CHAPTER 6

Financial Structure

A firm's financial structure is its integrity. It is the backbone that provides the strength to withstand both the forces of economic nature and those self-imposed. It is where creditors look to first when evaluating and rating an enterprise. "Does the capitalization support the rating" is a common theme heard from rating agencies. The more leverage an entity has, the greater is the risk. And leverage is balanced by cash flows, the stability of those cash flows, and liquid assets. If the financial structure is not sitting on solid ground, a marginal turn of events can put the health of the enterprise at risk. Its ability to satisfy claims, including fixed obligations, is put into question.

An entity whose financial structure is overly capitalized normally is prepared for a sudden and swift negative turn of events; it is in a position to both buy time and take advantage of its competitors' weakened market condition. It also can, if it so chooses, gain market share or severely weaken its competitors, such as through pricing decisions that its weakened competitors cannot afford to match profitably. As we have seen, though, being overcapitalized has its costs, in the form of foregone free cash flow based on the returns of lower-yielding cash assets versus what could have been achieved had the cash been invested in value-enhancing investments. Not infrequently, the cost of the insurance for holding cash is worth the price, as it was during 2008 and 2009.

This is admittedly a long chapter, but it is necessary to the cost-of-capital matrix. In it I cover balance-sheet assets, liabilities of all forms, financial securities, off-balance-sheet obligations, and applicable accounting rules. For concerns that doubt the need for capital strength, financial history and a storied legacy will not be sufficient to bail them out.

Example:

Lehman Brothers survived for 157 years, through wars, the Great Depression, famines, assassinations of presidents, deep recessions, and oil embargoes, but it got into trouble by buying and financing commercial and residential real estate, including subprime mortgages. By placing the riskiest of all financial instruments on its balance sheet, it in essence put itself out of business when the real estate market collapsed. The company did not suitably gauge the extreme risk involved, nor did investors focus on their derivative activities. Its financial structure, despite such a long period of profitable growth, could not handle the immense strain of risky assets to which its management had taken it.

Many financial executives do not wish their firms to be significantly overcapitalized because their management consultants advise a larger than necessary equity cushion harms their financial ratios. Also, the yield on cash is unpredictable, aside from not being the purpose for which the organization was founded. Income from cash is not included in the return on invested capital (ROIC) metric.

Corporate executives must explicitly understand and determine the entity's desired and current financial and operating risk when setting the desired capital base. Excess leverage may not allow the firm's cash flows to service its obligated requirements. Certainly, this type of stress analysis took on new meaning with the 2008 credit crises and the subsequent effects on financial as well as industrial entities. And since shocks come "unannounced," the capital cushion is a necessary part of risk analysis and should be included in every research report by those undergoing such reviews. Every firm and analyst must ask themselves: Is the company prepared for a severe financial or industry crisis? Are the necessary financial backstops in place from reliable providers? What if it wasn't business as usual for a year or two or three? Could the firm survive?

In hindsight, it is easy to see that in too many historical instances, assumptions had been incorrect or perhaps not even considered. Firms ran into financial difficulties, and debt payments could not be met from operating cash flows. For banks and mortgage insurers, the projected default rates underpinning the cash flows of securitized debt turned out to be a multiple higher than originally perceived. Pension plans went from large overfunded positions to large underfunded positions, resulting in negative shareholders' equity for many firms. The expected ROIC for many projects no longer made economic sense, but cash had been spent and the projects were half complete. Borrowing froze for even the most creditworthy risks.

The optimal financial structure is established based on a firm's ability to predict its cash flows accurately. If it does not have this foresight—and few, if

any, firms do—it must be set by its ability to withstand a probable worst-case scenario. So-called one in a hundred-year events seem to come around all too frequently. A probable worst-case scenario might be one in which the credit market freezes for two years with revenues at half the projected levels. If a firm has sufficient cash and calls on capital from a group of reliable providers, it can see its way through such a scenario.

If, however, ROIC is greater than the cost of capital for a project, the firm's *cost of capital could very well decline by increasing leverage.* We see this with most successful high-credit-rated entities, such as Walmart, Cisco, and Pepsi. Financial executives are always weighing business risk, leverage, and the cost of capital when making capital decisions—it is then up to investors, who also must weigh the rewards and risks, setting a required return for the cash they are considering investing. When Pepsi made a $7.8 billion bid to acquire its bottling unit, it did so, in part, because the expected return on the acquisition exceeded its cost of capital.

The firm's financial structure, as portrayed by its balance sheet, is out of date a moment after it is prepared because the value of its assets and liabilities shifts with the respective markets and the company's clients' business and financial condition. For instance, FNMA, in the years prior to its U.S. government bailout, showed large deferred tax assets on its balance sheet, without which it would have had large negative shareholders' equity. Given its poor cash flows, its financial leverage was considerably weaker than the company portrayed because the value of those deferred assets was questionable. A retailer's or manufacturer's inventory would be overstated if demand for its product slowed.

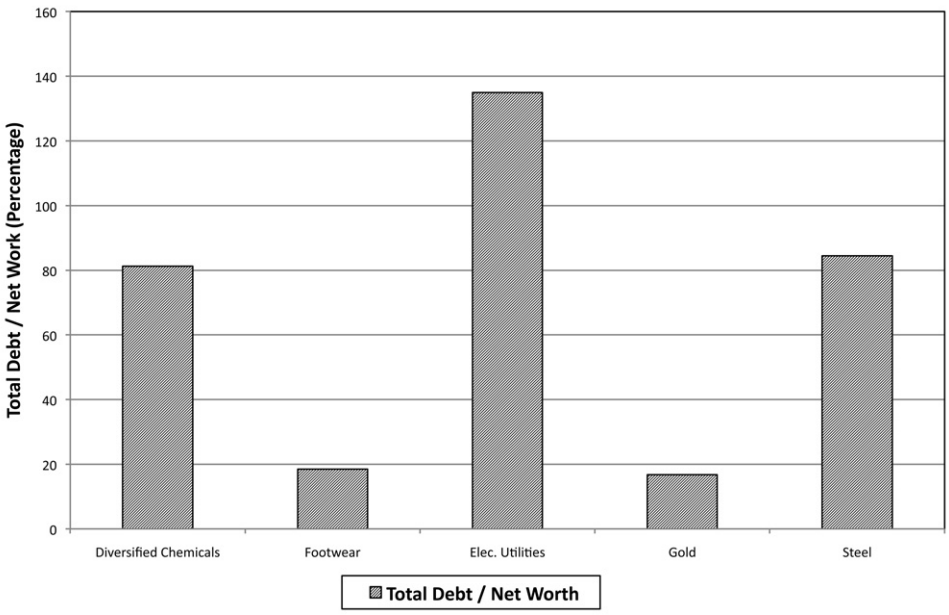
Errors in forecasts or shifting industry conditions affect the optimal financial structure. Many companies that experienced financial difficulty had a conservative financial structure, including adequate interest-charge coverage (operating cash flows/interest and operating lease expense[1]). However, when their business did not meet expectations, a reasonable financial structure became onerous and, and as bondholders increased their debt positions by virtue of the higher credit risk, they, in effect, controlled the company, putting equity holders at risk. It is therefore important that the analyst be able to "see down the road" in the event additional capital is needed and where, how, and at what cost that capital could be raised.

Electric utilities (Fig. 6-1), owing to their fairly assured return on capital, typically operate with higher leverage than the cyclic footwear, gold, and steel industries.

[1] In my model I add back interest and operating lease payments to cash flow from operations to arrive at the coverage.

FIGURE 6-1

Total Debt/Shareholders' Equity for Various Industries, Fiscal Year Ending (FYE) 2008



INTERNAL AND EXTERNAL CAPITAL

Most publicly held companies are financed by a mixture of internal and external capital. *Internal capital* consists of all financial instruments that, in effect, provide holders with an equity position in the firm. Examples include common stocks, convertible instruments such as preferred stocks and bonds that, for all practical purposes, can be considered as already converted into common stock, stock warrants, stock rights, and so on. *External capital* can be defined as all financial obligations to outsiders who are not likely to become equity holders in the firm. Examples are short-term debt owed to banks and bonds that are not likely to be converted to common stock. Other examples of external capital are obligations of the firm under leases, guarantees made by the firm, and other off-balance-sheet liabilities such as debt related to a joint venture and various derivative securities.[2]

[2] In some cases, a supplier will provide a customer with free equipment and even inventory in exchange for the customer using the firm as a supplier.

Traditional financial theory states that a firm has an optimal financial structure when there is is an optimal balance between internal and external capital.[3] In practice, corporate executives attempt to minimize the weighted-average cost of capital using all forms of internal and external capital consistent with the risk level of the firm.

The term *optimal financial structure* is an illusory term. It shifts with changes in cost of capital, which encompasses market perception (i.e., valuation multiples and yield spreads), cash flows, taxes, debt levels, litigation risk, risk-free rate, and other variables discussed in Chapter 8.

One well-known study suggests that owing to the tax benefits of debt and the fact that debt holders pay bankruptcy costs, leverage ratios should be high to attain the optimal capital structure.[4] Leland claims that leverage for most companies is optimal at about 75 to 95 percent and that firms with high risk and high bankruptcy costs should have leverage on the order of 50 to 60 percent when their effective tax rate is 35 percent. Leland does not broach volatility of tax rates, an important determinant of my credit model. He does not discuss cash flow or cash tax rate in his paper despite the fact it is cash-flow adequacy that keeps entities from avoiding bankruptcy. Litigation risk is not mentioned, but debt covenants are.

Benefits and costs are associated with external capital. For example, as Leland explains, interest payments on debt are tax deductable, whereas dividend payments to preferred and common stockholders are not deductable to the firm and are taxable to shareholders. Thus the firm has a clear incentive to raise external capital. However, external capital may dilute the implicit control of equity holders because the firm is subject to greater scrutiny by rating agencies and creditors. Also, if at any period the firm's cash flows are insufficient to service its debt, the firm may be forced into operating decisions it would prefer not to make or even confront bankruptcy, exposing equity holders to additional unexpected costs (including the issuance of additional equity). Firms steering down such as path may be forced to sell assets that have been reliable producers of free cash flow because these properties meet with the greatest demand by potential acquirers.

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[3] Miller and Modigliani showed in 1961 (*Journal of Business*) that it does not matter how a firm finances itself. Ross (*Bell Journal of Economics*, 1977) and Leland and Pyle (*Journal of Finance*, 1977) show that an optimal financial structure exists because of signaling costs. Lewellen (*Journal of Finance*, 1975) and Galai and Masulis (*Journal of Financial Economics*, 1984) show that an optimal financial structure exists because of bankruptcy costs and taxation.

[4] See "Corporate Debt Value, Bond Covenants and Optimal Debt Structure," by Hayne Leland (*Journal of Finance*, September 1994).

Other financial theories suggest that entrepreneurs have incentives to issue shares in their firms to the public, in effect, raising more internal capital when they consider current stock prices too high. Thus they issue additional shares of the firm to the public and enjoy the benefits of cash infusion into the firm that is not justified by the firm's cash flows. Conversely, when firms purchase stock in themselves, they likely consider the price too low compared with their cash flows. Thus they repurchase the firm's stock, reducing internal capital. In reality, while many soundly financed firms with good cash flows have repurchased their own stock, too many others have done so succumbing to the pressure of vocal shareholders who believed that buyback programs will lend support to the stock price, implying that the stock price was not correctly discounting prospective free cash flow. Also, for a firm to constantly buy and sell its own stock would send a signal to the financial markets that could harm the stock valuation. Besides, no company has a crystal ball.

Information asymmetry almost always exists between insiders and outside investors, and it also may exist between shareholders and bondholders. For example, stock repurchases reduce total shareholders' equity, and shareholders may wish to accept certain capital projects or acquisitions that are too risky for bondholders.

One common characteristic of all financial theorists is that the financial structure of a firm does not usually lie in either extreme case; that is, firms are neither all equity nor all debt. Rather, they are a mixture of internal and external capital. Another common characteristic of the theories is that firms are not at their optimal structure at all times. Instead, they continuously make adjustments to their financial structure in an attempt to react to changing economic and market conditions so that they can reach their new optimal financial structure. Thus we should observe that firms adjust their capital structure in almost every period, as can, indeed, be verified from any casual examination of the financing cash flows of firms. These adjustments are more earmarked toward leverage, not equity issuance.

Can one predict how adjustments to the financial structure of a firm should be related to operating and free cash flow? To answer this question, recall that one of the major disadvantages of external capital is the possibility of bankruptcy and reorganization costs to shareholders. These expected costs relate to the likelihood of financial difficulties for the firm; the higher the likelihood of financial difficulties, the greater are the expected bankruptcy costs, and the more costly external financing becomes. An immediate variable to consider for the likelihood of financial difficulties is the stability of operating and free cash flow. The more stable[5] operating

[5] I define *stability* in Chapter 8.

and free cash flows are, the lower is the probability of financial difficulties, and the lower is the probability of bankruptcy. Thus firms with stable but growing operating and free cash flows are expected to be characterized by higher financial leverage than their counterparts, where financial leverage can be measured by the relative proportion of debt to equity, including all forms of external financing. Such firms are also more likely to be increasing external capital at the expense of internal capital. Assumed in all this is the soundness of the nation's banking system and, for individual entities, the soundness, reliability, and diversity of any backup financing agreements in place.

For entities that have entered bankruptcy but have shown a history of adequate but cyclicality in their cash flows, creditors have a reasonable opportunity at recouping some to all of their capital. Pilgrim's Pride, a large poultry company, saw its senior unsecured debt trade as low as 14 cents on the dollar with the firm being in Chapter 11 bankruptcy; when the firm was offered $2.6 billion in a buyout, those bonds went back up to par. Unfortunately, stockholders received very little from the deal.

Firms that exhibit volatile operating cash flows and firms that are characterized by negative free cash flow are expected to have lower financial leverage and, on average, are expected to show decreases in debt and increases in equity financing when conditions permit.

While the optimal financial structure is one of constant debate, in reality, it can be only determined with perfect foresight. This is so because the optimal mix of debt and equity is a function of future cash flows and the assets required to produce those cash flows. If the firm knew for certain its operating cash flows, it would adjust its capital structure accordingly, including lining up any necessary financing that needed to take place from secure sources. *The optimal structure would, in essence, be that level where the entity is capable of producing the highest free cash flow consistent with its ability to retire its contractual obligations and allowing a measure of financial flexibility.* There is a continual dynamic tradeoff between that financial structure and the time it takes for normalized operating cash flows to retire all outstanding obligations. Investors and corporate executives must evaluate the risk of nonpayment of debt if the operating cash flows are less than expected and whether the increase in leverage ratios is worth the added cash flows. As we saw in the case of Clorox, part of the analysis is available liquidity aside from what is listed on the balance sheet. Committed unused credit lines, including contingent equity, must be considered when evaluating the optimal structure for a particular company. Two companies having the same expected operating and free cash flows should have different leverage ratios if they have dissimilar credit lines available. Likewise, if they have dissimilar costs of capital, the company having the less risk (lower cost of capital) would be expected to withstand higher leverage.

Cash-flow analysis can provide worthwhile clues to impending financial risk and return. Unfortunately, many entities reporting a healthy operating gain after years of negative free cash flow often find themselves unprepared to operate during an ensuing business downturn. Because traditionally they have been heavy users of cash (with commensurate increases in debt), they cannot build the sufficient liquidity cushion necessary as conditions improve. Some entities, however, have been successful using a financing "window" to enhance their capital structure.

Example:

Temple Inland, Inc., manufactures corrugated packaging and building products and had $3.8 billion in revenues during fiscal year 2008. As reported on its balance sheet, Temple Inland has $41 million in cash and minimal short-term debt coming due.

TEMPLE INLAND, INC., AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	At Year-End (in Millions)	
	2008	**2007**
ASSETS		
Current assets:		
Cash and cash equivalents	$41	$227
Trade receivables, net of allowance for doubtful accounts of $14 in 2008 and 2007	407	433
Inventories:		
Work in process and finished goods	104	116
Raw materials	217	224
Supplies and other	137	121
Total inventories	458	461
Deferred tax asset	66	99
Income taxes receivable	57	—
Prepaid expenses and other	44	57
Total current assets	1,073	1,277
Property and equipment:		
Land and buildings	671	641
Machinery and equipment	3,577	3,423
Construction in progress	36	120
Less allowances for depreciation	(2,620)	(2,552)
Total property and equipment	1,664	1,632

	At Year-End (in Millions)	
	2008	**2007**
Financial assets of special-purpose entities:	2,474	2,383
Goodwill	394	365
Other assets	264	285
Total assets	$5,869	$5,942
Liabilities		
Current liabilities:		
Accounts payable	$162	$244
Accrued employee compensation and benefits	84	108
Accrued interest	30	31
Accrued property taxes	12	11
Accrued income taxes	—	258
Other accrued expenses	140	173
Current portion of long-term debt	1	3
Current portion of pension and postretirement benefits	17	62
Total current liabilities	446	890
Long-term debt:	1,191	852
Nonrecourse financial liabilities of special-purpose entities	2,140	2,140
Deferred tax liability	750	762
Liability for pension benefits	172	71
Liability for postretirement benefits	101	123
Other long-term liabilities	292	324
Total liabilities	5,092	5,162
Noncontrolling Interest of Special-Purpose Entities	91	—
Shareholders' equity		
Preferred stock—par value $1 per share, authorized 25,000,000 shares, none issued	—	—
Common stock—par value $1 per share, authorized 200,000,000 shares, issued 123,605,344 shares in 2008 and 2007, including shares held in the treasury	124	124
Additional paid-in capital	461	475
Accumulated other comprehensive loss	(189)	(139)
Retained earnings	936	987
Cost of shares held in the treasury: 17,098,808 shares in 2008 and 17,464,189 shares in 2007	(646)	(667)
Total shareholders' equity	686	780
Total liabilities and shareholders' equity	$5,869	$5,942

We see, however, that the company has significant debt maturing over its coming three years. Also on the balance sheet is an entry associated with its special-purpose entity, which relates to the sale of timberland through nonrecourse notes and would need to be investigated for any potential financial liabilities.

Temple Inland reports:

> Maturities of our debt during the next five years are (in millions): 2009—$33; 2010—$191; 2011—$163; 2012—$293; 2013—$0; and thereafter—$512. We have classified $32 million of 2009 stated maturities as long-term based on our intent and ability to refinance them on a long-term basis.

Given the cyclicality of its business, the company has been dependent on economic conditions to generate free cash flow. When reviewing this company, the analyst would be apprehensive that the company may be forced to pay a high cost of debt to refinance the coming obligations. Temple Inland states in a footnote that its $835 million in committed credit agreements expires by 2011. If the company decided to completely take down the $835 million to repay the debt coming due, it would have less than a year to repay that entire obligation—the date the credit line expired. Obviously, an analyst would prefer to see these debts coming due extended as soon as possible.

Example:

SkyTerra Communications, Inc., through its subsidiaries, provides mobile satellite communications services in the United States and Canada. For the 11 years shown in Table 6-1, SkyTerra Communications has shown just one year of limited free-cash-flow generation as its market value fell from almost $1.4 billion down to $18 million and then rose to $740 million. The sole reason SkyTerra recorded positive free cash flow during 2004 was that it was working its balance sheet; otherwise, its free cash flow would have been negative for all years shown in the table.

TABLE 6-1

SkyTerra Communications, Inc.

December Year End	Net Income (Loss)	Free Cash Flow	Total Debt	Total Market Value
1998	−0.6	−9.6	—	—
1999	−49.5	−84.6	2.6	1,375.0
2000	−124.7	−113.1	0.1	121.2
2001	−210.3	−52.3	0.0	47.1
2002	−4.0	−20.8	0.0	18.0
2003	−0.7	−15.4	0.0	22.6
2004	17.2	5.5	0.0	403.1
2005	59.3	−15.3	0.0	677.3
2006	−57.1	−33.4	483.9	740.3
2007	−123.6	−71.1	604.8	696.5
2008	−204.9	−89.4	838.2	193.4

Source: CT Capital, LLC.

Executives at the company took advantage of two positive years in earnings, especially 2005, when earnings showed a substantial jump, allowing management to raise almost $500 million in the debt market. Free cash flow again was negative that year, but both equity and fixed-income investors looked the other way, perhaps fixating on reported income. Investors who looked at the common free-cash-flow definition of net income plus depreciation also were fooled because that measure during 2004–2006 showed relative stability. In 2007 and 2008, as cash flows remained negative, the company was continually allowed to reenter the debt markets, forcing up leverage on lower capital.

This company was successful at raising almost $275 million in the year 2000, which allowed it to stay in business during 2001, when it reported a large loss along with continued negative free cash flow. With the loss, the credit markets were closed to the company, and as we see from Table 6-2, capital spending was, in essence, eliminated as revenues remained at basically zero.

SkyTerra was able to raise large amounts of equity and debt despite having a minimal revenue base. Normally, when firms such as SkyTerra have consistent negative free cash flow, it is an irrefutably negative signal because the original projections were not met. When such firms continually enter the debt markets, it bears closer watching, and it is indeed a risky proposition for creditors if they are not accorded a security interest in assets worth at least the principal amount of the loan. When revenues rose to $35 million in 2006, management jumped at the chance to raise capital again. Unfortunately, free cash flow continued to be negative, and SkyTerra's market value subsequently declined by over 75 percent.

SkyTerra Communications, Inc.

Ticker: 3SKYT

December Year End	Sales ($M)	Free Cash Flow ($M)
2002	0.0	(20.8)
2003	0.7	(15.4)
2004	2.1	5.5
2005	0.6	(15.3)
2006	34.9	(33.4)
2007	34.1	(71.1)
2008	34.5	(89.4)

It is not surprising that financial structure and cost of capital are closely related because credit and possible impairment to cash flows play a central role in risk analysis. Cost of capital, as with financial structure, is established by an entity's ability to produce cash flows—magnitude, growth rate, consistency, and capital intensity, as well as the other fundamental credit metrics enumerated in Chapter 8.

Entities having uncertain cash flows should carry less total debt, whereas entities having more predictable streams could have greater leverage.[6] For new

[6] For purposes of discussion, I refer to operating companies as opposed to companies in full or partial liquidation. Also excluded are companies that have raised sufficient equity capital with a low cash burn rate so that the cash could satisfy all outstanding claims. The cash burn rate is explained later in this chapter.

TABLE 6-2

Selected Investing and Financing Data: SkyTerra

SKYTERRA COMMUNICATIONS INC
TICKER: 3SKYT
SIC: 4,899.000
GICS: 50102010

	Stockholders' Equity	Capital Expenditures	Sale of Com/ Pref Stock	Issuance of LT Debt	Reduction in LT Debt	Financing Activ-Other
Dec98	29.822	0.912	0.118	0.000	0.108	0.000
Dec99	141.215	8.792	94.789	6.000	1.245	0.000
Dec00	280.407	24.491	247.038	@CF	0.915	0.000
Dec01	128.862	0.095	0.022	0.000	0.000	10.000
Dec02	81.297	0.000	16.971	0.000	0.000	0.177
Dec03	79.566	0.007	0.006	0.000	0.000	(1.195)
Dec04	134.084	0.839	35.328	0.000	0.000	(2.913)
Dec05	191.485	0.003	0.140	0.000	0.000	0.076
Dec06	(119.943)	99.063	0.713	423.052	0.225	0.000
Dec07	616.218	240.494	1.123	1.058	0.247	0.000
Dec08	471.353	177.101	0.064	150.000	0.910	0.000

organizations, the financial structure should be geared toward equity and the raising of equity capital if additional financing is needed. Unless the new enterprise is virtually assured of being in a position to repay borrowings, including principal, leverage is discouraged. For a fortunate entity whose debt retirement is very likely and prospective free cash flow is large, maximum leverage is judicious.

More cyclical firms or those with unstable cash flows will have a higher cost of debt owing to their questionable ability to repay principal and interest. If the cyclical concern is at the top of the operating cycle, where operating margins, free cash flow, and stock price are strongest, it should seriously consider selling shares, even if the cash is not currently needed. It should do this for three reasons: (1) so that it is not forced to sell high-cost equity during an ensuing downturn, (2) so that it can later take advantage of investment opportunities, including in-house research, which its weakened competitors cannot, with its low cost capital, and (3) so that its financial strength can grow market share through pricing. Being overcapitalized has its virtues, but as mentioned, if the entity continually

taps the market at perceived peaks, it will send the wrong signal to investors (of prospective diminishment of cash flows), causing a stock decline and making such future sales unlikely.

If the entity under analysis is being studied for its ability to retire principal payments in a timely manner, it is total debt that must be used in the calculation of leverage ratios. Debt is debt—whether it is short-term bank debt, long-term subordinated debt, sinking-fund requirements, operating leases, pension obligations, or purchase commitments. They all represent legal liabilities that must be satisfied prior to shareholders' interest. For this reason, the maturing debt must match the enterprise's ability to service it. Again, this is addressed in Chapter 8.

Many popular financial ratios consider only long-term debt, thereby subjecting the leverage ratio to classification decision and conceivably manipulation. To consider only long-term debt might result in a large and inappropriate shift in leverage ratios depending on such classification. Under *Statement of Financial Accounting Standards No. 78* (SFAS 78): *Classification of Long Term Debt Callable by the Creditor*, if there is a violation of the debt agreement (covenant), such long-term debt might need to be reclassified as a current liability, altering both working capital and other ratios, which could impair the firm. Likewise, if the debt has a call feature and is callable within a year, it must be reclassified as a current liability, affecting working capital and similar ratios, which also could impair the firm or affect debt covenants.

Low leverage does not ensure an entity a low cost of capital if the firm does not generate free cash flow or have other positive metrics, as discussed in Chapter 8. As of October 1, 2009, there were 323 industrial companies having 40 percent or lower total debt/shareholders equity, a market value in excess of $100 million, greater than 10 percent cost of equity capital, and three-year negative average of free cash flow. Their five-year total stock return, thereby encompassing not just the three-year period of negative free cash flow but two years prior, showed a negative 4.9 percent total rate of return compared with a positive 2.4 percent for the Standard and Poor's (S&P) 500 Index.

For entities undergoing large capital expansion programs in the belief that the project will contribute to free cash flow, such as Wynn Resorts, total leverage will increase until the operating cash flows from the project are able to return the debt ratios back to acceptable levels. Such temporary strains to shareholders' equity should be balanced with additional equity raises in the event that market conditions work against projected revenues and cash flows. If the equity raise comes after market conditions turn down, the incremental cost of capital would be much higher than if part of the initial raise occurred when optimism for the project was at its peak. We see this with every recession, when capital becomes scarce and costs extreme.

TABLE 6-3

Companies with Low Leverage and High Cost of Equity Capital

Company	Cost of Capital (%)	Three-Year Average Free Cash Flow	Total Debt/ Net Worth	Five-Year Total Return
ATS Medical	17.5	(6.3)	32.3	(5.8)
Ballard Power	18.3	(35.3)	0	(23.2)
Enzo Biochem	15.3	(7.1)	0	(17.3)
Golden Star Res.	12.9	(95.9)	29.1	(10.7)
Lexicon Pharma.	11.5	(62.8)	11.5	(24.2)
Microvision	18.2	(23.5)	18.2	(11.2)
Tejon Ranch	13.2	(0.4)	13.2	(7.2)

In the midst of the credit crunch in 2009, Wynn was forced to raise $175 million by selling 9.6 million shares at $19 per share, when a year earlier its stock sold at as high as $119; a mere four months after the equity sale, its stock was back to $57. If it had a more balanced approach to the initial capital raise during 2007, taking into account the possibility of an economic downturn, dilution would have been very minor, and given its low cost of capital resulting from its then-stronger balance sheet, Wynn stock would not have sold off as greatly during the capital crunch. Six months after the $175 million raise, Wynn raised an additional $1.6 billion by selling 25 percent of its high-growth Macau properties through an initial public offering (IPO).

Debt taken on to fund the purchase of assets should be able to be tied directly to operating cash flows used in the retirement of that debt. The financing decision must match the investment decision. Banks that borrow short and loan long learn this lesson with each downturn.

As stated, startups, including companies that are expected to incur negative cash flows, should have as little debt as possible (preferably none), along with a substantial capital cushion. These companies often go through longer than expected periods of cash burn, with their only cash inflow resulting from interest income.

This was the case with a 2005 IPO, Nucryst Corporation, a medical products company based on a proprietary metal technology. While the capital raise brought it time and cash to expand, its business never took hold and was unable to produce free cash flow. We see in the firm's 2008 10K balance sheet an accumulated deficit of $41 million. When an entity is continually burning cash, it remains to be seen how long it will continue as a viable independent concern.

NUCRYST PHARMACEUTICALS CORP.
CONSOLIDATED BALANCE SHEETS

	December 31, 2008	December 31, 2007
	(Thousands of U.S. Dollars, Except Share Data)	
Assets		
Current		
Cash and cash equivalents	$23,388	$17,841
Accounts receivable—net (note 4)	5,062	14,924
Inventories (note 5)	2,887	4,426
Prepaid expenses	414	427
	31,751	37,618
Restricted cash (note 2g)	145	140
Capital assets—net (note 6)	9,379	12,734
Intangible assets—net (note 7)	525	807
	$41,800	$51,299
Liabilities and Shareholders' Equity		
Current		
Accounts payable and accrued liabilities (note 8)	$2,859	$3,650
Accounts payable and accrued liabilities to related party (note 12)	—	67
Deferred lease inducement (note 2m)	90	111
	2,949	3,828
Long-term deferred lease inducement (note 2m)	495	726
	3,444	4,554
Guarantees (note 13)		
Commitments (note 14)		
Shareholders' Equity		
Common shares no par value, unlimited shares authorized, issued and outstanding—18,320,531 and 18,367,563 shares on December 31, 2008 and 2007, respectively (note 10)	82,776	82,776
Additional paid-in capital	2,178	1,511
Accumulated other comprehensive (loss) income (note 2d)	(5,528)	557
Accumulated deficit	(41,070)	(38,099)
Total shareholders' equity	38,356	46,745
	$41,800	$51,299

Source: Nucryst Pharmaceuticals 2009 10K.

DEFERRED ASSETS

The deferred-asset account appearing on a balance sheet must be monitored for its potential impact on cash flows and financial structure, including the underlying causes resulting from changes to the account. The merit of the asset(s) should be evaluated. There is little doubt that material issues could be uncovered through such analysis, including that related to pension funding and income taxes. The interperiod change also will be reflected under the operating activity section, but the underlying cause may not. Unlike other working-capital items appearing under operating activities, which are self-explanatory, deferred assets, because they consist of many items grouped together, could represent trends, benefits, or potential problems ahead.

Examples of deferred assets that might benefit the firm in future periods include advertising expenses, rents paid in advance, capitalized items such as interest or dry holes, and intangible assets such as goodwill. Changes in deferred assets could be attributed to changes in policy regarding payment of expenditures for such items as insurance, maintenance, and the cost to redesign and improve existing products, which the firm *hopes* will result in future cash flows. However, the addition to deferred assets usually requires an outlay of cash, whose expense recognition for accounting purposes is deferred for later periods. The deferred-asset account can be a refuge for many items, and for certain entities it can be quite large.

Advocates of cash-flow analysis differ with the accounting convention of recording an asset of this kind for cash already spent and will consider it an immediate cash outflow in their analysis. As we will see, deferred tax assets might represent an important asset that might be offset by a valuation allowance. Judgments as to the size of the valuation allowance are subjective and influence accounting ratios that are popular with analysts and credit-rating agencies, especially leverage ratios. If used, it represents a tax shield resulting in higher than otherwise cash flows.

CONTINGENT EQUITY

Contingent equity can be considered part of standby capital for entities that have such commitments. Equity commitments to the enterprise will be found in the footnotes. Under a contingent equity agreement, also referred to as a *contingent capital commitment*, cash would be received under predefined circumstances, similar to the action of the Federal Reserve in providing a backstop for acquiring banks, thereby facilitating their purchase of weaker institutions that otherwise would have failed. However, contingent equity agreements can exist for any sector.

A firm given a contingent equity commitment would receive the capital (cash) on the realization of a predetermined event. A triggering event could be an increase in raw materials prices, a natural hazard, a financial market setback, a labor strike, a change in the state of the economy, and so on. The capital can be in the form of subordinated debt, preferred shares, or pure equity. For this "insurance," the firm pays an option fee to the institution or group providing the commitment, whereas the company receives the comfort of standby capital at a predetermined cost. If the contingent capital takes the form of straight preferred stock, it could have no dilution effect on reported earnings and, being equity, could aid leverage ratios. To the entity receiving the contingent capital, its price normally consists of a commitment fee based on LIBOR that is paid during the period that the commitment remains in effect.

Contingent capital allows the entity to use its assets more fully because the need for a normal reserve it might maintain for contingencies would be lessened. This could increase the firm's ROIC and, commensurably, its stock price.

Normally, the cost to firms receiving contingent equity is high because investors need to be induced to offer a capital contingency arrangement; entities participating thus far generally have not been top-tier credits because the cost is greater than a standard bank commitment. It appears, however, based on Securities and Exchange Commission (SEC) filings that contingent equity arrangements are growing in popularity. It is up to the analyst to pro forma the balance sheet to determine if the contingent capital would provide sufficient financing for the firm to continue normal operations if the triggering event were to take place. The analyst also must review the reason for the need for this type of financing, its cost, and how long it might be needed. Growth of this form of financing has not been greater because large buyers of contingent convertibles are sometimes prohibited from owning equity.

Example:

On June 19, 2009, we entered into a Contingent Equity Agreement with Thermo Funding whereby Thermo Funding agreed to deposit $60 million into a contingent equity account to fulfill a condition precedent for borrowing under the Facility Agreement. Under the terms of the Facility Agreement, we will be required to make drawings from this account if and to the extent we have an actual or projected deficiency in our ability to meet indebtedness obligations due within a forward-looking 90 day period. Thermo Funding pledged the contingent equity account to secure our obligations under the Facility Agreement. If we make any drawings from the contingent equity account, we will issue Thermo Funding shares of our Common Stock calculated using a price per share equal to 80% of the volume-weighted average closing price of the Common Stock for the 15 trading days immediately preceding the draw. Any undrawn amounts in the account will be returned to Thermo Funding after we have made the second scheduled repayment under the Facility Agreement, which we currently expect to be no later than June 15, 2012.

The Contingent Equity Agreement also provides that we will pay Thermo Funding an availability fee of 10 percent per year for maintaining funds in the contingent equity account. This fee is payable solely in warrants to purchase Common Stock at $0.01 per share with a five-year exercise period from issuance, with respect to a number of shares equal to the available balance in the contingent equity account divided by $1.37, subject to an annual retroactive adjustment at each anniversary of the date of the agreement. We issued Thermo Funding a warrant to purchase 4,379,562 shares for this fee upon the establishment of the Contingent Equity Account. No Common Stock is issuable if it would cause Thermo Funding and its affiliates to own more than 70 percent of our outstanding voting stock. If our Board of Directors and stockholders approve the creation of a class of nonvoting common stock in the future, we may issue nonvoting common stock in lieu of Common Stock to the extent issuing Common Stock would cause Thermo Funding and its affiliates to exceed this 70 percent ownership level.

Source: Globalstar 14A, September 3, 2009.

Example:

Deltic Timber Corporation is a natural resources company engaged primarily in the growing and harvesting of timber and the manufacture and marketing of lumber. Deltic owns approximately 437,700 acres of timberland, primarily in Arkansas and north Louisiana.

Prior to August 26, 2004, the company had agreed to a contingent equity contribution agreement with Del-Tin Fiber and the group of banks from whom Del-Tin Fiber had obtained its $89,000,000 credit facility. Under this agreement, Deltic and the other 50 percent owner of the joint venture had agreed to fund any deficiency in contributions to either Del-Tin Fiber's required sinking fund or debt service reserve, up to a cumulative total of $17,500,000 for each owner. In addition, each owner had committed to a production support agreement, under which each owner had agreed to make support obligation payments to Del-Tin Fiber to provide, on the occurrence of certain events, additional funds for payment of debt service until the plant was able to successfully complete a minimum production test. Both owners had also agreed, in a series of one-year term commitments, to fund any operating working capital needs until the facility was able to consistently generate sufficient funds to meet its cash requirements.

Source: Deltic Timber Corp. 2005 10K.

BANK CREDIT FACILITIES

Bank credit facilities represent short-term calls on cash. When drawn, they are similar to short-term debt and become part of that balance-sheet entry. The maturity of the debt typically ranges from a few months to three years, although it can be longer. As the entity enters the final year of a credit facility, it normally looks to extend and perhaps increase the amount of the current agreement. If the facility is near expiration, obvious risk develops, including that which may be due to market conditions.

The ability of the entity to have a bank credit facility in place represents an important source of cash and has proven to be invaluable if a pending liability needs to be funded quickly or a fear of credit market tightening or change in perception takes hold. It also may be needed to satisfy maturing liabilities.

Bank credit facilities become increasingly important as the credit of the entity drops. During the financial crisis, many firms drew down their bank credits, fearing they would be removed and long-term credits would be unavailable. Entities that feared a large derivatives trading loss quickly established increases to their existing facilities.

When reviewing bank facilities, it is preferable for the entity to have contractual commitments with several high-grade institutions with which the entity has had a long relationship. The use of a single bank poses risk, as might agreements with just two institutions. The larger the facility, the larger is the consortium needed. This is done to minimize both client and bank risk. The greater the number of institutions taking part in the lending facility, the lower is the exposure for any particular bank, and the more willing banks would be to provide the financing commitment. The soundness of the lending institutions must be part of the analysis because the loss of any one could result in collapse of the entire agreement.

The analyst should evaluate the size of the credit facility in relation to the needs of the entity, its purpose, and the length of the agreement. The analysis should include the circumstances under which the banks can block any further credit or demand immediate repayment of amounts borrowed. If the entity needs to take down part or all of the facility, it must be reviewed for repayment prospects and to determine whether the added debt will violate any existing covenants.

DEBT, FINANCIAL FLEXIBILITY, AND COVENANTS

Financial flexibility refers to the ability of an enterprise to take advantage of investment opportunities. Companies that lose financial flexibility become increasingly reliant on sources outside the company for help, including additional financing and asset purchases. They do not control their own destiny. If they lack such flexibility, whether owing to market conditions or their own state of affairs, available projects that can enhance their ROIC or acquisitions become limited, affecting prospective cash flows, shareholder returns, and credit rating. Entities that are managed conservatively, with a long history of stable growth of revenues and free cash flow, or entities that are in industry sectors perceived to have above-average growth prospects have access to a strong investor supply of capital that may be used for expansion, acquisition, or to lower prices to gain market share. Such enterprises can operate with greater financial leverage.

Entities with consistent cash flows have an invaluable advantage—a lower hurdle rate than their competition. This was seen vividly in the credit crisis of 2007–2008, in which many companies under generally accepted accounting principles (GAAP) earnings growth became cash strapped owing to an unbalanced financial structure and, because of large capital expenditures, did not generate normalized (four-year average) free cash flow. They were reliant on others. Financially flexible firms during that same period were able to invest in assets at substantially below-market prices resulting from the crisis, as they are during every economic downturn.

When an entity enters the marketplace to raise capital, it must take into consideration its remaining financial flexibility—is it increasing or decreasing as a result of the offering? To what extent? Did the yield spread change? Will the entity be able to tap the market further, if necessary? Is the current project worth cashing in some or all of that flexibility? No matter how high the credit rating of the entity, investors often will demand higher rates of return for continued trips to raise capital. For this reason, in my credit model, I penalize (raise the cost of equity capital for) such entities because there always comes a time when credit conditions work against them.

Understanding the financial flexibility of a firm requires an analysis of all debt covenants that restrict the firm's ability to operate its business in a manner allowing it to maximize free cash flow while maintaining a sufficiently low cost of capital. Covenants can affect the financial flexibility in addition to bankruptcy risk. Covenants also can protect a firm from taking unwarranted risk under the fear of bankruptcy resulting from a violation. Restrictive covenants are included in every lending agreement, especially restrictions related to conversion of assets that are used to collateralize the obligation. The covenants affecting working capital and leverage could impair an entity's ability to do business, and the analyst must understand the effects those limitations have on the firm's operations. As would be expected, the weaker the credit, the more restrictive are the covenants; such restrictions and requirements might include agreements requiring the company to meet monthly liquidity hurdles, even if the borrower is public and required to report results to shareholders on a quarterly basis.

Bond indentures contain the terms of the obligations set forth between the issuer and the trustee, with the latter selected to represent the rights of the bondholders. Indenture terms include the interest rate, maturity, collateral, procedures to modify the indenture, use of proceeds, and the responsibilities of the borrower. Other common clauses relate to required insurance, events of default, payment of dividends, incurring additional debt, and restrictions of business combinations.

The covenants of the indenture can be either positive or negative. A negative covenant, such as a maximum leverage ratio, can restrict the borrower and hence its ability to operate without creditor approval. A positive covenant requires the firm to take certain actions, such as minimum net worth and working capital.

If the bond issue calls for an annual sinking fund, the terms, including the amount of principal or number of bonds to be retired each year, will be listed in the indenture. If the issuer's bonds are selling below par, the company can repurchase the bonds at a discount and book the gain into its income statement. For the cash-flow analyst, these retirements could have positive ramifications owing to the effects on leverage ratios, such as debt/operating cash flows and fixed-charge coverage. Additionally, if the issuer is able to retire additional debt resulting from excess free cash flow, the deleveraging will add financial flexibility should additional capital be needed in the future. On the other hand, if the entity is required to make a sinking-fund payment and its balance sheet cash is needed for working capital, payment would cause additional loss to financial flexibility, resulting in greater prospective risk to both equity and debt holders. In this circumstance, where the entity might be forced to raise equity to satisfy debt payments, it is not unusual for large dilution to take place, resulting from the new higher risk (cost of equity).

When analyzing debt covenants, it is imperative to understand the definitions set forth by the creditors. For example, restricted cash on the balance sheet may not count as equity in the calculation of leverage ratios by certain lenders. Other times, events that have yet to take place may allow for debt not to count against leverage ratios, such as debt related to a division to be sold. Other times, balance-sheet cash is allowed to be netted against debt in the calculation of leverage. When firms negotiate credit agreements, those agreements must be suited to their particular situation, especially the timing of expected cash flows.

The failure of the entity to comply with a loan covenant might not necessarily mean that the loan will be declared in default. If the lender believes that the company will eventually be in compliance, it may waive the (soon to be) violated covenant for a period of time until the covenant will again be in full force. The lender also may choose to amend the covenant to less restrictive terms under which the borrower will not continue to be in violation. After all, if the lender is a bank, it is in its best interest not only to see the loan repaid but also to continue to help the customer to grow. The bank's business will benefit as well, especially since its reputation will be enhanced. Cost of equity will benefit if, as a result of a covenant waiver, the price of the stock rises, allowing for equity financing and payment of those same fixed obligations.

Often, when loan covenants are extended, they are done so at a high cost to the entity. Either borrowing capacity is restrained, as in lines of credit, or other terms, such as the rate of interest or collateral, are reworked. Such actions would have a negative impact on the value of the firm if the present values of future free cash flow are affected.

If the lender is so inclined, for example, out of fear that the collateral is being impaired or because there is greater doubt that the entity can repay, it may demand the violation be cured within a period of time, which is normally spelled out in the

loan agreement. Such periods normally run from 10 to 90 days. If the violation has not been cured, the lender again may choose to defer the cure for another specified period, rewrite the covenant, or declare the loan to be in default. Regardless of the lender's decision, a violation of a loan covenant or indenture is a negative event often resulting in bankruptcy.

Example:

Nordstrom lists the following covenants in its 2009 10K:

Debt Covenants

Our borrowing facilities include restrictive covenants, including the following significant restrictions:

Facility	Description of Covenant
2007-A $300 variable funding note	Standard and Poor's BB+ and Moody's Ba1ratings or better
$100 variable funding note	Standard and Poor's BB+ and Moody's Ba1 ratings or better
$650 commercial paper/ unsecured line of credit	Leverage ratio ("Adjusted Debt to EBITDAR" not greater than approximately four times)

Example:

The debt indenture includes covenants that limit our ability to grant liens on our facilities and to enter into sale and leaseback transactions, subject to significant allowances under which certain sale and leaseback transactions are not restricted. We are in compliance with all of our covenants as at June 30, 2009.

Source: KLA Tencor 2009 10K.

Example:

Restrictive covenants that lenders refuse to waive might make it more difficult to operate and grow a company. Many capital projects do not produce significant cash flows for several years, and therefore, creditors would be reluctant to waive covenants until it is clear that payback is reasonably assured or they have little choice. Lenders often will defer covenants and provide additional cash if a project is near completion or is about to be sold. Restrictive covenants could hamper management's desire to diversify out of existing businesses or add onto current lines. Management also conceivably could lose the flexibility of making an undervalued acquisition that could contribute significantly to cash flows.

Restrictive Covenants. The agreements governing our credit facility, the term loans and the operating lease agreements contain restrictive covenants that, among others, (a) prohibit distributions under defined events of default, (b) restrict investments and sales of assets, and (c) require us to adhere to certain financial covenants, including defined ratios of asset coverage of at least 1.25 to 1.00, fixed charge coverage of at least 1.85 to 1.00 and of total funded debt to EBITDA (as defined in the agreements) of no greater than 4.00 to 1.00 through June 30, 2009 and of no greater than 3.75 to 1.00 thereafter. We continuously monitor our debt covenants and when considering future transaction, our decision making process evaluates the impact such transactions will have on our debt covenants. As of June 30, 2009 and 2008, we were in compliance with all of our debt covenants.

Source: K-Sea Transportation Partners 2009 10K.

Example:

For IMG Resort, if a company having a weak or uncertain credit were to buy a significant equity interest in it, it might hamper the company's ability to raise equity owing to a loan restriction. If IMG needed working capital and the covenant was in existence, it would be up to creditors to decide if they were willing to void or amend the provision, calling for payment on the entire note, called an *acceleration clause*.

On November 3, 2003, IMG Resort and Casino issued $200.0 million of its 12% Senior Notes (the "*Notes*"). The Notes bear interest at 12% per year, payable on May 15 and November 15 of each year, beginning on May 15, 2004. The Notes will mature on November 15, 2010. The Notes may be redeemed at any time on or after November 15, 2007 at fixed redemption prices plus accrued and unpaid interest, if any. If a change in control occurs, holders of the Notes will have the right to require the repurchase of their Notes at a price equal to 101% of the principal amount thereof, plus accrued and unpaid interest, if any. The Notes are guaranteed by all of IMG Resort and Casino's subsidiaries.

Source: IMG Resorts 2009 10K.

Example:

When Vail Resorts required additional capital, the indenture needed to be modified as follows:

The Additional Guarantor, as provided by Section 4.18 of the Indenture, jointly and severally, hereby unconditionally expressly assumes all of the obligations of a Guarantor under the Notes and the Indenture to the fullest as set forth in Article 12 of the Indenture; and the Additional Guarantor may expressly exercise every right and power of a Guarantor under the Indenture with the same effect as if it had been named a Guarantor therein.

Example:

Loan covenants, if not reviewed carefully and understood, can result in a massive wipeout of an entire equity investment. For example, Las Vegas Sands saw its market capitalization fall from over $80 billion to under $1 billion because it was about to violate certain covenants related to leverage and interest-charge coverage before its founder and chairman personally injected capital into the company. The firm has covenants related to many large debt tranches for its various operating properties, each of which calls for default if any other loan is in default, referred to as a *cross-default provision*. When assessing Las Vegas Sands credit quality, one must consider the consolidated entity and each of its operating companies separately owing to cross-defaults, with maximum leverage covenants varying from division to division. Restrictions also include the company's ability to transfer cash from one division to another.

Even with its current $10.5 billion market capitalization, these covenants bear close watching because they become more restrictive over time, and despite the company's existing ability to cover the next two years of debt maturities from available cash, a violation of a covenant would force all debt to become due. At the end of September 2009, the Las Vegas division had 5.73 times leverage (as defined in the covenant agreement) versus a 6.5 requirement, which steps down to 6 times in March 2009 and 5 times in March 2011. Given the company's substantial capital spending program, Las Vegas Sands most likely would need to sell assets, improve its earnings before interest, taxes, depreciation, and amortization (EBITDA) or renegotiate its credit terms.[7] The fact that Las Vegas Sands sold a portion of its Macau subsidiary subsequent to the Form 10K being filed does not play into the rating assessment other than the cash flow that boosted the liquidity of the parent. While technically a portion of the cash flows is now owned by investors of the Macau subsidiary, so too is a proportion of the debt obligation. Therefore, credit measures the rating agencies rely on, such as EBITDA coverage, are not affected.

The following is from Las Vegas Sands' China subsidiary and its Form 10K:

> The U.S. credit facility and FF&E facility require the company's Las Vegas operations to comply with certain financial covenants at the end of each quarter, including maintaining a maximum leverage ratio of net debt, as defined, to trailing twelve-month adjusted earnings before interest, income taxes, depreciation and amortization, as defined ("Adjusted EBITDA"). The maximum leverage ratio is 6.5× for the quarterly periods ending September 30 and December 31, 2009, and decreases by 0.5× every subsequent two quarterly periods until it decreases to, and remains at 5.0× for all quarterly periods thereafter through maturity (commencing with the quarterly period ending March 31, 2011). The Macau credit facility, as amended in August 2009, requires the company's Macau operations to comply with similar financial covenants, including maintaining a maximum leverage ratio of debt to Adjusted EBITDA. The maximum leverage ratio is 4.5× for the quarterly periods ending September 30 and December 31, 2009, and decreases by 0.5× every subsequent two quarterly periods until it decreases to, and remains at 3.0× for all quarterly periods thereafter through maturity (commencing with the quarterly period ending March 31, 2011).

[7] For purposes of its debt covenant, Las Vegas Sands is allowed to offset cash against debt.

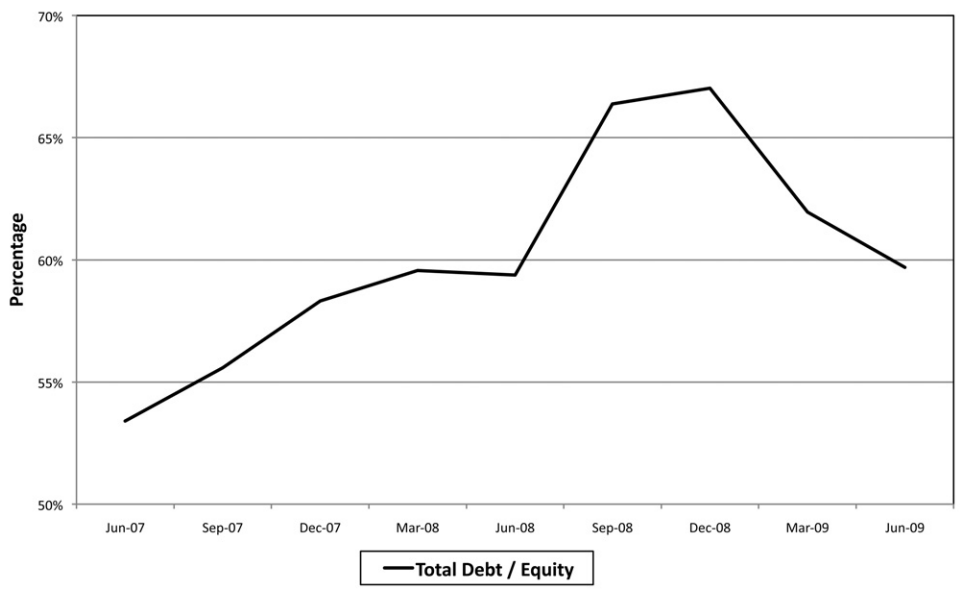
Financial Ratios	Ratio Requirement as of June 30, 2009	As of June 30, 2009	Ratio requirement as of September 30, 2009	As of September 30, 2009
Consolidated interest coverage ratio	Not less than 3.50	5.73	Not less than 4.00	6.47
Consolidated leverage ratio	Not more than 4.00	3.83	Not more than 4.50	3.48

DEBT AND FREE CASH FLOW DURING THE 2007–2009 CREDIT CRISIS

An interesting period to study leverage is June 2007 through June 2009, that of going into and coming out of a severe recession. As Figure 6-2 makes clear, leverage began to build going into the recession as equity fell and debt grew. Even with record equity financing, leverage ratios at the end of June 2009 were higher than two years earlier. This is not atypical because excesses typically take several years to unwind.

FIGURE 6-2

Debt as a Percent of Equity for S&P 500, Quarters June 2007–June 2009

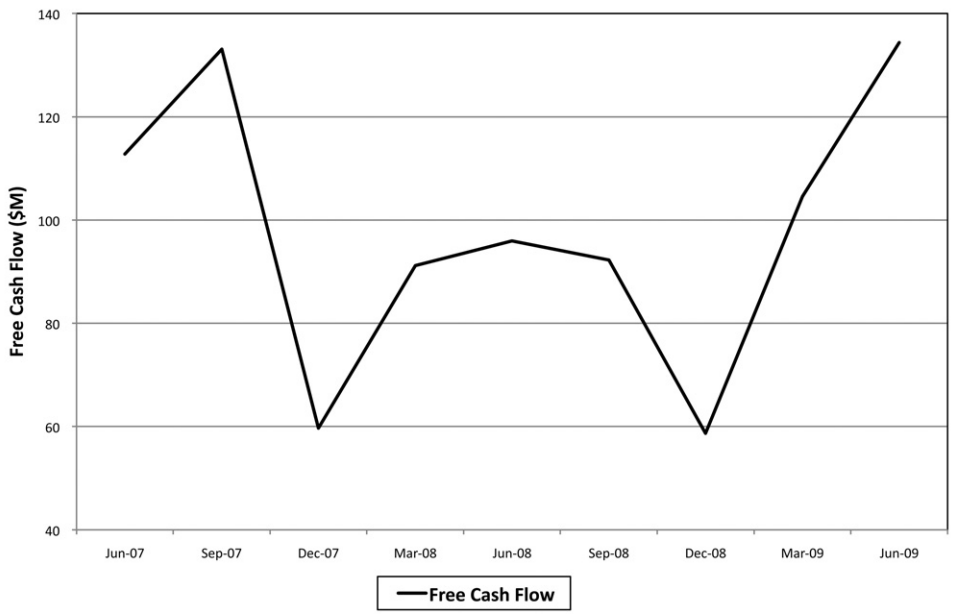


As Figure 6-3 illustrates, free cash flow increased 40 percent year over year for the one-year period ending June 2009, led by aggressive balance-sheet and discretionary expenditure management, without which free cash flow would have remained flat. The figure also shows the initial drop in free cash flow resulting from the recession and subsequent improvement starting in the March 2009 quarter, coinciding with the equity market rally.

Several S&P 500 companies saw their free cash flow decline, accompanied by an increase in leverage, yet saw a sharp rise in their stock price over the period, such as Archer Daniels, Interpublic, Jabil, and Massey Energy. For these companies, their (normalized) three- and four-year average free cash flows divided by their market capitalization were far in excess of the 10-year Treasury yield, and their fixed-charge coverage indicated that they would be able to continue to service their fixed-income obligations. As it became apparent that the United States would not suffer a depression, more leveraged firms saw outsized returns, especially those having a history of adequate normalized cash generation.

FIGURE 6-3

Free Cash Flow for S&P 500 Index by Quarter, June 2007–June 2009



ADJUSTED DEBT

As with most non-GAAP yardsticks, the term *adjusted debt* takes many forms. This is true for reporting companies and credit-rating agencies. In their credit analyses, rating agencies normally define adjusted debt to include debt outstanding plus an adjustment to capitalize the operating leases.

It is fairly common for companies to design leverage yardsticks applicable to their own circumstance or that of their industry. For instance, Ralph Lauren and Nordstrom calculate adjusted debt as balance-sheet debt plus eight times their rent expense, believing that the latter is a fair approximation of their total capitalized operating leases. Brookdale Senior Living, Inc., takes this definition and subtracts available cash and cash equivalents.

FedEx considers adjusted debt to be long-term debt, including the current portion of such debt, plus six times rentals and landing fees. McDonalds states in its 10K that rating agencies exclude certain leases outside the United States that are cancellable with minimal penalty, capitalizing nonrestaurant leases at three times rent expense and reducing total rent expense by a percentage of the annual minimum rent payments due the company from franchisees. Schlumberger, Inc., calculates its adjusted net debt, which it defines as gross debt minus cash and investments that could be used to retire that debt. It also shows a modified cash-flow statement showing the change in net debt.

Regardless of the method used to capitalize the operating leases (Table 6-4) and adjust other debt, the result typically is a more accurate presentation of debt (than the balance sheet itself) to be compared with shareholders' equity and cash flows when making credit decisions.

Net debt also should be used to adjust the present value of free cash flow, as also shown for Schlumberger in Table 6-4, to arrive at fair value. For instance, the fair-equity-value estimate of Schlumberger requires, after arriving at the present value of its free cash flow using an appropriate cost of equity capital, subtracting its net debt (or net debt per share) of $1.1 billion and three months' working capital. Since Schlumberger generates positive and consistent free cash flows, probably no more than three months of working capital on hand is needed, especially given that the firm has sufficiently strong lines of credit available.

BUYING BACK DEBT

Buying back outstanding debt issued when interest rates were high and selling new low-interest debt in its place does not make economic sense if the market values and maturity dates are identical. Although it would appear that the entity would be

TABLE 6-4

Schlumberger Calculation of Adjusted Net Debt from Its 2008 10K (In Millions)

	2008	2007	2006
Net debt, beginning of year	**$(1,857)**	$(2,834)	$(532)
Net income	**5,435**	5,177	3,710
Excess of equity income over dividends received	**(235)**	(189)	(181)
Depreciation and amortization (includes multiclient seismic data costs)	**2,269**	1,954	1,561
Increase in working capital	**(591)**	(541)	(341)
Pension plan contributions	**(290)**	(250)	(251)
Capital expenditures	**(3,723)**	(2,931)	(2,457)
Multiclient seismic data capitalized	**(345)**	(260)	(180)
Proceeds from employee stock plans	**351**	622	442
Stock repurchase program	**(1,819)**	(1,355)	(1,068)
Dividends paid	**(964)**	(771)	(568)
Eastern Echo acquisition	**—**	(699)	—
Acquisition of minority interest in WesternGeco	**—**	—	(2,406)
Other business acquisitions	**(345)**	(286)	(577)
Conversion of debentures	**448**	656	—
Distribution to joint venture partner	**—**	—	(60)
Translation effect on net debt	**166**	(128)	(66)
Other	**371**	(22)	140
Net Debt, end of year	**$(1,129)**	$(1,857)	$(2,834)
Components of Net Debt	**Dec. 31, 2008**	**Dec. 31, 2007**	**Dec. 31, 2006**
Cash	**$189**	$197	$166
Short-term investments	**3,503**	2,972	2,833
Fixed income investments, held to maturity	**470**	440	153
Bank loans and current portion of long-term debt	**(1,598)**	(1,318)	(1,322)
Convertible debentures	**(321)**	(769)	(1,425)
Other long-term debt	**(3,372)**	(3,379)	(3,239)
	$(1,129)	$(1,857)	$(2,834)

saving cash from the gap in coupon rates, this is not always correct. If, however, the firm is desirous of "locking" in rates over a longer maturity, it might wish to do so. The cash impact of any swapping would be reported in the financing activities section of the cash-flow statement.

While normally a firm will show a separate line entry for early extinguishment of debt, this is not always the case. For instance, in 2009, Textron reported its loss of an early extinguishment of debt into selling, general, and administrative (SG&A) expense. When calculating the growth rate in SG&A for the estimation of free cash flow, this loss should be removed, as should all such atypical inputs.

GOODWILL

How should balance-sheet goodwill be viewed by the equity analyst? Goodwill is measured as the excess of the purchase price of a purchased business over the fair value of the tangible and intangible assets acquired minus the liabilities assumed. If there is a bargain purchase, where the acquirer pays less for the assets than the stated amount, *negative goodwill* occurs, and the buyer is required to recognize such excess in earnings as a gain. This would be recognized as a noncash event in operating activities.

Goodwill has measurable value to the extent the assets it represents can produce free cash flow in excess of the firm's cost of capital. Since goodwill represents an economic benefit, to the extent that this benefit is impaired, so too must its value, including a possible increase in stability metrics related to the firm's cash flows. But because the value of goodwill is included in the calculation of ROIC, its write-down could distort the analysis of management's ability to spend and earn a rate of return in excess of its cost of capital. In theory, an entity should write down all assets that do not produce a cash return at least equal to its cost of capital, as assets should reflect economic reality. Impairments, by themselves, do not affect free cash flow and that is why we look to growth rates in that measure when selecting an investment portfolio.

For the cash-flow analyst, the governing rule, SFAS 109, *Accounting for Income Taxes*, does not permit the recognition of deferred taxes related to goodwill that is not deductible for tax purposes. If the assets creating the goodwill are expected to be of indefinite value, the goodwill is not amortized, and the related deferred tax liabilities will not reverse until those assets become impaired. The tax treatment of the goodwill depends on the expenditures that created the goodwill. If an acquisition is structured as a stock purchase, no amortization of goodwill is permitted. If the purchase is structured as an asset purchase, goodwill is amortized over 15 years using straight-line depreciation. For shareholder reporting, goodwill normally is not amortized unless the assets are deemed impaired.

When goodwill is not tax deductible, any book/tax difference is considered a permanent difference, and no deferred taxes are recognized. When goodwill is tax deductible and is being amortized on the corporate return, it creates a deferred tax liability once the amortization period is up. When a company makes an acquisition,

it may be required to reclassify its acquired intangible assets as goodwill if the intangibles are not tax deductible, and any deferred tax liability associated with those intangibles will be reversed as a reduction to goodwill.

As part of the Omnibus Budget Reconciliation Act of 1993, Congress added Section 197 to the Internal Revenue Code:

> **(a) General Rule**
>
> A taxpayer shall be entitled to an amortization deduction with respect to any amortizable section **197** intangible. The amount of such deduction shall be determined by amortizing the adjusted basis (for purposes of determining gain) of such intangible ratably over the 15-year period beginning with the month in which such intangible was acquired.
>
> For purposes of this section—
>
> **(1) In general**
> Except as otherwise provided in this section, the term "section 197 intangible" means—
>
> **(A)** goodwill,
>
> **(B)** going concern value,
>
> **(C)** any of the following intangible items:
>
> **(i)** workforce in place including its composition and terms and conditions (contractual or otherwise) of its employment,
>
> **(ii)** business books and records, operating systems, or any other information base (including lists or other information with respect to current or prospective customers),
>
> **(iii)** any patent, copyright, formula, process, design, pattern, knowhow, format, or other similar item,
>
> **(iv)** any customer-based intangible,
>
> **(v)** any supplier-based intangible, and
>
> **(vi)** any other similar item,
>
> **(D)** any license, permit, or other right granted by a governmental unit or an agency or instrumentality thereof,
>
> **(E)** any covenant not to compete (or other arrangement to the extent such arrangement has substantially the same effect as a covenant not to compete) entered into in connection with an acquisition (directly or indirectly) of an interest in a trade or business or substantial portion thereof, and
>
> **(F)** any franchise, trademark, or trade name.

The following are listed by the IRS as not Section 197 intangibles and therefore are ineligible for amortization on the tax return:

1. Any interest in a corporation, partnership, trust, or estate.
2. Any interest under an existing futures contract, foreign currency contract, notional principal contract, interest-rate swap, or similar financial contract.
3. Any interest in land.
4. Most computer software (see below).
5. Any of the following assets not acquired in connection with the acquisition of a trade or business or a substantial part of a trade or business:
   a. An interest in a film, sound recording, videotape, book, or similar property.
   b. A right to receive tangible property or services under a contract or from a governmental agency.
   c. An interest in a patent or copyright.
   d. Certain rights that have a fixed duration or amount.
6. An interest under either of the following:
   a. An existing lease or sublease of tangible property.
   b. A debt that was in existence when the interest was acquired.
7. A right to service residential mortgages unless the right is acquired in connection with the acquisition of a trade or business or a substantial part of a trade or business.
8. Certain transaction costs incurred by parties to a corporate organization or reorganization in which any part of a gain or loss is not recognized.

Intangible property that is not amortizable under the rules for Section 197 intangibles can be depreciated if it meets certain requirements. You generally must use the straight-line method over its useful life. For certain intangibles, the depreciation period is specified in the law and regulations. For example, the depreciation period for computer software that is not a Section 197 intangible is generally 36 months.

For more information on depreciating intangible property, see "Intangible Property" under "What Method Can You Use to Depreciate Your Property?" in Chapter 1 of Publication 946.

Section 197 intangibles do not include the following types of computer software:

1. Software that meets all the following requirements:
   a. It is or has been readily available for purchase by the general public.
   b. It is subject to a nonexclusive license.
   c. It has not been substantially modified. This requirement is considered met if the cost of all modifications is not more than the greater of 25 percent of the price of the publicly available unmodified software or $2,000.
2. Software that is not acquired in connection with the acquisition of a trade or business or a substantial part of a trade or business.

To see if investors penalize entities that have large amounts of goodwill relative to shareholders' equity, all companies (including companies that became inactive through merger or bankruptcy) that had greater goodwill than equity were studied, with no other financial considerations taken into account; if goodwill had been valued at zero for these entities, shareholders' equity would have turned negative. For the five years ending November 2009, this group had a median stock return of 1.4 percent, virtually in line with the average return of each sector these companies are a member of. The companies had a median market value of $1.5 billion, $918 million in goodwill and $436 million in shareholders' equity. Based on this one study, it appears that investors do not penalize firms having excessive goodwill when making buy/sell decisions.

Because SFAS 109 requires periodic testing for impairment of goodwill, analysts should consider it in their calculation of shareholders' equity. If these assets fail to produce cash flows in excess of the firm's cost of capital, it will quickly show in the reporting periods and affect the free-cash-flow multiple, growth rate in free cash flow, stability of cash flows, and associated metrics, including cash flow/debt and ROIC. Given the preceding study, any write-down is most likely already reflected in the market price.

OFF-BALANCE-SHEET LIABILITIES

Certain significant current and potential legal liabilities may not appear on the balance sheet. For example, joint-venture entities may have debt obligations that do not appear on either equity owners' balance sheets but may represent legal or moral obligations of the joint-venture partners. The analyst should consider the likelihood that the joint-venture entity will be unable to service such obligations.

Special-purpose entity (SPE) debt is now required, under most circumstances, to be included in the consolidated balance sheet, even if nonrecourse. I will discuss this later in this chapter under SFAS 166.

If the likelihood of default is minimal and the debt is nonrecourse such that the joint-venture entity has at least three times fixed-charge coverage and operating cash flow capable of servicing the principal debt, the analyst may exclude the debt from the owner's balance sheet; otherwise, it could be included based either on the proportionate share of ownership or on exposure of repayment, which would be the case if one of the joint-venture partners was incapable of satisfying a claim. This nonrecourse debt would be included if this were a moral obligation on the part of the equity owner to see that the debts were paid. Some entities may give the debt holder other collateral or new debt to replace the bad debt. In the case of Pulte Homes, its joint venture defaulted under its debt agreement.

Example:

At December 31, 2008 and 2007, aggregate outstanding debt of unconsolidated joint ventures was $519.3 million and $602.5 million, respectively, of which our proportionate share of such joint venture debt was $92.0 million and $134.0 million, respectively. Of our proportionate share of joint venture debt, we provided limited recourse guaranties for $84.3 million and $124.5 million of such joint venture debt at December 31, 2008 and 2007, respectively.

Source: Pulte Homes 2008 10K.

While obligations for payment appearing on the balance sheet and with explanation in debt footnote are clear, off-balance-sheet liabilities are often less so. These obligations will be discussed throughout this chapter and may be explicit, in the case of guarantees, or implicit, in the case of implied or moral commitments. For example, even though an entity has sold accounts receivable on a nonrecourse basis, it may feel an obligation to make the buyer whole out of fear that such future sales will be impossible if the expected return to the buyer falls short.

The projected statement of cash flows should reflect any off-balance-sheet payments. Commitment or contingency payments, a common off-balance-sheet liability, normally become compulsory only on a trigger, as would be called for by a loan guaranty or a supply contract. If business conditions deteriorate and a purchase contract calls for delivery of unneeded product at prices above current market value, the projected cash-flow statement must reflect that payment due, with its commensurate impact on leverage. The firm's ability to make payment

on these obligations must be assessed in light of expected cash flow, balance-sheet liquidity, and other calls on capital, such as maturing debt, or other commitments. At a minimum, prospective free cash flows would be affected because cash paid to suppliers could well exceed collections on the firm's receivables.

When energy prices spiked upward during the 1990s, pipelines and utility companies were required under so-called take-or-pay contracts to accept large volumes of oil and gas at prices far in excess of the then-current market price, having signed such contracts under fear they would not have either their needed supply or be required, owing to market conditions, to pay even higher prices than the contracts called for. Several companies filed bankruptcy as a result of these onerous provisions.

Example:

Resolute Energy Corp. is an oil and gas company engaged in exploration and development.

> Resolute is required to take on a monthly basis, or pay for if not taken, a percentage of the total of the maximum daily quantities for each month during the term of the Kinder Morgan contract. The percentage is 80% for 2009 and 75% for the remainder of the contract term. There are make-up provisions allowing any take or pay payments it makes to be applied against future purchases for specified periods of time. Resolute has a one time right to reduce committed volumes under the contract by up to approximately 41 Bcf for 25% of the contract price at the time the volumes are released. It does not have the right to resell CO_2 required to be purchased under the Kinder Morgan contract. As of December 31, 2008, Resolute had made payments of $94,290 under this contract for 134,708 Mcf of CO_2 for which it had not yet taken delivery.

Source: Resolute Energy Form S4, August 28, 2009.

So great were the liabilities resulting from take-or-pay contracts that merger agreements in the energy industry now contain a fairly standard clause stipulating that the party being acquired has either a small or no such obligation in existence.[8]

Companies are required to provide comprehensive explanations of any such arrangements and agreements in their annual and quarterly reports, registration statements, and proxy and information statements. In addition, companies must determine whether the contracts underlying these arrangements are material contracts required to be filed as exhibits.

Not all agreements with suppliers incur contingent or reportable liabilities. For example, to induce large restaurant chains to purchase their syrup, Coke and

[8] During 2001, Columbia Gas Systems unexpectedly filed for bankruptcy owing to natural gas take-or-pay obligations.

Pepsi often pay those customers large upfront cash payments for exclusivity in their stores and their agreement to take a certain volume. However, their clients incur no legal obligation to take such volume, although it is in those customers' best interest to work off the deal quickly so that they can receive another large cash payment. Until the supply is exhausted, the restaurant operator is prohibited from using the competitor's product.

Example:

During the year ended June 30, 2000, the company entered into long-term, exclusive contracts with The Coca-Cola Company and with Dr Pepper/Seven Up, Inc., to supply the company and its franchise restaurants with their products and obligating Burger King restaurants in the United States to purchase a specified number of gallons of soft drink syrup. These volume commitments are not subject to any time limit. As of June 30, 2009, the company estimates that it will take approximately 13 years to complete the Coca-Cola and Dr Pepper/Seven Up, Inc., purchase commitments. In the event of early termination of these arrangements, the company may be required to make termination payments that could be material to the company's results of operations and financial position. Additionally, in connection with these contracts, the company received upfront fees, which are being amortized over the term of the contracts. As of June 30, 2009 and 2008, the deferred amounts totaled $16.1 million and $17.2 million, respectively. These deferred amounts are amortized as a reduction to food, paper, and product costs in the accompanying consolidated statements of income.

Source: Burger King Holdings, Inc., 2009 10K.

Typically, the most common and largest off-balance-sheet liability is the operating lease, which I will soon discuss. However, off-balance-sheet liabilities, especially coming under the umbrella of a special-purpose entity, can be as creative as lawyers and investment bankers can imagine.

SPECIAL-PURPOSE ENTITIES

A *special-purpose entity* (SPE) is a structured finance vehicle typically designed to provide financing to a firm or its customers. The SPE was conceived originally as a sales tool, such as when companies set up such separate entities as leasing divisions to help customers finance a purchase. Thus the SPE began as a legitimate tool that allowed many companies to propel their growth while allowing the parent or holding company to maintain an acceptable level of risk by separating the two structures. With the Enron debacle, a closer look at SPEs

brought forth a wave of changes in their formation and accounting regulations, including SFAS 166 and SFAS 167, which took effect January 2010 and required, under many circumstances, consolidation of debt and other information pertaining to SPEs and securitizations. As originally intended, the SPE still represents a viable and important selling aid that enables firms to compete for business that could not obtain bank financing

In the SPE, assets are siphoned off and placed in a separate legal entity. This entity then can borrow and pay expenses and is subject to risks as with any corporation. Since many of the more infamous SPEs were levered, when tough times arose, the cash flows from their assets were not sufficient to repay their debts, and the owners of their equity and debt capital were stuck with massive losses.

The true amount of Enron's debt escaped most investors who believed the story line coming out of the conference calls, including Merrill Lynch, whom the SEC accused of abetting and aiding Enron. We thus learned that the SPE needed to be analyzed with the precision and diligence one would use when evaluating any concern and especially for the implications it held for its owners and creditors. Many SPEs were poorly capitalized and could not stand up to the strains of a poor economic climate.

Today, many SPEs are used to remove (or place new debt) off the consolidated balance sheet, including lease obligations, sometimes referred to as *synthetic leases*. As a result, the Financial Accounting Standards Board (FASB) issued Interpretations 46 and 46R, *Consolidation of Variable Interest Entities*. The objectives of 46R were to explain how to identify variable-interest entities (VIEs) and how to determine when a business enterprise should include the assets, liabilities, noncontrolling interests, and results of activities of a VIE in its consolidated financial statements. I will provide an example involving this standard later in this chapter.

CONTINGENT LIABILITIES

Another potential off-balance-sheet liability is that related to contingent liabilities, which could be included in leverage ratios, depending on the circumstances. If large enough, contingent liabilities can severely impair an entity or even induce bankruptcy. These include obligations that occurred before the end of the fiscal year but whose effect on the financial statements is not clearly determinable on that date.[9]

[9] On April 1, 2009, the FASB issued Staff Position 141R, which reduced the recognition of contingent assets and liabilities acquired during a business combination to those which can be *reasonably* determined from being more likely than not to give rise to an asset or liability.

Example:

Contingent obligations can either be *contractual* or *non-contractual* in nature. For example, if a subsidiary is facing financial difficulties, its parent company may be contractually obligated to cover the subsidiary's debt service payments under the terms of a guarantee. In another example, financial institutions may provide standby liquidity facilities or letters of credit, which contractually require funding under certain conditions and could result in potentially significant liquidity calls and exposure to credit risk.

Non-contractual contingent obligations are those that arise unexpectedly such as lawsuits or those created by the requirements of regulatory or environmental agencies. Unlike contractual contingent obligations and the other two categories of OBS exposures, non-contractual contingent obligations are difficult to measure due to their uncertainty.

Source: Moodys.com.

For many years, contingent liabilities, because they are normally relegated to the footnotes of financial statements, were merely an afterthought for many investors and analysts—until the financial crisis began in 2007. To many analysts, they were considered an ordinary cost of doing business—mere formalities or simple hedges—and because of that, they were believed to be conservative in nature. At least that was what analysts were hearing from many CFOs.

Contingent liabilities can run the gamut of circumstances and are recorded on the balance sheet only if the contingency is both probable and the amount can be estimated. If the contingent liability is only possible, or if the amount cannot be estimated, only a disclosure is required. If the contingent liability is remote, no disclosure is required.

A common contingent liability found in financial statements is product warranties because manufacturers can reasonably estimate, based on history, their amount and probability. Other examples of contingent liabilities include lease agreements, forward purchase or sale commitments, guarantees, standby liquidity agreements, letters of credit, environmental remediation, and unwinding loss-plagued financial instruments.

Contingency payments with regard to lawsuits are also common, and the financial consequences can be significant. For this reason, exposure to lawsuits is included in my cost-of-equity credit model. It is rare for companies to admit, on being handed a lawsuit, that the plaintiffs have a weak case and thus downplay its significance. Because such contingent liabilities often cannot be estimated (they are subject to judgment), they are normally relegated to a footnote. Unfortunately,

financial history has seen many formerly very healthy entities forced into bankruptcy or severely weakened as a result of lost verdicts and settlements, most recently those related to asbestos. A. H. Robbins was a strong credit until faced with thousands of lawsuits and many millions of dollars in claims resulting from its manufacture of the Dalkon Shield. It ultimately filed bankruptcy. Dow Corning was the subject of many hundreds of claims resulting from its manufacture of silicone gel breast implants and also filed bankruptcy.

Not only can lawsuits have a devastating effect on current finances, they also can force a shift in operating decisions if the risk associated with the research into or sale of a product are deemed to be too great. It is an unfortunate aspect of our society that litigation risk has prevented important research from going forward.

Since the 1990s, there have been an increasing number of successful lawsuits related to a company's financial engineering. For instance, Lucent paid $517 million and Oxford Health $300 million as a result of such lawsuits. Class-action lawsuits now take place in every country having an active stock exchange.

The analyst therefore cannot glance over contingencies because such payments not only could prove substantial, but they also divert management focus. Lawsuits have been most notable for the tobacco industry, where several awards were massive, and were thought by analysts at the time to potentially bankrupt the companies involved. In addition, even if the risk of loss from a lawsuit is remote, litigation expense is assured, always costly, and must be considered when preparing a cash-flow projection.

While cash outlays for contingencies are, in many instances, difficult to estimate, the same is not true for commitments. A firm normally would agree to a commitment if it is either concerned about the supply of an important input or is concerned about future prices of the input. When an entity agrees to a commitment, it represents a legal obligation; therefore, a review must take place for its capacity to do so and the extent of future cash obligations that could result. For instance, asset-retirement obligations (AROs) incurred by power companies to decommission power plants would be studied for both the change in cash flows resulting from the plant and all costs agreed to resulting from its dismantling.

The risks to the entity signing a commitment agreement to purchase inputs, such as raw materials or energy, are that demand for its product does not materialize or the cost of the goods falls in price. The analyst must ask, What if demand for the entity's products were to fall? What if the price of the committed material were to fall by half? Or more? How would that affect the firm's cash flow and leverage? Could it be used at a later time? Is the possibility already reflected in the price of the company's debt, equity, and cost of capital (risk profile)? As history has shown, this is more than a theoretical exercise.

Example:

Rancher Energy Corp. acquires, explores for, develops, and produces oil and natural gas in North America. The following is from its 2009 10K:

> Our existing contracts with ExxonMobil and Anadarko contain provisions under which we are required to take delivery of certain volumes of CO_2 or pay the seller for the volume difference between the required quantity and the volume actually purchased. If we are unable to secure sufficient financing to construct a pipeline and to develop and prepare our properties for the injection of CO_2 we will be unable to take delivery of CO_2 and our cash position at that time will not be sufficient to pay for the take-or-pay volume.

Example:

Reddy Ice Holdings, Inc., engages in the manufacture and distribution of packaged ice in the United States. The following is taken from its June 30, 2009 10Q:

Commitments and Contingencies

In order to secure a long-term supply of plastic bags at favorable prices, the company entered into a supply agreement with a plastic bag manufacturer (the "Bag Supply Agreement") in which it committed to purchase 250 million bags per twelve-month period beginning March 1, 2008. The Bag Supply Agreement expires on March 1, 2013. On March 9, 2009, the Bag Supply Agreement was amended to start on January 1, 2008 and end on December 31, 2012 and modify certain other provisions. The annual commitment to purchase 250 million bags remains in effect. The company anticipates being in compliance with the terms of the contract at December 31, 2009.

The following is a discussion of the company's significant legal matters. The company is involved in various claims, suits, investigations, and legal proceedings. The company accrues a liability when it believes that it is both probable that a liability has been incurred and that it can reasonably estimate the amount of the loss. At September 30, 2009, and December 31, 2008, no accruals had been made in connection with the matters discussed below.

Example:

A. O. Smith Corporation engages in the manufacture and sale of water-heating equipment and electric motors for residential, commercial, and industrial end markets. The following is from its 2009 10K. The company is insured against large claims and self-insures against small claims to maintain low insurance premium payments. Insurance is a costly expense, so all companies self-insure to some degree.

Commitments and Contingencies

The company is subject to various claims and pending lawsuits for product liability and other matters arising out of the conduct of the company's business. With respect to product liability claims, the company has self-insured a portion of its product liability loss exposure for many years. The company has established reserves which it believes are adequate to cover incurred claims. For the years ended December 31, 2008 and 2007, the company had $125 million of product liability insurance for individual losses in excess of $5 million. The company periodically reevaluates its exposure on claims and lawsuits and makes adjustments to its reserves as appropriate. The company believes, based on current knowledge, consultation with counsel, adequate reserves, and insurance coverage, that the outcome of such claims and lawsuits will not have a material adverse effect on the company's financial position, results of operations, or cash flows.

Example:

Dollar General paid $32 million to settle a lawsuit rather than undergo a lengthy trial during the period it sought to sell equity to be used to pay down debt. The company's management did not want the "overhang" of a potential large liability to weigh on the IPO.

DOLLAR GENERAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(In Thousands Except Per-Share Amounts)

	Successor		Predecessor	
	For the Year Ended January 30, 2009	March 6, 2007 Through February 1, 2008(a)	February 3, 2007 Through July 6, 2007	For the Year Ended February 2, 2007
Net sales	$10,457,668	$5,571,493	$3,923,753	$9,169,822
Cost of goods sold	7,396,571	3,999,599	2,852,178	6,801,617
Gross profit	3,061,097	1,571,894	1,071,575	2,368,205
Selling, general, and administrative expenses	2,448,611	1,324,508	960,930	2,119,929
Litigation settlement and related costs, net	32,000	—	—	—
Transaction and related costs	—	1,242	101,397	—
Operating profit	580,486	246,144	9,248	248,276
Interest income	(3,061)	(3,799)	(5,046)	(7,002)
Interest expense	391,932	252,897	10,299	34,915
Other (income) expense	(2,788)	3,639	—	—
Income (loss) before income taxes	194,403	(6,593)	3,995	220,363
Income tax expense (benefit)	86,221	(1,775)	11,993	82,420

	Successor		Predecessor	
	For the Year Ended January 30, 2009	March 6, 2007 Through February 1, 2008(a)	February 3, 2007 Through July 6, 2007	For the Year Ended February 2, 2007
Net income (loss)	$108,182	$(4,818)	$(7,998)	$137,943
Earnings (loss) per share:				
Basic	$0.19	$(0.01)		
Diluted	$0.19	$(0.01)		
Weighted-average shares:				
Basic	554,792	554,360		
Diluted	555,630	554,360		

Source: Dollar General August 2009 S1.

Although Dollar General's payment might be considered *de minimus* in relation to its equity, such is not always the case, as a review of Form 10Ks will attest.

Analysts must access litigation risk even when there is minor ongoing litigation because from time to time small lawsuits, if they are successful, can spread rapidly into many large class-action fillings. The analyst must determine if this possibility exists. For the small filing, the analyst must understand, to the extent possible, the facts involved, whether the company is potentially at fault, and if so, whether the lawsuit is contagious. A thorough review of the financial filings must be made because company executives normally do not make recent lawsuits a regular part of scheduled conference calls or investor presentations. Credit reports also report lawsuits, as do other services. Because large legal liabilities could have an important effect on an entity's ability to function, they must be considered in the risk profile, affecting the cost of equity capital. If lawsuits, including legal expenses, represent over 5 percent of the entity's cash flow from operations, the analyst must possess a very detailed understanding of the facts involved and consider a worst-case scenario. Cost of capital will be adjusted upward, as it would be in my credit model.

Example:

In a September 4, 2009, "Heard on the Street" *Wall Street Journal* column, the author noted that shares of Moody's and McGraw-Hill declined 7 and 10 percent after a federal judge ruled that the companies will have to defend themselves against fraud claims relating to ratings on a collapsed investment vehicle. The article noted that while the ruling does not conclude that Moody's or S&P (a division of McGraw-Hill) did anything wrong, it does show how the ratings agencies may be legally vulnerable. The article pointed out that Moody's latest quarterly filing implied that liability from litigation and regulatory actions would not be materially adverse.

How do companies account for commitments and contingencies? The FASB postulated in SFAS 5 three degrees of uncertainty: probable, reasonably possible, and remote. The firm must set a liability for an expected obligation if it is *probable* that a liability has been incurred *and* the amount of the liability can be reasonably estimated.[10] For example, when a firm distributes coupons that can be redeemed with purchases of future merchandise, a contingent liability exists and must be accrued. In such a case, it is almost certain that a large proportion of the coupons will be presented in the next accounting period. Furthermore, the firm can reasonably forecast what percentage of the coupons will be presented by the due date. Thus a liability is accrued on the balance sheet with an offsetting charge against income.

When the liability involves a lawsuit, the analyst must, in his or her best judgment, attempt to estimate any follow-on legal claims, as well as any insurance covering the liability. If the total value of the claims is in excess of the insured loss, it could devastate the entity.

Example:

On April 10, 2007, an individual shareholder of Vitesse, Jamison John Dupuy, filed a complaint in the Superior Court of California, County of Ventura, against Vitesse and three of its former officers (Case No. CIV 247776). Mr. Dupuy's complaint included causes of action for fraud, deceit, and concealment and violation of California Corporations Code §§25400 et seq. Vitesse filed an answer, asserting numerous affirmative defenses. On March 3, 2008, Mr. Dupuy filed an amended complaint that named six new defendants, all former employees, and included new causes of action for negligent misrepresentation and violations of California Corporations Code §1507. On April 4, 2008, after mediation before a retired U.S. District Judge for the Central District of California, the parties entered into a confidential settlement agreement, and the plaintiff filed a dismissal of the action. The company has recorded a liability for this settlement, and the related expense is reflected in the accompanying financial statements.

Source: Vitesse Semiconductor 2008 10K.

The cash-flow analyst must examine the footnote on contingencies closely to determine if any events occurred that may affect cash flows in the future, although

[10] In "Materiality and Contingent Tax Liability Reporting," by Gleason and Mills (*The Accounting Review*), the authors found that many companies failed to disclose IRS claims, even though they exceeded 5 percent of income.

they had not been given accounting recognition in the financial statements. The analysis should include past acquisitions that might require additional future payments of cash, stock, or debt on the attainment of certain predefined targets. If an asset sale was involved, the entity might be due additional cash.

Should the cash-flow analyst add purchase commitments to leverage ratios, as one would add operating leases? I include the obligation to total debt only if the supply is not needed and cannot be expected to be used in the current operating cycle. Since the unneeded product or material would not result in free cash flow, it must be considered a liability.

An announced acquisition or business combination ordinarily results in new commitment obligations for the acquirer. The analyst's examination of the company to be acquired should include:

1. Irrevocable standby letters of credit that guarantee payment of a specified obligation
2. Market-value guarantee of assets owned by the guaranteed party
3. Guarantee of the market price of common stock by the acquirer
4. Guarantee of the collection of cash flows from assets held by any special-purpose entity
5. Indirect guarantees of the indebtedness of others, including moral obligations
6. Indemnification agreements that require the guarantor to make payments to the indemnified party

SFAS 141 (revised in 2007) provides the accounting and disclosure requirements for contingent gains and losses recognized as part of a business combination.

Example:

Cracker Barrel Old Country Store, Inc., operates 591 restaurants. Shown, from their 2009 10K, are their contractual obligations and commitments. As expected for this industry, operating lease obligations are substantial and become particularly relevant for locations that cannot generate free cash flow. Often the entity is not let out of the lease or is required to pay a large settlement to be let out. Cracker Barrel also leases billboards used to advertise its stores. The $257.3 million in purchase commitments for food, capital expenditures, and other trade payables may seem large but is reasonable given that Cracker Barrel has annual revenues of almost $2.4 billion

As seen in the footnote, Cracker Barrel does pay its lenders a usage fee to keep the credit facilities available. During the 2008 credit crises, many financial companies took advantage of such standby agreements, fearing a liquidity issue. Other entities like having the credit available if a suitable business opportunity arises.

Contractual Obligations[a]	Total	2010	2011–2012	2013–2014	After 2014
Term loan B[b]	$600,000	$6,847	$13,695	$579,458	—
Delayed-draw term loan facility[b]	45,000	459	918	43,623	—
Note payable[c]	473	110	218	145	—
Operating leases excluding billboards[d]	765,144	36,890	71,269	72,381	$584,604
Operating leases for billboards	26,780	18,339	8,369	72	—
Capital leases	89	22	44	23	—
Purchase obligations[e]	257,276	98,521	99,185	52,699	6,871
Other long-term obligations[f]	29,002	—	2,177	444	26,381
Total contractual cash obligations	$1,723,764	$161,188	$195,875	$748,845	$617,856

	Amount of Commitment Expirations by Year				
	Total	2010	2011–2012	2013–2014	After 2014
Revolving credit facility[g]	$250,000	—	$250,000	—	—
Standby letters of credit	33,892	$6,930	26,962	—	—
Guarantees[h]	2,919	555	1,705	$659	—
Total commitments	$286,811	$7,485	$278,667	$659	—

[a] At July 31, 2009, the entire liability for uncertain tax positions (including penalties and interest) is classified as a long-term liability. At this time, we are unable to make a reasonably reliable estimate of the amounts and timing of payments in individual years due to uncertainties in the timing of the effective settlement of tax positions. As such, the liability for uncertain tax positions of $26,137 is not included in the contractual cash obligations and commitments table above.

[b] The balances on the Term Loan B and Delayed-Draw Term Loan, at July 31, 2009, are, respectively, $600,000 and $45,000. Using the minimum principal payment schedules on the Term Loan B and Delayed-Draw Term Loan facilities and projected interest rates, we will have interest payments of $44,203, $86,056, and $30,415 in 2010, 2011–2012, and 2013–2014, respectively. These interest payments are calculated using a 7.07% and 4.12% interest rate, respectively, for the swapped and unswapped portion of our debt. The 7.07% interest rate is the same rate as our fixed rate under our interest rate swap plus our credit spread at July 31, 2009 of 1.50%. The projected interest rate of 4.12% was estimated by using the average of the three-year and five-year swap rates at July 31, 2009 plus our credit spread of 1.50%.

[c] The note payable consists of a five-year note with a vendor in the original principal amount of $507 and represents the financing of prepaid maintenance for telecommunications equipment. The note payable is payable in monthly installments of principal and interest of $9 through October 16, 2013, and bears interest at 2.88%. Principal and interest payments for the note payable are included in the contractual cash obligations and commitments table above.

[d] Includes base lease terms and certain optional renewal periods, for which at the inception of the lease, it is reasonably assured that we will exercise.

[e] Purchase obligations consist of purchase orders for food and retail merchandise; purchase orders for capital expenditures, supplies and other operating needs and other services; and commitments under contracts for maintenance needs and other services. We have excluded contracts that do not contain minimum purchase obligations. We excluded long-term agreements for services and operating needs that can be cancelled within 60 days without penalty. We included long-term agreements and certain retail purchase orders for services and operating needs that can be cancelled with more than 60 days notice without penalty only through the term of the notice. We included long-term agreements for services and operating needs that only can be cancelled in the event of an uncured material breach or with a penalty through the entire term of the contract. Due to the uncertainties of seasonal demands and promotional calendar changes, our best estimate of usage for food, supplies, and other operating needs and services is ratably over either the notice period or the remaining life of the contract, as applicable, unless we had better information available at the time related to each contract.

[f] Other long-term obligations include our Non-Qualified Savings Plan ($22,583, with a corresponding long-term asset to fund the liability; see Note 13 to the Consolidated Financial Statements), Deferred Compensation Plan ($3,798), FY2007, FY2008, and FY2009 Long-Term Retention Incentive Plans ($2,158), and FY2009 District Manager Long-Term Performance Plan ($463).

[g] We did not have any outstanding borrowings under our Revolving Credit Facility as of July 31, 2009. We paid $493 in non-use fees (also known as commitment fees) on the Revolving Credit Facility during 2009. Based on having no outstanding borrowings at July 31, 2009 and our current unused commitment fee as defined in the Credit Facility, our unused commitment fees in 2010 would be $545; however, the actual amount will differ based on actual usage of the Revolving Credit Facility in 2010.

[h] Consists solely of guarantees associated with properties that have been assigned. We are not aware of any non-performance under these arrangements that would result in us having to perform in accordance with the terms of those guarantees.

Example:

ING Group is a Dutch banking and insurance company. As seen from its 20F, the company separates commitments and guarantees by their segments of operation. Although ING states that most contingencies are short term, they are normally rolled over.

CONTINGENT LIABILITIES AND COMMITMENTS

	2008	2007
Insurance operations		
Commitments	**4,221**	4,477
Guarantees	**2,460**	173
Banking operations		
Contingent liabilities in respect of		
Discounted bills		
Guarantees	**1**	1
Irrevocable letters of credit	**22,391**	19,018
Other	**10,458**	11,551
Irrevocable facilities		
	89,081	100,707
	129,065	136,277

Guarantees relate both to credit and noncredit substitute guarantees. Credit substitute guarantees are guarantees given by ING Group in respect of credit granted to customers by a third party. Many of them are expected to expire without being drawn on and therefore do not necessarily represent future cash outflows. The guarantees generally are of a short-term nature. In addition to the items included in contingent liabilities, ING Group has issued guarantees as a participant in collective arrangements of national industry bodies and as a participant in government required collective guarantee schemes that apply in different countries.

Irrevocable letters of credit mainly secure payments to third parties for a customer's foreign and domestic trade transactions in order to finance a shipment of goods. ING Group's credit risk in these transactions is limited because these transactions are collateralized by the commodity shipped and are of a short duration.

Other contingent liabilities include acceptances of bills and are of a short-term nature. Other contingent liabilities also include contingent liabilities resulting from the normal operations of the real estate business, including obligations under development and construction contracts. None of the items included in other contingent liabilities are individually significant.

Irrevocable facilities mainly constitute unused portions of irrevocable credit facilities granted to corporate clients. Many of these facilities are for a fixed duration and bear interest at a floating rate. ING Group's credit risk and interest-rate risk in these transactions are limited. Most of the unused portion of irrevocable credit facilities is secured by the customer's assets or counterguarantees by the central government and exempted bodies under the regulatory requirements. Irrevocable facilities also include commitments made to purchase securities to be issued by governments and private issuers.

Example:

In a footnoted table in its 10K, UPS, a company we will soon explore in greater detail, reported that it entered into substantial purchase commitments. From time to time, such purchase commitments actually represent value rather than a liability, as, for instance, would be the case if the product the company has committed to purchase has seen its price rise or is in such great demand that another buyer is willing to pay a premium for its spot in line. For instance, when the demand for aircraft was high, a ready market appeared for earlier spots on line for delivery from Boeing and Airbus. These early delivery spots often were sold.

Year	Capital Leases	Operating Leases	Debt Principal	Debt Interest	Purchase Commitments	Pension Fundings	Other Liabilities
2009	$83	$344	$2,007	$331	$708	$778	$74
2010	121	288	18	326	658	593	71
2011	29	217	5	326	667	828	69
2012	30	147	22	325	406	945	67
2013	31	109	1,768	285	—	964	65
After 2013	246	423	5,658	4,526	—	—	139
Total	$540	$1,528	$9,478	$6,119	$2,439	$4,108	$485

Source: UPS 2008 10K.

HEDGING

As we have seen in several examples, the use of hedging and derivatives is commonplace, regardless of industry. While it is not the intent of this text to delve into the minutiae of derivatives, a working knowledge is essential. An understanding of their accounting treatment, effect, and impact on the balance sheet, credit, and cash flow is an integral element of risk and cash-flow analysis, and lest we forget, they can either be ticking time bombs or an important and conservative management tool. If used with prudence, hedging indeed can reduce overall risk and allow the entity to concentrate on its operations with less concern for swings in the credit and commodity markets. In fact, many creditors, as part of their loan agreements with borrowers, require interest-rate swaps as protection on variable-interest-rate loans.

Keep in mind when evaluating hedging strategies, whether from the viewpoint of the analyst, creditor, or entity employing a hedging strategy, that the more volatile the markets, the more costly is the strategy. For an entity employing a

hedge, a period of low volatility results in less cost and higher cash flows, everything else being equal.

However, for entities that use derivatives as more than a hedging device, the risks are enormous. Even the esteemed Harvard University lost at least $500 million betting on the wrong side of swaps. Swaps are a type of derivative where two parties agree to exchange payments tied to a financing, typically receiving a variable-rate for a fixed-rate payment. For example, if an entity has a variable-rate loan and would like to insulate against the effects of increases in the base rate (i.e., LIBOR),[11] it can turn that loan into a fixed-rate loan through a swap. Harvard paid $497.6 million to investment banks during the fiscal year ended June 30, 2009, to get out of $1.1 billion of interest-rate swaps intended to hedge variable-rate debt for capital projects, the school's annual report said. The university also agreed to pay $425 million over 30 to 40 years to offset an additional $764 million in swaps.

Example:

Interest-rate exposure—The Company had outstanding bank debt in excess of $22.0 million as of May 31, 2009, all of which is subject to interest rate fluctuations by the company's lenders. Higher rates applied by the Federal Reserve Board could have a negative effect on the company's earnings. It is the intent of the company to continually monitor interest rates and consider converting portions of the company's debt from floating rates to fixed rates should conditions be favorable for such interest rate swaps or hedges.

Source: Video Display Corporation 2009 10K.

Hedging through interest-rate swaps is recorded on the balance sheet at fair value as either an asset or a liability in accordance with the SFAS 133. Changes in the fair value of such interest-rate swaps are recorded as nonoperating income or expense in each period. The fair value approximates the amount the company would receive if these contracts were settled at the respective valuation dates. Fair value is estimated based on current and predictions of future interest-rate levels

[11] The London Interbank Offered Rate (LIBOR) is based on the interest rates at which banks borrow unsecured funds from other banks in the London wholesale money market (or interbank market).

along a yield curve, the remaining duration of the instruments, and other market conditions and therefore is subject to significant estimation and a high degree of fluctuation between periods.

Example:

Wynn Resorts has used hedges in the form of interest-rate swaps to protect against an increase in the LIBOR for its variable-rate debt. As reported by the company, Wynn booked a $6.3 million credit in its income statement for the March 31, 2006 ending quarter compared with $7.7 million during the prior year. The reported income from the swaps, however, is a noncash event and therefore does not add to operating cash flow, although it does affect reported income and earnings per share. It is merely a change in the value of the financial agreement. This is seen in the statement of cash flows, where the line entry in the income statement is reversed under cash flows from operating activities. If Wynn had purchased additional protection or had changed the terms of the existing derivatives, necessitating a cash payment or receipt, we would see that as well in the cash-flow statement to the extent that it provided or required funds. Why would Wynn use interest-rate swaps? As shown in its long-term debt footnote, Wynn has about $636 million face value of variable-rate debt tied to LIBOR as part of its large total debt. Wynn recorded a $15.1 million asset on its balance sheet as of the statement date related to the gain. This amount can be expected to rise or fall quarterly based on the level of interest rates.

Evaluating Wynn's cash flow and risk resulting from the derivative activity, the analyst should view the interest-rate swaps as constructive. The firm is using the tool only to protect against the cost of rising rates on its variable-rate debt obligations. There is no other risk involved outside the cost of the protection, which is minimal compared with the total value of debt and the conceivable increase in cash payments resulting from a rise in interest rates if the hedges were not in place. The effect on cash flows is otherwise nil. Of more concern, in the case of Wynn, is the large amount of debt (from its expansion of new hotels) on its balance sheet resulting in a high cost of capital and whether the cash flows can adequately service that debt.

I would look at other industrial and service companies in a similar manner. Were the hedges necessary? Were they put in place as a conservative measure, as a fair-value or cash-flow hedge? Did the company put in place no more than what was needed to hedge effectively? Does the company need to constantly add or reduce its hedge exposure? What has been the company's experience using hedging instruments? Have the hedges resulted in a lower cost of debt capital? For Wynn, the answers are all positive.

Example: WYNN RESORTS

Interest-Rate Swaps

The company has entered into interest rate swap arrangements to effectively fix the interest on floating-rate debt borrowings. The following table presents the historical asset or (liability) fair values (reflected in deposits and other assets or in other long-term liabilities as appropriate) as of March 31, 2006 and 2005 and as of December 31, 2005 and 2004 (amounts in thousands):

	Wynn Las Vegas Interest-Rate Swaps	Wynn Macau Interest-Rate Swaps	Total Interest-Rate Swap Asset/ (Liability)
Asset/(liability) fair value on March 31, 2006	$13,878	$1,202	$15,080
Asset/(liability) fair value on December 31, 2005	$10,523	$(1,788)	$8,735
Asset/(liability) fair value on March 31, 2005	$8,283	$—	$8,283
Asset/(liability) fair value ont December 31, 2004	$583	$—	$583

The fair value approximates the amount the company would receive if these contracts were settled at the respective valuation dates. Fair value is estimated based upon current, and predictions of future, interest rate levels along a yield curve, the remaining duration of the instruments and other market conditions, and therefore, is subject to significant estimation and a high degree of variability of fluctuation between periods.

The company accounts for these interest rate swaps in accordance with Statement of Financial Accounting Standards No. 133, *Accounting for Derivative Instruments and Hedging Activities* ("SFAS No. 133"), and its related interpretations. Accordingly, during the three months ended March 31, 2006 and 2005, the company recorded approximately $6.3 million and $7.7 million, respectively, as increase to swap fair value, a component of other income (expense), net.

Long-Term Debt

Long-term debt consists of the following (amounts in thousands):

	March 31, 2006	December 31, 2005
6%/8% First mortgage notes, due December 1, 2014	$1,300,000	$1,300,000
6% Convertible subordinated debentures, due July 15, 2015	235,871	250,000
$600.0 million revolving credit facility, due December 14, 2009, interest at LIBOR plus 2.25% (approximately 7.1% and 6.67%)	—	10,000

(*Continued*)

	March 31, 2006	December 31, 2005
$400.0 million delay draw term loan facility, due December 14, 2011, interest at LIBOR plus 2.125% (approximately 6.975% and 6.525%)	400,000	400,000
Senior term loan facilities, due September 14, 2011, interest at LIBOR or HIBOR plus 3.0%, decreasing to LIBOR or HIBOR plus 2.75% on opening of Wynn Macau (approximately 7.82% and 7.345%)	193,869	78,944
$44.75 million note payable, due March 31, 2010, interest at LIBOR plus 2.375% (approximately 7.225% and 6.902%)	42,305	43,536
Note payable—aircraft, interest at 5.67%	13,812	13,986
12% Second mortgage notes, net of original issue discount of approximately $417,000 and $440,000, respectively, due November 1, 2010, effective interest at approximately 12.9%	9,725	9,702
Other	156	167
	2,195,738	2,106,335
Current portion of long-term debt	(15,592)	(15,489)
	$2,180,146	$2,090,846

WYNN RESORTS, LIMITED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Amounts in Thousands, Except Per-Share Data)
(Unaudited)

	Three Months Ended March 31	
	2006	2005
		(As Restated: See Note 14)
Operating revenues:		
Casino	$126,514	$—
Rooms	68,177	—
Food and beverage	74,634	—
Entertainment, retail, and other	48,957	—
Gross revenues	318,282	—

	Three Months Ended March 31	
	2006	2005
		(As Restated: See Note 14)
Less promotional allowances	(41,057)	—
Net revenues	277,225	—
Operating costs and expenses:		
Casino	63,236	—
Rooms	16,985	—
Food and beverage	44,759	—
Entertainment, retail, and other	32,514	4
General and administrative	46,965	5
Provision for doubtful accounts	2,929	—
Preopening costs	8,946	38,104
Depreciation and amortization	41,785	3,494
Contract termination fee	5,000	—
Property charges and other	4,949	53
Total operating costs and expenses	268,068	41,660
Equity in income from unconsolidated affiliates	575	—
Operating income (loss)	9,732	(41,660)
Other income/(expense):		
Interest income	8,432	6,182
Interest expense	(35,943)	(2,149)
Increase in swap fair value	6,345	7,700
Other income (expense), net	(21,166)	11,733
Net loss	$(11,434)	$(29,927)
Basic and diluted earnings per common share:		
Net loss:		
Basic	$(0.12)	$(0.30)
Diluted	$(0.12)	$(0.30)
Weighted average common shares outstanding:		
Basic	98,736	98,229
Diluted	98,736	98,229

WYNN RESORTS, LTD., AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Amounts in Thousands)
(Unaudited)

	Three Months Ended March 31	
	2006	2005
		(As Restated: See Note 14)
Cash flows from operating activities:		
Net loss	$(11,434)	$(29,927)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	41,785	3,494
Stock-based compensation	3,919	1,256
Amortization and writeoff of deferred financing costs	3,832	2,043
Provision for doubtful accounts	2,929	—
Property charges and other	4,949	(12)
Equity in income of unconsolidated affiliates, net of distributions received	(325)	—
Increase in the fair value of interest rate swaps	(6,345)	(7,700)
Increase (decrease) in cash from changes in:		
Receivables	19,006	(575)
Inventories and prepaid expenses	(8,351)	(5,801)
Accounts payable and accrued expenses	(16,633)	31,330
Net cash provided by (used in) operating activities	33,332	(5,892)
Cash flows from investing activities:		
Capital expenditures	(115,413)	(291,969)
Restricted cash and investments	34,447	(13,847)
Other assets	(11,056)	(21,323)
Proceeds from sale of equipment	—	23
Net cash used in investing activities	(92,022)	(327,116)
Cash flows from financing activities:		
Proceeds from the exercise of stock options	2,365	534
Proceeds from issuance of long-term debt	114,926	373,436
Principal payments of long-term debt	(11,417)	(176)
Payments on long-term land concession obligation	(4,446)	(4,759)
Net cash provided by financing activities	101,428	369,035
Cash and cash equivalents:		
Increase in cash and cash equivalents	42,738	36,027
Balance, beginning of period	434,289	330,261
Balance, end of period	$477,027	$366,288

Source: Wynn Resorts Limited March, 31, 2006 10Q,

The value of derivatives, whether as a cash-flow or a non-cash-flow hedge, can constitute a significant liability or asset on the balance sheet, whereas the cash-flow effect may be slight. While most derivative agreements are rolled over or settled for a small fraction of their notional value, a large change in bond prices could force nonhedged contracts to be settled with cash that the entity does not have or the credit capacity to settle.

When an entity's risk exposure is large in relation to its financial ability to settle an extreme scenario, caution should be exercised, especially regarding the possibility of a catastrophic event. It is up to the analyst to place a very conservative estimate on the magnitude of such liabilities for the company and their effect on survivability. A sensitivity analysis would be an important part of such a review. This would apply only if the firm is not using the instruments as a hedging strategy or if the hedges became partially unbalanced owing to market conditions.

Derivative assets and liabilities can be exchange traded or traded over the counter. Otherwise, their values are based on models that may, at times, not reflect their true value. Valuation models require a variety of inputs, including contractual terms, market prices and rates, yield curves, credit curves, measures of volatility, prepayment rates, and correlations of such inputs.

AIG, once the world's largest insurer, had to be propped up by the federal government with many tens of billions of dollars of taxpayer money after derivative losses left it on the verge of bankruptcy.[12] Although AIG's derivative contracts were contained in a separate legal entity, the parent guaranteed the subsidiary's obligations. How large was the liability for AIG? The company stated in March 2009 that it had about $1.6 trillion in "notional derivatives exposure."

If AIG or a properly regulated insurance company were forced into bankruptcy, policyholders would be protected, although equity holders most likely would lose the entirety of their investment. This is so because the insurance subsidiaries are not responsible for the debts of their parent, and insurance policy claims are backed both by the subsidiary's required reserves and state insurance funds.

The size of AIG's notional amount is the reason legendary investor Warren Buffett referred to such instruments as "financial weapons of mass destruction." The *notional value* refers to the value of the assets the investor is controlling as a result of holding the contract and is used to calculate payments made on that instrument.

[12] AIG played the role of counterparty (insurer) to hundreds of billions of dollars of CDS, which were purchased by firms to protect against a default. As the counterparty, AIG put up a small amount to insure a large amount. Although AIG is a regulated U.S. insurance company, its CDS business was largely conducted by lightly regulated offshore entities, which made it possible for AIG to engage in CDS trades without setting aside sufficient capital to cover widespread losses, such as happened in 2007 and 2008.

As seen from Table 6-5, the fair value of AIG's derivative liabilities, even near the height of the credit crisis, was just 8.7 percent its notional value. Even so, the fair-value liabilities of $77.5 billion exceeded its fair-value assets by $8 billion and were extraordinary in size by almost any measure, having $896 billion in notional liabilities and $609 billion in assets. A 1 percent change in its fair-value assets would add almost $7 billion the firm would need to cover with additional collateral it did not have; a 10 percent change would add about $70 billion.

TABLE 6-5

AIG Derivative Instruments

	Derivative Assets		Derivative Liabilities	
	Notional Amount[a]	Fair Value[b]	Notional Amount[a]	Fair Value[b]
	On March 31, 2009 (In Millions)			
Derivatives designated as hedging instruments:				
Interest-rate contracts	$3,450	$551	$2,573	$195
Foreign-exchange contracts	7,562	1,293	1,963	442
Total derivatives designated as hedging instruments	$11,012	$1,844	$4,536	$637
Derivatives not designated as hedging instruments:				
Interest-rate contracts	$501,644	$56,248	$520,422	$54,841
Foreign-exchange contracts	20,487	2,635	51,690	2,862
Equity contracts	9,311	3,087	13,031	2,862
Commodity contracts	18,969	3,949	14,324	2,781
Credit contracts	4,632	924	269,974	11,046
Other contracts	43,827	865	22,189	2,509
Total derivatives not designated as hedging instruments	$598,870	$67,708	$891,630	$76,901
Total derivatives	$609,882	$69,552	$896,166	$77,538

[a]Notional amount represents a standard of measurement of the volume of swaps business of AIG. Notional amount is not a quantification of market risk or credit risk and is not recorded on the consolidated balance sheet. Notional amounts generally represent those amounts used to calculate contractual cash flows to be exchanged and are not paid or received, except for certain contracts such as currency swaps.

[b]Fair value amounts are shown before the effects of counterparty netting adjustments and offsetting cash collateral in accordance with FIN 39.

Example:

Airlines are well known for attempting to hedge their largest expense, fuel. Southwest Airlines was notably successful and able to avoid bankruptcy, unlike many of its competitors, when the price of fuel tripled and revenues weakened.

Airlines Fuel Risk for Investors

Airlines are stuck in the hedging maze.

Last year, when oil nudged $150 a barrel and was touted to hit $200, airlines aggressively hedged fuel costs with swaps, collars, and other financial instruments. But when oil plunged to below $40, those hedges sank in value, carrying airline profits down, too.

Delta Air Lines' $257 million second-quarter loss included a $390 million loss on fuel hedges. JetBlue Airways lost $42 million on fuel hedges. It's a similar story worldwide. LAN Airlines of Chile took a $53 million hedging loss. Cathay Pacific Airways of Hong Kong doesn't release quarterly figures but took a $980 million hit on fuel hedges in 2008.

Oil's now back around $69 a barrel, so it might seem like time to hedge for 2010. Instead, carriers appear hesitant. It's not just nervousness about taking losses again. In addition, industry liquidity isn't great and airlines don't want to exacerbate balance-sheet weakness with poor use of capital.

Source: Wall Street Journal, August 1, 2009.

While derivative activity may result in an inconsequential cash-flow impact, owing to SFAS 133, *Accounting for Derivatives and Hedging Transactions*, its effect on shareholders' equity, and thus credit rating, may be significant. On the other hand are financially strong firms (including Berkshire Hathaway) whose balance-sheet leverage, although having increased owing to a change in the market value of the swap, benefited from investors and creditors choosing to look past the accounting entry.

Let us now look at the summary statement of SFAS 133, as issued by the FASB. To the analyst, the chief sources of concern should be the potential impact on cash flow and credit. The accounting of derivatives focuses more on classification of the instrument than on the instrument's cash-flows impact.

BACKGROUND ON SFAS 133

Summary of Statement Number 133: Accounting for Derivative Instruments and Hedging Activities

This Statement establishes accounting and reporting standards for derivative instruments, including certain derivative instruments

embedded in other contracts (collectively referred to as derivatives) and for hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the statement of financial position and measure those instruments at fair value. If certain conditions are met, a derivative may be specifically designated as (a) a hedge of the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment, (b) a hedge of the exposure to variable cash flows of a forecasted transaction, or (c) a hedge of the foreign currency exposure of a net investment in a foreign operation, an unrecognized firm commitment, an available-for-sale security, or a foreign-currency-denominated forecasted transaction.

The accounting for changes in the fair value of a derivative (that is, gains and losses) depends on the intended use of the derivative and the resulting designation.

- For a derivative designated as hedging the exposure to changes in the fair value of a recognized asset or liability or a firm commitment (referred to as a fair value hedge), the gain or loss is recognized in earnings in the period of change together with the offsetting loss or gain on the hedged item attributable to the risk being hedged. The effect of that accounting is to reflect in earnings the extent to which the hedge is not effective in achieving offsetting changes in fair value.
- For a derivative designated as hedging the exposure to variable cash flows of a forecasted transaction (referred to as a cash flow hedge), the effective portion of the derivative's gain or loss is initially reported as a component of other comprehensive income (outside earnings) and subsequently reclassified into earnings when the forecasted transaction affects earnings. The ineffective portion of the gain or loss is reported in earnings immediately.
- For a derivative designated as hedging the foreign currency exposure of a net investment in a foreign operation, the gain or loss is reported in other comprehensive income (outside earnings) as part of the cumulative translation adjustment. The accounting for a fair value hedge described above applies to a derivative designated as a hedge of the foreign currency exposure of an unrecognized firm commitment or an available-for-sale security. Similarly, the accounting for a cash flow hedge described above applies to a derivative designated as a hedge of the foreign currency exposure of a foreign-currency-denominated forecasted transaction.

> For a derivative not designated as a hedging instrument, the gain or loss is recognized in earnings in the period of change.
>
> *Source:* Financial Standards Accounting Board.

The accounting for derivative instruments was codified by SFAS 133, *Accounting for Derivative Instruments and Hedging Activities*, as amended by SFAS 137, SFAS 138, SFAS 149, and SFAS 155. On issuing SFAS 133, the FASB set forth the Derivatives Implementation Group (DIG) to aid users in understanding and compliance with the statement.

Derivative accounting is categorized as either hedge or nonhedge. Hedge accounting deals with accounting for derivatives that are entered into as a hedging strategy, and I will soon provide examples of this. These are typically intended to reduce or eliminate common market risks such as interest-rate and currency fluctuations and commodity price movements. Hedge accounting is presented under SFAS 133 only if certain strict criteria are met at inception and, in some cases, through the life of the derivative instrument. The purpose of hedge accounting is to relate the gains and losses arising from changes in fair value of the derivative with the related gains and losses of the hedged transactions. While the derivatives must be carried at fair value at any given reporting date, the gains and losses from changes in fair value potentially may be offset against the gains and losses arising from the hedged transaction, thereby minimizing the overall impact of the hedge and the hedged transaction on a company's income statement.

Other derivatives, those not qualifying for hedge accounting, are placed into the nonhedge accounting category. Here, gains or losses arising from changes in fair value of the derivative must be fully reported in current income. Since their impact is applied directly to the income statement, changes in fair value could have a significant impact on an entity's shareholder profits or loss. Derivatives falling under nonhedge accounting fall into one of two types, either freestanding derivatives or embedded derivatives. *Freestanding derivatives* are instruments that in their entirety meet the definition of a derivative set forth in paragraph 6 of SFAS 133, which, along with the entire statement, may be found on the FASB Web site.

Embedded derivatives contain features or provisions that meet specific criteria, namely, (1) the feature or provision meets the SFAS 133 definition, (2) the feature or provision would be accounted for as a derivative were it freestanding, and (3) the derivatives contract is not a derivative in its entirety (i.e., a derivative cannot contain embedded derivatives).

Other comprehensive income is established when the entity has a cash-flow hedge or a foreign-currency hedge of a net investment. From an analytic viewpoint, a hedging strategy should be engaged in only to reduce risk and thereby permit the entity to focus on enhancements to revenue. If used as a tool in this manner, it can

result in higher free cash flow and lower cost of capital. It is only when the hedges fall outside normal business parameters that the entity runs into trouble.

To summarize, hedging transactions normally are separated into three broad categories:

1. *Cash-flow hedge.* Under the cash-flow hedge, the variability of the hedged item's cash flow (i.e., oil prices) is offset by the cash flows of the financial instrument (derivative contract). The hedged item is a forecasted transaction or balance-sheet item with variable cash flows. The market value of the derivative is shown under other comprehensive income, with normally no effect on cash flows except during the purchase or sale of the hedge.
2. *Fair-value hedge.* Under a fair-value hedge, the hedged item is exposed to changes in its value (i.e., variable interest rates) or an unrecognized commitment (to purchase a commodity). Changes in fair value of the hedged item and the financial instrument are recorded in earnings, and normally, no effect on cash flows is seen, except during the purchase or sale.
3. *Investment in a foreign operation hedge.* Such as hedge may be employed to reduce any of the risks associated with an entity's foreign operations—cash flows, assets, or currency. Changes in the fair value of the instrument are consolidated with the translation (currency) adjustment as part of other comprehensive income. There would be no effect on cash flows, except during the purchase or sale.

Presented next is Warren Buffett's dire but amazingly accurate assessment of the derivatives market in his 2003 letter to shareholders. Unfortunately, he has not been immune from taking large bets himself.

> **Unless derivatives contracts are collateralized or guaranteed, their ultimate value also depends on the creditworthiness of the counterparties to them. But before a contract is settled, the counterparties record profits and losses—often huge in amount—in their current earnings statements without so much as a penny changing hands. Reported earnings on derivatives are often wildly overstated. That's because today's earnings are in a significant way based on estimates whose inaccuracy may not be exposed for many years.**
>
> **The errors usually reflect the human tendency to take an optimistic view of one's commitments. But the parties to derivatives also have enormous incentives to cheat in accounting for them. Those who trade derivatives are usually paid, in whole or part, on "earnings" calculated by mark-to-market accounting. But often there is no real market, and**

"mark-to-model" is utilized. This substitution can bring on large-scale mischief. As a general rule, contracts involving multiple reference items and distant settlement dates increase the opportunities for counterparties to use fanciful assumptions. The two parties to the contract might well use differing models allowing both to show substantial profits for many years. In extreme cases, mark-to-model degenerates into what I would call mark-to-myth.

I can assure you that the marking errors in the derivatives business have not been symmetrical. Almost invariably, they have favored either the trader who was eyeing a multi-million dollar bonus or the CEO who wanted to report impressive "earnings" (or both). The bonuses were paid, and the CEO profited from his options. Only much later did shareholders learn that the reported earnings were a sham.

Initial implementation of SFAS 133 was not uniform, and as a result, restatements often were necessary. Even sophisticated companies ran amok, including General Electric.

Example:

Restatement and Non-reliance

On the date hereof, GE is filing an amendment to its Annual Report on Form 10K for the year ended December 31, 2005, to amend and restate financial statements and other financial information for the years 2005, 2004, and 2003, and financial information for the years 2002 and 2001, and for each of the quarters in the years 2005 and 2004. In addition, we are filing amendments to our Quarterly Reports on Form 10Q for each of the periods ended September 30, June 30, and March 31, 2006, to amend and restate financial statements for the first three quarters of 2006. The restatement adjusts our accounting for interest rate swap transactions related to a portion of the commercial paper issued by General Electric Capital Corporation (GECC) and General Electric Capital Services, Inc. (GECS), each wholly-owned subsidiaries of GE, from January 1, 2001, the date we adopted Statement of Financial Accounting Standards (SFAS) No. 133, *Accounting for Derivative Instruments and Hedging Activities*, as amended. The restatement has no effect on our cash flows or liquidity, and its effects on our financial position at the ends of the respective restated periods are immaterial. We have not found that any of our hedge positions were inconsistent with our risk management policies or economic objectives.

In light of the restatement, readers should not rely on our previously filed financial statements and other financial information for the years and for each of the quarters in the years 2005, 2004, 2003, 2002, and 2001, and for each of the first three quarters of 2006.

Source: GE January 19, 2007 8K.

The analyst may wonder how to treat potentially harmful derivative contracts that appear on the balance sheet and whose potential value can only be subject to estimation. As stated, such is the case with Berkshire Hathaway, whose eminent

chairman, despite the accuracy of his 2003 letter, was making large bets on both currency and equities through derivatives.

Sensitivity analysis showing the range of conceivable scenarios is an essential part of the credit analysis, and most entities will share this information with shareholders. The range and probability of outcomes and the effect each would have on the financial structure and credit capacity of the enterprise would enter into the cost-of-capital determination. If the entity has adequate bank facilities in place to satisfy all but the most extreme scenario, the penalty to cost of capital still would need to be recognized and monitored for changes. The potential liability should be placed on the firm's balance sheet as debt. For Berkshire, settlement was of a very long duration, and balance-sheet cash and its other sources of liquidity, including lines of credit, expected cash from operations, and investments, could have settled even an extreme scenario. Shareholders' equity would have been impaired, however.

If derivatives are used, the analyst must thoroughly understand their purpose, including the extent of hedged and nonhedged instruments, their notional values, company history using hedging instruments, and the company's ability to withstand a large impact to equity, as reflected in the sensitivity model. Equity analysts and creditors should mark up the cost of capital of these firms as appropriate. Once the hedges stop acting as insurance and more like bets, the riskier they become. Even though Warren Buffett has to date been successful in his market bets, one must wonder, given his inordinate success investing in high-ROIC companies, why he would chose to gamble on nonhedged derivatives.

Example:

Medtronic, Inc., a medical device manufacturer, reported the following sensitivity results, in its October, 2009 10Q. The analyst should extend the model to incorporate wider swings in the underlying contracts than Medtronic's is revealing.

> We had foreign exchange derivative contracts outstanding in notional amounts of $5.801 billion and $5.296 billion at October 30, 2009 and April 24, 2009, respectively. The fair value of these contracts at October 30, 2009 was $46 million less than the original contract value. A sensitivity analysis of changes in the fair value of all foreign exchange derivative contracts at October 30, 2009 indicates that, if the U.S. dollar uniformly strengthened/weakened by 10 percent against all currencies, the fair value of these contracts would increase/decrease by $542 million, respectively. Any gains and losses on the fair value of derivative contracts would be largely offset by gains and losses on the underlying transactions. These offsetting gains and losses are not reflected in the above analysis. We are also exposed to interest rate changes affecting principally our investments in interest rate sensitive instruments. A sensitivity analysis of the impact on our interest rate sensitive financial instruments of a hypothetical 10 percent change in short-term interest rates compared to interest rates at October 30, 2009 indicates that the fair value of these instruments would correspondingly change by $15 million.

Example:

BERKSHIRE HATHAWAY, INC., AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(Dollars in Millions)
(Unaudited)

	June 30, 2009	December 31, 2008
ASSETS		
Insurance and other:		
Cash and cash equivalents	$21,439	$24,302
Investments:		
Fixed-maturity securities	32,018	27,115
Equity securities	45,794	49,073
Other	30,365	21,535
Receivables	15,778	14,925
Inventories	6,387	7,500
Property, plant, and equipment	17,016	16,703
Goodwill	27,535	27,477
Other	13,306	13,257
	209,638	201,887
Utilities and energy:		
Cash and cash equivalents	875	280
Property, plant, and equipment	29,987	28,454
Goodwill	5,363	5,280
Other	5,597	7,556
	41,822	41,570
Finance and financial products:		
Cash and cash equivalents	2,197	957
Investments in fixed-maturity securities	4,150	4,517
Loans and finance receivables	13,631	13,942
Goodwill	1,024	1,024
Other	3,184	3,502
	24,186	23,942
	$275,646	$267,399

(*Continued*)

	June 30, 2009	December 31, 2008
Liabilities and Shareholders' Equity		
Insurance and other:		
Losses and loss-adjustment expenses	$58,867	$56,620
Unearned premiums	8,831	7,861
Life and health insurance benefits	3,898	3,619
Accounts payable, accruals, and other liabilities	14,676	14,987
Notes payable and other borrowings	4,379	4,349
	90,651	87,436
Utilities and energy:		
Accounts payable, accruals, and other liabilities	5,800	6,175
Notes payable and other borrowings	19,708	19,145
	25,508	25,320
Finance and financial products:		
Accounts payable, accruals, and other liabilities	2,580	2,656
Derivative contract liabilities	12,299	14,612
Notes payable and other borrowings	14,697	13,388
	29,576	30,656
Income taxes, principally deferred	11,074	10,280
Total liabilities	156,809	153,692
Shareholders' equity:		
Common stock and capital in excess of par value	27,089	27,141
Accumulated other comprehensive income	7,505	3,954
Retained earnings	79,933	78,172
Berkshire Hathaway shareholders' equity	114,527	109,267
Noncontrolling interests	4,310	4,440
Total shareholders' equity	118,837	113,707
	$275,646	$267,399

Source: Berkshire Hathaway June, 30, 2009 10K.

Whereas, during the March 2009 quarter, Berkshire recorded a noncash gain of $2.3 billion owing to the company's bullish bet on a rise in equity prices, not all such bets have gone in its direction. In fact, if the current bet needed to be settled as of the balance-sheet date (June 30, 2009),

Berkshire would need to either extend the maturities of its contracts or settle the trade in cash, which would have resulted in a mega-billion-dollar loss. Berkshire has already collected the premiums on the derivatives trades at the outset of the contracts, in essence betting that stock prices do not fall below the striking price of its S&P futures contracts. Assuming that June 30, 2009, was the actual expiration date of the put contracts, Berkshire would need to pay $9.3 billion in cash to settle the trades.

As seen in its footnote concerning derivative contracts, part of the booked gain resulted from the company being able to renegotiate and amend six equity index put option contracts, reducing their duration and striking prices and reducing the intrinsic-values losses by $1.1 billion.

While Berkshire, having stated shareholders' equity of $118 billion, would appear able to withstand the risk, the magnitude of having over $37 billion in notional value in put options is large enough to bear very close scrutiny. If the stock market suffered a dramatic fall, the bet undoubtedly would have a pronounced negative effect on Berkshire, its stockholders, creditors, and potentially, its insurance operations.

Note 9: Derivative contracts of finance and financial products businesses

Derivative contracts of Berkshire's finance and financial products businesses, with limited exceptions, are not designated as hedges for financial reporting purposes. These contracts were initially entered into with the expectation that the premiums received would exceed the amounts ultimately paid to counterparties. Changes in the fair values of such contracts are reported in earnings as derivative gains/losses. A summary of derivative contracts outstanding as of June 30, 2009 and December 31, 2008, follows (in millions):

	June 30, 2009			December 31, 2008		
	Assets[3]	Liabilities	Notional Value	Assets[3]	Liabilities	Notional Value
Equity index put options	$—	$8,233	$37,480[1]	$—	$10,022	$37,134[1]
Credit default obligations:						
High-yield indexes	—	2,507	6,383[2]	—	3,031	7,892[2]
States/municipalities	—	1,049	16,042[2]	—	958	18,364[2]
Individual corporate	—	80	3,775[2]	—	105	3,900[2]
Other	439	461		503	528	
Counterparty netting and funds held as collateral	(239)	(31)		(295)	(32)	
	$200	$12,299		$208	$14,612	

[1] Represents the aggregate undiscounted amount payable at the contract expiration dates assuming that the value of each index is zero at the contract expiration date.

[2] Represents the maximum undiscounted future value of losses payable under the contracts, assuming a sufficient number of credit defaults occur. The number of losses required to exhaust contract limits under substantially all of the contracts is dependent on the loss recovery rate related to the specific obligor at the time of the default.

[3] Included in other assets of finance and financial products businesses.

A summary of derivative gains/losses included in the Condensed Consolidated Statements of Earnings follows (in millions):

	Second Quarter		First Six Months	
	2009	**2008**	**2009**	**2008**
Equity index put options	$1,956	$326	$1,790	$(851)
Credit default obligations	391	339	(960)	(136)
Other	10	24	10	35
	$2,357	$689	$840	$(952)

Berkshire has written equity index put option contracts on four major equity indexes including three indexes outside the United States. These contracts are European-style options and will be settled on the contract expiration dates, which occur between June 2018 and January 2028. Future payments, if any, under these contracts will be required if the underlying index value is below the strike price at the contract expiration dates. Premiums on these contracts were received in full at the contract inception dates, and therefore, Berkshire has no counterparty credit risk.

On June 30, 2009, the aggregate intrinsic value (the undiscounted liability, assuming that the contracts are settled on their future expiration dates based on the June 30, 2009, index values) was $9.3 billion. Aggregate intrinsic value was approximately $13.3 billion on March 31, 2009, and $10.8 billion as of December 31, 2008. However, these contracts may not be terminated or fully settled before the expiration dates, and therefore, the ultimate amount of cash basis gains or losses on these contracts will not be known for many years.

In the second quarter of 2009, Berkshire agreed with certain counterparties to amend six equity index put option contracts. The amendments reduced the remaining durations of these contracts between 3.5 and 9.5 years. As a result, the remaining average life of all of Berkshire's contracts declined from 13 years at March 31, 2009 to 12 years at June 30, 2009. In addition, the amendments reduced the strike prices of those contracts between 29% and 39%. The reductions in the strike prices had the effect of reducing the intrinsic value losses on those contracts by approximately $1.1 billion. In addition, the aggregate notional value related to three of the amended contracts increased by approximately $161 million. No consideration was paid by either party with respect to these amendments.

Credit default contracts include various high yield indexes, state/municipal debt issuers and individual corporate issuers. These contracts cover the loss in value of specified debt obligations of the issuers arising from default events, which are usually for non-payment or bankruptcy. Loss amounts are subject to contract limits.

High yield indexes are comprised of specified North American corporate issuers (usually 100 in number) whose obligations are rated below investment grade. The weighted average contract life at June 30, 2009 was approximately 2 years. State and municipality contracts are comprised of over 500 reference obligations issuers, which had a weighted average duration at June 30, 2009 of approximately 11.5 years. Risks related to approximately 50% of the notional amount cannot be settled before the maturity dates of the underlying obligations, which range from 2019 to 2054.

Premiums on the high yield index and state/municipality contracts were received in full at the inception dates of the contracts and, as a result, Berkshire has no counterparty credit risk. Berkshire's payment obligations under certain of these contracts are on

a first loss basis. Several other contracts are subject to aggregate loss deductibles that must be satisfied before Berkshire has any payment obligations.

Credit default contracts written on individual corporate issuers primarily relate to investment grade obligations. Installment premiums are due from counterparties over the terms of the contracts. In most instances, premiums are due from counterparties on a quarterly basis. Most individual issuer contracts expire in 2013.

With limited exception, Berkshire's equity index put option and credit default contracts contain no collateral posting requirements with respect to changes in either the fair value or intrinsic value of the contracts and/or a downgrade of Berkshire's credit rating. Under certain conditions, a few contracts require that Berkshire post collateral. As of June 30, 2009, Berkshire's collateral posting requirement under such contracts was approximately $650 million.

Sometimes, a firm may account for a derivative agreement as a fair-value hedge when, for all practical purposes, it is a cash-flow hedge. This could be the case if, owing to a change in the price of the item hedged, the firm becomes slightly over(under)hedged.

In making the determination each quarter, the Empire Electric Company applies any gain or loss on contracts that become unhedged as reclassified to fuel expense. The company states in its 2009 10K, "All of our gas hedging activities are related to stabilizing fuel costs as part of our fuel procurement program and are not speculative activities. If conditions change, such as a planned unit outage, we may need to de-designate and/or unwind some of our previous derivatives designated under SFAS 133. In this instance, these derivatives would be classified into the category above, which is derivatives classified as non-hedges."

The analyst might need to confer with financial management to understand why a transaction was accounted for as a particular hedge if the accounting is unclear. *The significant issues are not always the accounting treatment but the determination as to whether the derivatives were used to reduce risk, the extent to which such risk has been reduced, and the range of cash-flow and credit outcomes resulting from their implementation.* The sensitivity analysis performed by the company should be released and considered an integral part of the financial statements. Even AutoDesk, Inc., a strong credit that hedges its dollar risk, explained in its October 2009 10Q:

> A sensitivity analysis performed on our hedging portfolio as of October 31, 2009, indicated that a hypothetical 10 percent appreciation of the U.S. dollar from its value at October 31, 2009, would increase the fair value of our forward exchange and option contracts by $13.4 million. A hypothetical 10 percent depreciation of the dollar from its value at October 31, 2009, would decrease the fair value of our forward exchange and option contracts

> by $14.2 million. We do not anticipate any material adverse impact to our consolidated financial position, results of operations or cash flows as a result of this foreign currency forward and option contracts.

Given Autodesk's strong financial position and cash flows, the hedges are of a nonmaterial nature in evaluating the company's credit strength and cost of capital. However, even this strong credit finds it appropriate to release its sensitivity results as part of its financial filings.

FINANCIAL STRUCTURE AND DEBT COVERAGE

Financial leverage may be defined as the proportion of total debt to total capitalization of a firm. A firm is considered highly leveraged when the ratio of debt to total capitalization is high, taking into account the operating cash flows. A firm is unleveraged when it has no debt in its capital structure. *Debt* is defined as total debt, including lease obligations and any off-balance-sheet liabilities, such as unfunded pension and other postretirement benefits, and any other off-balance-sheet liabilities, including derivatives, for which the entity might be liable.

Contingent liabilities should not be included unless the probability of the obligations coming due is reasonably assured. They should be evaluated to both probability and the cash-flow and credit impact. If a contingent liability is assumed, its effect may be short-lived or last many years depending on the circumstances. Short-term debt also must be included in total debt becaues many companies have short-term loans that must be settled with cash or recast into long-term debt. In fact, credit analysis begins with the analysis of near-term obligations. Rollover risk is an important part of the cost of capital. Companies having large balloon payments due within a year must have the financial flexibility to satisfy those upcoming claims or face bankruptcy.

Total capitalization, as typically defined, includes long-term debt plus total shareholders' equity, where the latter is measured by the accounting book value of equity, taking into account assets that are likely to be sold above (below) book within the coming 12 months. Short-term debt is excluded because it could be removed from the firm within an operating cycle.

The market value of the equity should be used, when appropriate, such as when book value is unrealistically low owing to an accounting regulation or not otherwise reflective of the firm's capital strength, as we saw with Clorox, whose book value was affected by the large share repurchase. Thus the typical treatment of total capital where short-term debt is excluded is different from my ROIC measure, in which I include all interest-bearing debt. Short-term debt is almost

always rolled over or converted to equity. In instances of weak credits where rollover risk exists, my cost-of-capital model would pick this up and mark up the discount rate of the free cash flows. Even moderately leveraged firms can be sensitive to rollover risk.

Traditional finance thinking views greater amounts of financial leverage as increasing a firm's risk; if operating cash flows during any period are lower than short-term debt payments, the firm has to liquidate some assets or increase its capitalization to continue operations. Thus the more leveraged a firm, the riskier it becomes. At the same time, debt has a desirable benefit because interest payments on debt are tax deductible, whereas dividend payments are not. Generally, the greater the volatility of operating cash flows and free cash flow, the lower should be the financial leverage. Conversely, the greater the stability of operating or free cash flow, the more leveraged a firm can become.

In Chapter 3 we saw Macy's factoring its accounts receivable for cash that was used, in part, to pay down debt incurred from the previous year's acquisition of May Department Stores. Typically, continuous factoring arrangements restrict the ability of the entity to function in various ways, such as the sale of assets, dividend payments, minimum net worth, maximum leverage ratios, and minimum EBITDA requirements. If the entity under consideration has entered into such an arrangement, it is important to understand the terms of any accompanying positive or negative restrictions or covenants and the effect they might have on cash flows and competitive position.[13]

Example:

It is not unusual for financially weak brokerage firms to borrow at the parent level and then send the cash to the broker-dealer where it counts as capital. In the industry, this is known as *double leveraging*. The SEC regulates the industry and is in charge of setting capital requirements—how much equity and debt a firm must have invested in the business.

Since loans are counted as part of capital, Drexel Burnham Lambert, even as it was rapidly heading toward bankruptcy, was able to claim that it was exceeding federal capital requirements. In fact, just before Drexel entered bankruptcy, it stated that it had almost $300 million more in capital than was required by the SEC. However, much of the capital was in the form of loans from its parent, Drexel Burnham Lambert Group, Inc., which was financing itself with short-term loans. Soon afterward, Drexel's house of cards collapsed when the SEC and the New York Stock Exchange refused to allow Drexel's brokerage unit to reduce its capital by repaying loans from its parent.

[13] To see an example of a factoring agreement between CIT Financial and Bernard Chaus, please go to http://www.sec.gov/Archives/edgar/data/793983/000095012309045239/y02288exv10w3.htm.

Example

Many Japanese firms that typically had been financially leveraged throughout the 1990s up to the 2006 economic expansion, such as Hitachi, ran into financial difficulties when the 2007 recession took hold. At the end of 2008, Hitachi had a debt/equity ratio of 269 percent versus just 26.8 percent for Panasonic. In the same year, Intel Corp. and Oracle had ratios of 5.1 and 40.8 percent, respectively. Thus these two U.S. firms relied more heavily on internal capital than Hitachi, which relied more heavily on external capital. Thus it was no surprise that Hitachi shares did not hold up as well as those of Oracle, Panasonic, and Intel during the recession.

The most commonly applied measure of a firm's ability to pay the interest on its debt is the *debt coverage ratio*, measured by operating cash flows plus lease and interest expense divided by interest expense and lease expenses. The greater this ratio, the easier it is for a firm to meet interest and lease payments. However, this ratio measures the short-term ability of a firm to service its debt; it totally ignores the firm's ability to reduce its financial leverage. For example, the firm may generate enough operating cash flows to sustain its current level of growth and to cover existing interest and lease payments, but the firm may not have sufficient operating cash flows to retire old debt or meet minimal levels of EBITDA, as required in loan covenants. Consequently, it may be exposed to greater financial risk than a firm that does generate sufficient operating and free cash flow. Therefore, I suggest an additional measure of a firm's financial risk: the relationship between total debt and free cash flow. For this reason, I measure total debt relative to both operating and free cash flow.

To assess the ability of a firm to attain its desired financial structure, I examine the ratio of total debt to the normalized free cash flow as one of the leverage ratios in my credit model. Other factors I examine are stability measures of: free cash flow, sales, taxes, and operating cash flows. I also look at the entity's cash burn rate and persistence in going to the credit market, among other factors, all of which will determine the optimal financial structure.

The greater the leverage ratios, as measured by the cash-flow coverage ratios, the greater is the financial risk of the firm, and the lower this ratio, the lower is the financial risk of the firm. Ideally, one would like to invest in firms that are able to generate free cash flow consistently but also require a lower debt burden relative to their competition. Such firms can make appropriate capital investments if the management of these enterprises continues to find opportunities, both internally and externally, above their cost of capital. These firms either can use their retained earnings built from their free cash flow or can increase their debt. Firms that are leveraged may benefit from the tax advantage when the going is good but pay the consequences during periods of uncertainty or distress.

CREDIT-RATING FINANCIAL RATIOS

Credit-rating agencies have general financial guidelines under which their ratings are assigned. These are shown in Table 6-6, as compiled by Standard and Poor's, for some common financial ratios.

Enterprises attempt to maintain their leverage and fixed-charge ratios at the desired (target) level or to improve or take actions to improve their averages to that level, comparing their ratios with those in the table. Firms also compare their financial ratios with others in their industry relative to their respective credit ratings. Some overcapitalized entities will be comfortable taking on debt, even though it may mean sacrificing a credit rating, to improve ROIC. If investors believe that a project or acquisition will be value-enhancing, bonds that need to be sold normally will be placed at the expected interest rate, and cost of capital remains stable, even if the ratings are negatively affected. If the capitalization of the entity is inconsistent with its current rating, a rating change most likely will take place.

Entities that are reliant on the credit markets, especially medium credits, can reduce their cost of debt substantially if their credit rating is assigned a higher grade. Many pension funds are prohibited from owning debt below a certain grade,

TABLE 6-6

S&P-Adjusted Key Industrial Financial Ratios, Long-Term Debt, U.S. (Medians of Three-Year Averages, 2006–2008)

	AAA	AA	A	BBB	BB	B
Operating income (before D&A)/revenues (%)	27.8	25.2	18.8	17.7	17.2	15.7
Return on capital (%)	30.5	29.9	21.7	15.1	12.6	8.6
EBIT interest coverage (*x*)	34.9	16.6	10.8	5.9	3.6	1.4
EBITDA interest coverage (*x*)	38.8	20.8	13.3	7.8	5.1	2.2
FFO/debt (%)	190.2	76.9	54.0	34.8	26.9	11.6
Free operating cash flow/debt (%)	154.6	42.5	30.9	14.0	7.8	2.1
Discount cash flow/debt (%)	93.9	26.5	20.2	8.4	5.8	1.0
Debt/EBITDA (*x*)	0.4	1.0	1.5	2.3	3.0	5.4
Debt/debt plus equity (%)	13.3	27.6	36.1	45.3	52.9	75.6
Number of companies	6	15	100	202	271	321

Note: In this table, FFO = funds from operations, which is defined as net income from continuing operations adjusted for depreciation and amortization (D&A) and other noncash and nonrecurring items such as deferred taxes, write-offs, gains and losses on asset sales, foreign-exchange gains and losses on financial instruments, and undistributed equity earnings or losses from joint ventures. *Free operating cash flow* is defined as operating cash flow minus capital expenditures.

Source: "CreditStats: 2008 Adjusted Key U.S. and European Industrial and Utility Financial Ratios," by David Lugg and Paulina Grabowiec. Copyright © 2009 by Standard & Poor's Financial Services, LLC. Reproduced with permission of Standard & Poor's Financial Services, LLC.

whereas other funds may own no greater than a small allocation to lower grades. Thus the higher the grade, the greater is the potential demand for an entity's fixed-income instruments and a commensurate lower cost of debt.

As shown in the table, the greater the leverage and lower the fixed-charge coverage, the lower is the credit rating, on average. In actuality, a credit rating takes into account many factors, some being nonfinancial, such as the *willingness* of an entity to reduce its leverage.

CASH BURN RATE

The *cash burn rate* represents the number of days it will take until the company will use up all the cash and marketable securities it has on hand for its operations and new investments in capital expenditures. It is calculated as the magnitude of the negative free cash flow by the number of days so that if the entity had negative free cash flow, as defined, of $40 million for the quarter and had $160 million in cash, its cash burn would be one year. If the entity had bank credit facilities in place, depending on its reliability and date the facility runs out, that also could be added to the balance-sheet cash. The cash burn is also sometimes calculated as 365 (days) times cash and marketable securities divided by the difference between capital expenditures and operating cash flow.

For entities that do not generate free cash flow, this metric should indicate the date that additional cash will be needed, either from external financing or via asset sales. The metric also will be used to plan the magnitude of a cash raise and the needed reduction in fixed and variable costs to allow the entity to reach positive free cash flow.

Tables 6-7 delineates a number of companies that have high cash burn rates, are highly levered, and have negative free cash flow as of September 2009. When companies are under this pressure, they normally must restructure.

TABLE 6-7

High-Cash-Burn-Rate Companies

Company Name	Cash Burn Rate in Days	Total Debt/Total Capital	Three Year Average Free Cash Flows
ADVANCED MICRO DEVICES	303.982	105.951	(685.291)
AERCAP HOLDINGS NV	80.538	86.848	(621.956)
AMERICAN AXLE & MFG HOLDINGS	332.026	161.872	(41.686)
ANOORAQ RESOURCES CORP	188.706	111.422	(4.232)
ATP OIL & GAS CORP	211.672	81.713	(114.239)
BABCOCK & BROWN AIR LTD -ADR	157.703	78.523	(483.021)

Company Name	Cash Burn Rate in Days	Total Debt/Total Capital	Three Year Average Free Cash Flows
CARDIMA INC	155.940	961.824	(6.864)
CARDTRONICS INC	49.561	106.269	(24.912)
CHENIERE ENERGY INC	202.018	112.612	(502.699)
CHENIERE ENERGY PARTNERS LP	213.152	119.228	(416.931)
CHINA BAK BATTERY INC	340.305	76.359	(39.295)
CHINA SOUTHN AIRLS LTD -ADR	238.429	143.294	(114.992)
CONSTELLATION ENERGY GRP INC	140.237	100.656	(921.699)
COOPER TIRE & RUBBER CO	305.417	93.147	(14.997)
DEXCOM INC	247.348	277.731	(41.227)
EDP-ENERGIAS DE PORTUGAL-ADR	110.889	75.620	(283.291)
EMERITUS CORP	16.041	82.197	(85.560)
FOREST CITY ENTRPRS -CL A	260.937	96.450	(715.882)
GASTAR EXPLORATION LTD	24.733	149.322	(33.800)
GATX CORP	224.098	83.536	(372.098)
GOLAR LNG LTD BERMUDA	155.323	79.338	(6.343)
HUANENG POWER INTL INC -ADR	92.680	98.050	(1,093.763)
HUMAN GENOME SCIENCES INC	51.290	146.860	(8.563)
IMAX CORP	354.324	284.693	(4.605)
INSULET CORP	223.208	95.212	(66.025)
ISRAMCO INC	17.342	98.324	(9.029)
JAMES RIVER COAL CO	15.907	78.053	(36.566)
JETBLUE AIRWAYS CORP	329.007	76.134	(414.076)
LDK SOLAR CO LTD -ADR	156.074	91.994	(431.400)
MAP PHARMACEUTICALS INC	264.973	75.164	(40.902)
MONEYGRAM INTERNATIONAL INC	319.796	104.208	(1,763.058)
NIVS INTELLIMEDIA TECHNOLOGY	162.282	115.231	(25.078)
OPKO HEALTH INC	82.147	97.857	(16.029)
PARALLEL PETROLEUM CORP	155.770	77.602	(23.309)
PEREGRINE PHARMACEUTICLS INC	360.040	114.126	(11.818)
PILGRIM'S PRIDE CORP	31.537	463.199	(106.472)
SANDRIDGE ENERGY INC	6.771	75.351	(580.422)
SONIC AUTOMOTIVE INC -CL A	154.629	881.168	(28.039)
STRATUS MEDIA GROUP INC	118.300	151.286	(0.169)
STUDENT LOAN CORP	33.811	189.986	(160.331)
SYNUTRA INTERNATIONAL INC	288.741	261.059	(25.109)
TAL INTERNATIONAL GROUP INC	83.196	78.754	(19.844)
UNIGENE LABORATORIES INC	313.876	285.473	(3.612)
US AIRWAYS GROUP INC	237.087	127.709	(174.203)
VITACOST.COM INC	3.847	123.665	(9.722)
WILLIS LEASE FINANCE CORP	155.128	80.229	(32.628)
XOMA LTD	181.072	198.519	(25.507)
ZYMOGENETICS INC	286.672	80.302	(78.780)

Source: CT Capital, LLC, and company reports.

Example:

Companies that make large acquisitions, despite an already levered balance sheet, often run into financial danger. They simply do not have the financial structure to withstand adversity. During 2006, American Tire Distributors, Atlas Pipeline, Brookstone, Circuit City, Hexion, MF Global, and Spectrum Brands all made large acquisitions and saw their business either fail or severely weakened as a result.

Example:

In 2009, credit-rating agencies lowered their rating on UAL, a commercial airline. A review of the company's debt coming due included debt and lease payments of about $655 million through the rest of the year, $1 billion in 2010, and $869 million in 2011. The company's cash and investment total had slipped to $2.5 billion from $3.8 billion in 2008 because it sold off more than $1 billion in aircraft, parts, and frequent-flier miles to raise money. Fitch ratings stated that UAL's remaining $1.7 billion in unencumbered assets may be difficult to sell.

Companies such as UAL have been forced to consider debt from nontraditional lenders, including private equity and hedge funds. The willingness to accept high interest rates is a clear signal of a cash-strapped company. During periods of declining or low interest rates, many lenders, including nontraditional creditors, such as hedge funds, have been willing to take on second liens in the hope of greater returns. These leveraged lenders normally charge at least 400 basis points over the LIBOR rate. However, this higher rate may be insufficient because Standard and Poor's estimated that investors in second liens could recover less than 25 percent of their principal in the event of bankruptcy.[14]

RISK PROFILE

Because cash flows are, by their nature, uncertain, it is imperative to evaluate not only the ratio of total debt to average free cash flow but also the volatility of free cash flow. The volatility of free cash flow is a measure of the *operating risk* of a firm; the more volatile the free cash flow, the greater is the firm's operating (business) risk. The ratio of total debt to average free cash flow is a measure of *financial risk*; the higher this ratio, the greater is the firm's financial risk. Standard measures of risk—such as systematic risk, beta, or the total variability of stock returns—have

[14] "Return Hungry Investors Snap Up Riskier Loans" (*New York Times*, April 6, 2005). Krispy Kreme, a company in need of cash, paid 5.88 percentage points above LIBOR in such an agreement.

not always been useful predictors of financial and operating risks because they do not take into account the cash flows and credit structure.

Figure 6-4 shows the two dimensions of risk, and Table 6-8 illustrates how Standard and Poor's Rating Service would interpret the table with rating classifications. The figure shows a simplistic risk profile of hypothetical firm X. We can compare the risk profiles of other firms with this firm. Naturally, most people will prefer firms with lower risk to firms with higher risk. Thus firms with risk profiles in region C would be superior to firm X because they have both a lower operating risk and a lower financial risk. Firms in region B are inferior to firm X because both dimensions of risk are greater than those of firm X. The selection of a firm in regions A and D depends on the decision maker's tolerance for the two types of risk. Individuals with more tolerance for financial risk than for operating risk may prefer firms in region D over firm X because they have lower operating risk. The converse would be true for region A.

Instead of quadrants, Table 6-8 places risk profiles into ratings classes. As firms' financial ratios deteriorate, credit-rating agencies increase their risk level to lower rated credits such that, in effect, they shift to the right quadrants of Fig. 6-4. As their cash flows, including volatility, and leverage ratios improve, their business risk moderates, and they would be expected to be placed into a higher credit rating with resulting lower cost of capital, or into the upper-left quadrant. They also would move up to the top left of the table.

The security analyst should examine the behavior of the annual, rolling 12-month, and quarterly operating and free cash flows (stability and growth) relative to their prior periods, including a comparison to total debt of the same periods.

FIGURE 6-4

Risk-Volatility of Cash Flows versus Leverage

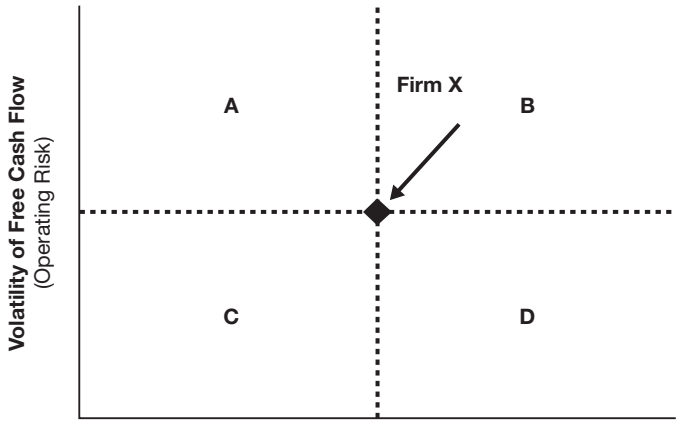


TABLE 6-8

Standard and Poor's Business Risk Profile

	Business Risk Profile			Financial Risk Profile		
	Minimal	Modest	Intermediate	Significant	Aggressive	Leveraged Highly
Excellent	AAA	AA	A	A−	BBB	—
Strong	AA	A	A−	BBB	BB	BB−
Satisfactory	A−	BBB+	BBB	BB+	BB−	B+
Fair	—	BBB−	BB+	BB	BB−	B
Weak	—	—	BB	BB−	B+	B−
Vulnerable	—	—	—	B+	B	CCC+

Note: These rating outcomes are shown for guidance purposes only. Actual rating should be within one notch of indicated rating outcomes.

Source: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," by Solomon B. Samson and Emmanuel Dubois-Perelin. Copyright © 2009 by Standard & Poor's Financial Services, LLC. Reproduced with permission of Standard & Poor's Financial Services, LLC.

Also to be examined are the most recent three- or four-year average free cash flow to assess if and how the firm was able to overcome downturns in the industry or economy, including managerial decision making during those periods. Was the firm reliant on the capital markets? To what extent? What happened to its operating cash flows and power operating cash flows? What executive decisions were made? Are the company's revenues of a recurring nature such that the company was protected during the downturn? What happened to the company's market share? Was the company reliant on weak credit clients? Did managers overreact to events or take advantage of them? How were the financial structure, cash flows, and credit rating affected? Have recent events changed the company's risk profile, as would be measured by Tables 6-6 and 6-7 and Fig. 6-4?

PRINCIPAL STRUCTURE OF DEBT

Credit analysis begins with an evaluation of the ability of an entity to satisfy its current obligations. If the entity has adequate financial flexibility and satisfactory prospects for the repayment or rollover of current debt, an analysis of later-maturing liabilities takes place.

The firm's long-term obligations, covered under SFAS 47, requires it to disclose its commitments under unconditional purchase obligations, such as take-or-pay contracts and obligations related to supplier financing. The firm must disclose its

long-term obligations, including sinking-fund requirements, maturities, and redemption requirements for each of the next five years.

While interest coverage on debt is a primary consideration in credit analysis, also to be evaluated is the ability of the entity to retire its principal obligations. In the credit model, I evaluate the ease of the entity to retire its obligations from a variety of sources, including credit extension, free cash flow, working capital, cash, and calls on credit.

Figure 6-5 shows Macy's debt structure, as reported, to which I have added the operating lease component. Macy's operating leases are almost entirely composed of rental commitments. Also shown, in Table 6-9, is Macy's upcoming maturity schedule over the next five years, including capital and operating leases, in conformity with the standard. The schedule shows a drop in minimum lease obligations, which is probably an unrealistic assumption. Even for an enterprise such as Macy's, which has seen its growth rate stall, it would be judicious to incorporate no less than the stated lease obligations for the five-year period. The analyst then would discount the operating leases at Macy's weighted-average cost of debt, which should be

FIGURE 6-5

Macy's Debt Structure

Debt Structure (Annual – January 2009)	$M	% of LT Debt
Convertible Debt Senior	0	0.0
Convertible Debt Subordinated	0	0.0
Total Convertible	0	0.0
Subordinated Debt	0	0.0
Notes	4,776	43.9
Debentures	3,589	33.0
Other – Long-Term	337	3.1
Operating Leases	2,148	19.7
Capital Lease Obligations	31	0.2
Unamortised Debt Disc & Premiums	0	0.0
Total Long-Term Debt	**10,881**	**100.0%**
Debt – Mortgage & Secured	31	
Contingent Liability Guarantees	48	
Total Debt Summary:		
Total Debt	10,960	100.0
Long-Term Debt	10,881	89.1
Debt in Current Liabilities	966	8.9

TABLE 6-9

Macy's Debt and Lease Obligations for the Upcoming Five Years

	2010	2011	2012	2013	2014	After
Debt maturities	238	662	1,663	138	505	5,185
Operating leases	235	226	207	191	170	1,709
Capital leases	8	7	6	5	4	27

added to total liabilities, as I will do for UPS later in this chapter. UPS, a growth company, has seen its operating leases grow by 5.6 percent per year, and as such, the analyst could build such growth into the cash-flow projection and debt-obligation schedule.

SUBSEQUENT EVENTS

Important events taking place subsequent to the reporting period but prior to the SEC filing may affect the financial structure of an enterprise. Such material events subsequent to the date the financial statements were prepared must be reported in a footnote. SFAS 165 (May 2009) sets standards for the disclosure of events that occur after the balance-sheet date but before financial statements are issued or are available to be issued. Aside from this one aspect, it left alone the central tenants of SFAS 5, *Accounting for Contingencies*.

The subsequent-event footnote is not a substitute for an 8K filing, whereby an entity must report, within 4 business days, an unscheduled event that is material (could be expected to affect the value of the company) to shareholders. The following are examples of subsequent events found in 8K financial filings. If it is deemed significant, the event must be reported by the entity through an 8K, but some latitude has been shown to exist where the effect is less clear-cut. Also, what may be a reportable event for one company might be insignificant for another. What is clear is that such events often have cash-flow, financial structure, and/or valuation consequences.

Which of the following eleven actual 8K-reported events affected financial structure, cash flow, or cost of capital (risk)? Which events might have had a significant effect on the firm's stock price?

1. The company effected a one-for-four reverse stock split. The financial statements have been restated, for all periods presented, to reflect the stock split. After the split, the company has 1,371,750 shares outstanding.

2. The IRS completed its examination of the firm's U.S. federal income tax returns for the years 2002 to 2005 and issued a Revenue Agent Report (RAR) that includes various proposed adjustments, including with respect to the going-private merger transactions.
3. The company issued 312,000 common shares at US$0.80 per share pursuant to secured convertible note principal conversions received in the amount of US$250,000.
4. The company will record a $1 billion noncash expense in the first quarter owing to the newly passed health care law.
5. The company entered into a corporate job-creation and lease agreement with the Pearland Economic Development Corporation of Pearland, Texas.
6. The company received a final payment of $820,000, completing the sale of all its domestic oil and gas properties.
7. The executive vice president and chief financial officer of the company resigned.
8. The company completed a $250 million share-repurchase program.
9. The company terminated the pending acquisition of . . . .
10. Mr. XXX (the CFO) died unexpectedly. As a result, the existing board unanimously appointed Ms YYY to replace Mr. XXX.
11. The company entered into a distribution agreement with a large company from South Korea for the exclusive rights to market the firm's products.

DEFERRED TAXES

Deferred taxes are included in this chapter because, if a deferral is reversed, the financial structure is affected, including the possibility of a violation of a debt covenant. I discussed the income tax rate as a credit indicator in Chapter 4, and now I discuss the deferred account as a provider (user) of cash if the rate were to change.

Most large firms include on the balance sheet a provision for future tax payments, or deferred tax liability. Deferred taxes represent an integral part of the capital structure and are also studied both for their potential cash effects and the integrity of the asset or liability causing their existence. If a deferred tax asset is recognized without an offsetting valuation allowance and business conditions turn down, the firm's financial structure would show greater leverage or possibly eliminate shareholders' equity as the tax assets become of questionable value and would need to be offset.

This liability has attracted the attention of investors, creditors, managers, and accountants for a long time. At issue is the difference between the tax expense reported in the financial statements and the actual tax payment to the governmental authorities, including overseas. The two are different because of different tax treatments of items for tax and for financial reporting purposes. Some differences are permanent (i.e., they are not expected to reverse in the future), whereas others are temporary differences that are expected to reverse.

For instance, companies normally would choose to depreciate[15] assets more quickly during the early years of placing the asset in service to enhance cash flows sooner. Any lower tax payments at the beginning of the asset's life are expected to be offset by greater tax payments toward the end of the asset's life; thus the cash flows will be enhanced during the early years. Of course, companies with growing capital expenditures would continue to see such benefits. One sees this when the deferred tax account continues to grow.

The accounting profession requires firms to record a liability for temporary differences based on the assumption that the entry will be reversed in the future, and increased tax payments will be necessitated. Thus the firm creates a liability based on these expected higher future rates. Such a liability is not required for permanent timing differences because they are not expected to be reversed in the future.

A firm is allowed to carry tax losses backward to two years and forward up to 20 years.[16] However, to use tax carry-fowards, the firm must have taxable income. To the extent that it does, the loss carry-fowards represent a very valuable asset because the gains could result in no or little actual federal income tax payments. It was estimated by the Bureau of Economic Research that extending the carry-back period from two to five years would have provided $34 billion in additional liquidity in 2008. For the cash-flow analyst, extending the carry-back period would, for firms able to take advantage of such a provision, help to smooth out (or increase average) free cash flow, thereby also reducing the cost of equity capital.

SFAS 109 allows firms to set up a deferred tax account if it "is more likely than not" that the tax asset would be used in the future. It also requires firms to show the entire amount of deferred tax assets with, if called for, a *valuation allowance*, which is similar to an allowance for uncollectible receivables. This allowance reduces the deferred tax asset to the amount that is likely to be used in the future. Accordingly, firms report separately in a footnote their current and

---

[15] *Economic depreciation* is the decrease in value of a productive asset as it ages. *Tax depreciation* is the depreciation permitted by the tax code.

[16] The IRS announced on March 16, 2008, that small businesses with deductions exceeding their income in 2008 can use a new net operating loss tax provision to get a refund of taxes paid in prior years. As tax laws change, the analyst must adjust the free cash flow to accommodate such shifts, including changes in state tax rates.

deferred tax expense for the period, as well as their federal, state, and local taxes and, if applicable, their foreign taxes. Firms are also required to reconcile their effective tax rate with the statutory tax rate, in effect providing information about permanent differences between financial reporting and taxable income. Firms are also required to disclose the major components of deferred tax assets and liabilities, in effect providing information about temporary differences.

When evaluating tax losses, the cash-flow analyst should determine if the loss was created through a business still owned by the parent or by an entity that was sold for a loss or closed down. If the remaining enterprise is a consistent and growing producer of free cash flow, the tax loss has real immediate value. Companies typically are conservative in recognizing the likely value of tax assets, with their auditors requiring the offset through the valuation allowance. It is contingent on the analyst to determine the likelihood of cash tax savings that could accrue to the entity and to adjust the expected free cash flow accordingly.

For International Paper Company, losses have been common, occurring in half the years shown in Table 6-10. As seen, the company was able to reduce its tax bill. During 2006, the company sold $3.4 billion in assets yet paid just $249 million in income taxes while showing an effective tax payment of $1.9 billion. The third

TABLE 6-10

International Paper Tax Information

INTL PAPER CO
TICKER: IP
SIC: 2,600.000
GICS: 15105020

	(1)	(2)	(3)	(4)	(5)	(6)
	Tax Loss Carry Forward	Tax Rate	Income Taxes-Total	Income Taxes Paid	Pretax Income	Free Cash Flow
Dec01	1,873.000	21.344	(270.000)	333.000	(1,265.000)	183.000
Dec02	3,786.000	(14.555)	(54.000)	295.000	371.000	607.000
Dec03	4,702.000	(26.590)	(92.000)	277.000	346.000	176.000
Dec04	4,024.000	27.614	206.000	254.000	746.000	641.000
Dec05	4,644.000	(48.635)	(285.000)	457.000	586.000	(140.000)
Dec06	3,189.000	59.253	1,889.000	249.000	3,188.000	(270.000)
Dec07	610.000	25.091	415.000	328.000	1,654.000	163.000
Dec08	762.000	(14.674)	162.000	131.000	(1,104.000)	1,239.000
Average	2,948.750	3.606	246.375	290.500	565.250	324.875

column discloses income taxes accrued under the effective tax rate, and the fourth column shows income taxes actually paid. Despite International Paper having shown a negative effective tax rate over many years owing to payments to local and foreign tax authorities (foreign constitutes about 21 percent of sales), its cash tax payments actually remained reasonably high, averaging $290 million on $565 million in pretax income, while showing an effective rate to shareholders of just 3.6 percent.

Example:

International Paper has U.S. federal and non-U.S. net operating loss carry forwards of approximately $488 million that expire as follows: 2009 through 2018—$16 million, years 2019 through 2028—$109 million and indefinite carry forwards of $363 million. International Paper has tax benefits from net operating loss carry forwards for state taxing jurisdictions of approximately $274 million that expire as follows: 2009 through 2018—$108 million and 2019 through 2028—$166 million. International Paper also has U.S. federal, non-U.S. and state tax credit carry forwards that expire as follows: 2009 through 2018—$57 million, 2019 through 2028—$90 million, and indefinite carry forwards—$337 million. Further, International Paper has state capital loss carry forwards that expire as follows: 2009 through 2018—$7 million.

Source: International Paper 2008 10K.

Example:

For unprofitable companies, the cash refund represents an important source of cash, given that the conditions that caused it most likely resulted in a need for cash. For example, during 2009, the management of Schnitzer Steel Corp. stated that it expected a $47 million refund owing to available tax loss carry-backs and the current year's reported loss. Since the payment has not yet been received, it is shown on the company's balance sheet as an asset.

SCHNITZER STEEL INDUSTRIES, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	August 31,	
	2009	**2008**
Assets		
Current assets:		
Cash and cash equivalents	$41,026	$15,039
Accounts receivable, net of allowance of $7,509 in 2009 and $3,049 in 2008	117,666	314,993
Inventories, net	184,455	429,061
Deferred income taxes	10,027	7,808

	August 31,	
	2009	2008
Refundable income taxes	46,972	825
Prepaid expenses and other current assets	10,868	11,800
Total current assets	411,014	779,526
Property, plant, and equipment, net	447,228	431,898
Other assets:		
Investment in and advances to joint venture partnerships	10,812	11,896
Goodwill	366,559	306,186
Intangibles, net	20,422	15,389
Other assets	12,198	9,958
Total assets	$1,268,233	$1,554,853
Liabilities and Shareholders' Equity		
Current liabilities:		
Short-term borrowings and capital lease obligations	$1,317	$25,490
Accounts payable	72,289	161,288
Accrued payroll and related liabilities	23,636	64,453
Environmental liabilities	3,148	3,652
Accrued income taxes	776	42,774
Other accrued liabilities	38,963	47,265
Total current liabilities	140,129	344,922
Deferred income taxes	44,523	16,807
Long-term debt and capital lease obligations, net of current maturities	110,414	158,933
Environmental liabilities, net of current portion	38,760	40,052
Other long-term liabilities	11,657	11,588
Minority interests	3,383	4,399
Commitments and contingencies (Note 11)		
Shareholders' equity:		
Preferred stock—20,000 shares authorized, none issued	—	—
Class A common stock—75,000 shares $1.00 par value authorized, 21,402 and 21,592 shares issued and outstanding	21,402	21,592
Class B common stock—25,000 shares $1.00 par value authorized, 6,268 and 6,345 shares issued and outstanding	6,268	6,345
Additional paid-in capital	—	11,425
Retained earnings	894,243	939,181
Accumulated other comprehensive loss	(2,546)	(391)
Total shareholders' equity	919,367	978,152
Total liabilities and shareholders' equity	$1,268,233	$1,554,853

Example:

Centex was able to use its loss carry-back, receiving a significant cash refund, but owing to the enormity of its recent losses and uncertainty as to future profits, it established a full valuation allowance.

> As of March 31, 2009, we had net deferred tax assets of $1.29 billion for which a $1.29 billion valuation allowance has been established. The ultimate realization of the deferred tax assets is dependent upon a variety of factors, including taxable income in prior carryback years, estimates of future taxable income, tax planning strategies, and reversals of existing taxable temporary differences. The FASB provides in SFAS No. 109, "Accounting for Income Taxes," or SFAS 109 that a cumulative loss in recent years is significant negative evidence in considering whether deferred tax assets are realizable. Based on our assessment, the realization of our deferred tax assets is dependent upon future taxable income and, accordingly, we have established a full valuation allowance. The valuation allowance may increase or decrease as conditions change and/or if new tax laws are enacted, such as changes to net operating loss carryback and carryforward rules, which could have a material effect on our financial position and results of operations.
>
> As of March 31, 2009 and 2008, the company had a federal income tax receivable of $198.8 million and $648.5 million, respectively, primarily relating to net operating loss carryback refund claims. During the year ended March 31, 2009, the company received federal tax refunds of $699.3 million. The company's net deferred tax assets before the valuation allowance increased to $1.29 billion as of March 31, 2009 from $1.02 billion as of March 31, 2008. The company had a $266.6 million deferred tax asset resulting from tax credits and net operating loss carryforwards at March 31, 2009. If unused, the various tax credits and net operating loss carryforwards will expire (beginning at various times depending on the tax jurisdiction) in the years 2013 through 2029.

Source: Centex 2009 10K.

Most firms use the liability method for recording deferred income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. A firm need not establish a full valuation allowance, like Centex, if it is more likely than not that some portion or all of the deferred tax assets will be realized.

For firms that have substantial temporary timing differences, cash flow, of course, would be enhanced in earlier years and impaired in later years. This is not the case with permanent timing differences. For example, interest received on municipal bonds is not taxable and would be excluded in taxable income, but financial reports must incorporate such interest as income.

Opponents of the deferred tax liability argue that, in reality, most firms have a large buildup of deferred taxes that are unlikely to ever be paid to the

government. They contend that as long as the firm keeps growing, and as long as additional temporary differences are created, deferred taxes will continue to grow. This is verified empirically by observing the steady growth of the deferred tax liability on most firms' financial statements over the last two decades. Furthermore, opponents of the deferred tax liability argue that this liability is never discounted to the present, unlike other long-term liabilities of the firm. Indeed, this issue has not been resolved satisfactorily by the FASB, which issued SFAS 96 to deal with accounting for income taxed. Also, the FASB deferred the effective date of the standard with the issuance of SFAS 100, deferred it again with SFAS 103, and finally set new accounting rules with SFAS 109.

SFAS 109 changed the accounting for income taxed in several material ways. First, it established the liability approach for deferred tax liabilities. Second, it defined and expanded the disclosure rules for temporary and permanent differences between tax and financial reporting. Finally, it allowed firms to include deferred tax assets on the balance sheet if it is "more likely than not" that the firm can use these deferred tax assets in the future. Let me explain each of these issues and illustrate them with several examples.

In the past (before SFAS 96, which most firms did not adopt, or before SFAS 109), firms used to set a deferred tax liability as the difference between the tax expense on a temporary item and the actual current tax liability on that item. For example, if a financial reporting expense was shown at $5,000, whereas on the tax return the same expense was shown as $6,000, a temporary difference of $1,000 would have been created. Suppose further that the firm was subject to a 46 percent tax rate. The firm would create a deferred tax liability for $460 (46 percent of $1,000), which is equal to the expected tax payment on the item when the expense is smaller on the tax return than on the financial statements. One also can derive $460 by comparing the financial statements tax credit on the item of $2,300 (46 percent of $5,000) and the actual tax credit of $2,760 (46 percent of $6,000). Note that both computations give the same result if one uses the same rate of 46 percent. Prior to SFAS 109 (or its predecessor, SFAS 96), firms used the second method to set up their deferred tax liability.

Suppose now that two years later, but before the item reverses, the government decides to reduce the tax rate to 40 percent. Using the first approach, the expected tax liability in the future is now $400 (40 percent of $1,000) instead of $460, as computed earlier. Thus the liability approach, which is adopted by SFAS 109 (and SFAS 96), would reduce the deferred tax liability on the balance sheet by $60 ($460 – $400) and would incorporate in income a $60 gain owing to lower taxes. Under the approaches prior to SFAS 109 *(*and SFAS 96), such a decrease in the liability would not have been made because at the time of the initial expense of the item the difference in the tax and financial statement expense that

was incorporated into the income statement was exactly $460. Note that if tax rates are expected to increase, the reverse effect would occur—an increase in the deferred tax liability and a loss on the income statement owing to tax increases.

Prior to SFAS 109, firms found it very difficult to record a deferred tax asset. Deferred tax assets occur when a firm has greater expense for financial reporting purposes than for tax purposes. For example, the accrual of postretirement benefits is a financial reporting expense under SFAS 106, but it is not a taxable expense until cash is actually paid to retirees. Firms did not set up deferred tax assets unless they were reasonably certain that the tax benefits from the assets would indeed be obtained in the future. Under the current tax rules, one can carry tax losses backward two years to offset prior taxable income and forward up to 20 years.[17] However, to use tax carryforwards, the firm must have future taxable income. Prior to SFAS 109, firms rarely created deferred tax assets because the uncertainty about utilization of those assets in the future was significant. SFAS 109 allowed firms to set up a deferred tax asset if "it is more likely than not" that the tax asset would be used in the future. It also required firms to show the entire amount of deferred tax assets but then reduce the tax assets by a "valuation allowance," which is similar to an allowance for uncollectible receivables. This allowance reduces the deferred tax asset to the amount that is likely to be used in the future.

SFAS 109 requires firms to continue with prior disclosure about income taxes and mandates some additional disclosure. Accordingly, firms usually report separately in a footnote their current and deferred tax expense for the period, as well as their federal, state, and local taxes and, if applicable, their domestic and foreign taxes. Firms are also required to reconcile the statutory tax rate with their effective tax rate, providing information about permanent differences between financial reporting and taxable income. Firms are also required to disclose the major components of deferred tax assets and liabilities, in effect providing information about temporary differences. Let's examine several such disclosures.

Since the cash-flow and debt effects of deferred taxes are difficult to ascertain, I recommend that the cash-flow analyst should not, under most circumstances, include deferred taxes among long-term liabilities of the firm when considering total debt and any ratio based on total debt. In fact, credit-rating agencies typically add deferred taxes to long-term debt in computing total capital. The one exception would be if an amount of deferred taxes were likely to be realized, the analyst should deduct that from estimated operating and free cash flow and adjust the current debt ratio to include the liability.

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[17] The loss carryback was extended for five years for eligible small business corporations resulting from the economic stimulus package of 2008.

Example:

Ulta Salon, Cosmetics & Fragrance, Inc., is the largest beauty retailer that provides one-stop shopping for prestige, mass, and salon products and salon services in the United States. In its income tax footnote, management reports a deferred tax asset of $10.5 million for reserves not currently deductible; the reserve is created as vendors advance cash to the company to promote their products. On Ulta's balance sheet, the amount is netted against inventory until the product is sold. The $2.8 million accrued tax asset represents mostly gift cards and would be reduced as redeemed. We also see that the company had a tax-loss carryforward that, given its recent consistent profitability, one would expect to be fully used in the current fiscal year. It will not, however, be utilized in the current period owing to a recent ownership control change that limits such deductibility per year.[18] The company's return to profitability related to the change in ownership illustrates the importance of management and the ability of different skill sets in turning around the cash flows of a company.

Finally, the deferred tax liability regarding deferred rent obligation relates to tenant allowances, whereby Ulta receives cash up front from landlords when building out locations, with the cash used for leasehold improvements. Ulta uses straight line for shareholder reporting and amortizes the upfront payments over the term of the lease. Presumably, as long as Ulta continues to expand locations, this timing difference will grow.

	January 31, 2009	February 2, 2008
Deferred tax assets:		
Reserves not currently deductible	$10,491	$11,655
Employee benefits	2,576	2,315
Net operating loss carryforwards	989	963
Accrued liabilities	2,799	1,038
Property and equipment	—	671
Inventory valuation	—	243
Total deferred tax assets	16,855	16,885
Deferred tax liabilities:		
Property and equipment	15,771	—
Deferred rent obligation	5,815	3,586
Prepaid expenses	4,483	—
Inventory valuation	124	—
Total deferred tax liabilities	26,193	3,586
Net deferred tax (liability) asset	$(9,338)	$13,299

Source: Ulta Salon and Fragrances 2009 10K.

[18] For information on the permissible deduction and change-of-control definitions, see IRS Code Section 382.

PENSION AND OTHER POSTRETIREMENT BENEFITS

Most entities in the United States have plans that promise employees various benefits, most notably pension, life insurance, and health care benefits. It is important to study and understand the entity's benefit expense, including postretirement liabilities, in credit analysis because it relates to capital structure. I shall describe in this section some of those postretirement benefits, their accounting rules, and their effects on cash flow and debt.

The contribution companies make into their retirement plans is almost always material. Its effect on the entity is profound, from a market-value perspective, owing to the impact of the required large cash outlays and leverage through the liability associated with pension obligations. These obligations also affect credit rating and future prospects because investments and additions to the workforce may be curtailed as a result of these prior commitments of cash now being earmarked for plan funding. Worker terminations may result if the cash contributions into the plans are greater than budgeted.

As of September 2009, there were 179 companies having a market value of at least $100 million that contributed 20 percent or more of their pretax profit to such plans. Table 6-11 discloses the magnitude of the cash expense for many large companies having a high ratio of company contributions as a percentage of net income for their latest fiscal year as of September 2009. Unsurprisingly, the average company on the list did not produce positive free cash flow for the year under review.

TABLE 6-11

Pension Expense and Other Related Information for Selected S&P 500 Companies

Company Name	Ticker Symbol	Premium Employer Contrib	Net Income (Low)	Pension Cont.	Free Cash Flow	Debt-Total
AK STEEL HOLDING CORP	AKS	326.800	4.000	56.700	(153.800)	693.300
ALTRA HOLDINGS INC	AIMC	3.947	6.494	0.600	25.825	261.523
AMCOR LTD -ADR	AMCRY	52.041	170.525	0.310	(144.268)	2,281.014
AMETEK INC	AME	79.906	246.952	0.324	177.365	1,111.681
AMPCO-PITTSBURGH CORP	AP	9.434	12.575	0.750	16.838	13.311
ANALOGIC CORP	ALOG	1.156	3.705	0.312	1.314	0.000
ANDERSONS INC	ANDE	10.002	32.900	0.304	154.475	361.751
ARH CHEMICLAS INC	ARJ	26.300	37.000	0.708	(27.800)	393.000
ARKANSAS BEST CORP	ABFS	31.218	29.163	1.070	31.254	16.805
AVISTA CORP	AVA	28.000	73.620	0.300	(140.932)	1,192.068

Company Name	Ticker Symbol	Premium Employer Contrib	Net Income (Low)	Pension Cont.	Free Cash Flow	Debt-Total
CAMBREX CORP	CBM	3.194	7.929	0.403	(24.389)	123.000
CASS INFORMATION SYSTEMS INC	CASS	5.900	19.006	0.310	16.291	3.296
CEMEX SAB DE CV -ADR	CX	60.223	164.691	0.366	217.972	18,659.195
CH ENERGY GROUP INC	CHG	13.027	36.051	0.361	(1.994)	469.394
CONNECTICUT WATER SVC INC	CTWS	3.500	9.424	0.371	(11.601)	104.309
CONSOLIDATED COMM HLDGS INC	CNSL	6.139	12.504	0.491	(1.065)	881.266
CRAWFORD & CO	CRDB	24.577	32.259	0.762	55.761	198.856
CROWN HOLDINGS INC	CCK	71.000	226.000	0.314	248.000	3,337.000
DANA HOLDING CORP	DAN	37.000	18.000	2.056	(1,283.000)	1,251.000
DELTIC TIMBER CORP	DEL	2.372	4.384	0.541	(11.317)	76.944
DEUTSCHE LUFTHANSA AG -ADR	DLAKY	470.462	833.743	0.564	8.359	5,065.124
DOW CHEMICAL	DOW	185.000	579.000	0.320	872.000	11,856.000
ENERGYSOLUTIONS INC	ES	104.632	45.181	2.310	87.849	568.864
FEDEX CORP	FDX	1,148.000	98.000	11.684	157.000	2,583.000
FORTUNE BRANDS INC	FO	114.500	311.100	0.360	380.100	4,725.200
FREIGHTCAR AMERICA INC	RAIL	6.750	4.614	1.463	(68.111)	0.028
GAYLORD ENTERTAINMENT CO	GET	2.674	4.364	0.613	(272.915)	1,262.901
GENCORP INC	GY	1.700	1.500	1.133	5.700	440.600
GERBER SCIENTIFIC INC	GRB	6.419	2.236	2.871	1.587	73.689
GOODRICH CORP	GR	227.200	681.200	0.334	385.200	1,569.400
GRACE (W R) & CO	GRA	67.700	121.500	0.557	(130.000)	11.800
GRAHAM CORP	GHM	7.500	17.487	0.429	1.100	0.059
HANOVER INSURANCE GROUP INC	THG	21.300	20.600	1.034	129.200	591.400
HONDA MOTOR CO LTD -ADR	HMC	481.866	1,381.795	0.349	(10,684.831)	46,565.598
INNOSPEC INC	IOSP	7.500	12.500	0.600	2.900	73.000
KAMAN CORP	KAMN	25.772	35.599	0.724	(43.900)	94.165
KELLOGG CO	K	354.000	1,148.000	0.300	311.000	5,462.000
KRONOS WORLDWIDE INC	KRO	20.000	9.000	2.311	(114.400)	658.500
KYOCERA CORP -ADR	KYO	122.243	298.040	0.410	(37.586)	539.425
LAUDER (ESTEE) CDS INC -CL A	EL	66.900	218.400	0.306	307.800	1,421.400
LAZARD LTD	LAZ	16.208	3.138	5.165	464.325	1,286.720
LIFE SCIENCES RESEARCH INC	LSR	4.926	10.418	0.473	15.061	74.539
LIFE TECHNOLOGIES CORP	LIFE	9.745	31.321	0.311	283.896	3,583.589
MCDERMOTT INTL INC	MDR	160.298	429.302	0.373	(304.858)	15.130
MOLSON COORS BREWING CO	TAP	223.600	388.000	0.519	41.900	1,831.800
MUELLER WATER PRODUCTS INC	MWA	33.900	42.000	0.855	85.800	1,095.500
NAVISTAR INTERNATIONAL CORP	NAV	108.000	134.000	0.806	905.000	6,074.000
NCR CORP	NCR	83.000	228.000	0.364	321.000	308.000
NORTHWESTERN CORP	NWE	32.734	57.601	0.414	23.930	900.047
NSTAR	NST	72.588	239.507	0.303	(21.868)	3,024.583

(*Continued*)

TABLE 6-11 *(Continued)*

Pension Expense and Other Related Information for Selected S&P 500 Companies

Company Name	Ticker Symbol	Premium Employer Contrib	Net Income (Low)	Pension Cont.	Free Cash Flow	Debt-Total
NV ENERGY INC	NVE	94.143	208.887	0.451	(1,156.303)	5,275.273
OCE NV -ADR	OCENY	54.166	2.498	21.964	(13.535)	775.732
ONEOK INC	OKE	117.597	311.909	0.377	(1,160.244)	6,500.776
PEPSI BOTTLING GROUP INC	PBG	90.000	162.000	0.556	389.000	6,192.000
PMA CAPITAL CORP	PMACA	2.000	5.689	0.352	(61.161)	129.380
POLYMER GROUP INC	3POLGA	5.141	5.353	1.091	24.998	413.665
QUAKER CHEMICAL CORP	KWR	8.355	11.132	0.751	(7.154)	33.167
RAYTHEON CO	RTN	1,174.000	1,872.000	0.702	1,251.000	2,309.000
RHODIA -ADR	RHAYY	57.068	146.150	0.390	101.568	2,510.988
RICOH CO LTD -ADR	3RJCOY	149.020	65.960	2.259	(351.283)	7,870.657
ROGERS CORP	ROG	9.326	26.515	0.352	41.277	0.000
RURAL/METRO CORP	RURL	2.185	5.026	0.435	35.389	277.309
SAPPI LTD -ADR	SPP	76.000	102.000	0.745	(150.000)	2,679.000
SARA LEE CORP	SLE	306.000	364.000	0.841	241.000	2,820.000
SCHWEITZER-MAUDUIT INTL INC	SWM	4.500	0.700	6.571	(11.400)	179.300
SCIENTIFIC GAMES CORP	SGMS	3.200	8.488	0.386	24.858	1,259.848
SEARS HOLDINGS CORP	SHLD	262.000	53.000	4.943	495.000	3,147.000
SENECA FOODS CORP -CL B	SENEA	10.000	18.765	0.533	24.058	230.802
SOUTHWEST GAS CORP	SWX	30.363	60.973	0.596	(39.174)	1,348.307
STANDARD RECHSTER CO	SR	22.316	6.836	9.264	17.784	33.999
STEINWAY MUSICAL INSTRS INC	LVB	7.017	8.186	0.857	1.639	186.750
STURM RUGER & CO INC	ROR	2.936	8.666	0.339	1.594	1.000
TATE & LYLE PLC -ADR	TATYY	44.330	92.950	0.477	228.000	2,362.360
TELEDYNE TECHNOLOGIES INC	TDY	59.700	111.300	0.536	78.500	333.200
TNT NV -ADR	TNTTY	311.786	773.896	0.403	456.543	3,119.248
TOSHIBA CORP -ADR	TOSYY	593.263	1,164.653	0.451	1,307.932	9,817.670
UNISOURCE ENERGY CORP	UNS	10.000	14.021	0.713	(106.321)	1,861.466
UNITED CAPITAL CORP	AFP	1.500	1.616	0.928	(4.530)	32.863
WACDAL HOLDINGS CORP -ADE	WACLY	20.958	52.743	0.397	22.410	53.475
WATSON WYATT WORLDWIDE	WW	68.014	146.458	0.451	175.567	0.000
WHIRLPOOL CORP	WHR	128.000	418.000	0.301	(348.000)	2,597.000
WILLS GROUP HOLDINGS LTD	WSH	154.000	303.000	0.508	(29.000)	2,650.000
XEROX CORP	XRX	299.000	230.000	1.300	579.000	9,092.000
AVERAGE		108.564	182.020	1.941	(68.606)	2,518.959

Firms employ two general types of pension plans—defined-benefit and defined-contribution plans. *Defined-benefit plans* promise employees specific monetary payments to be made to them (or to their remaining spouses) on retirement. The firm has the responsibility to have funds available to pay for those future benefits. *Defined-contribution plans* specify the contribution the employer has to make currently to the plan. Employees are paid from funds available in the plan when they retire based on number of years of service and salary. Under defined-benefit plans, the employer bears the risk of a shortfall in funds if the employee reaches retirement and the plan's assets are insufficient to make the required payments. In such a case, the employer must make supplemental payments so that retirees will receive their promised benefits. Under defined-contribution plans, the employer discharges most responsibilities as soon as the necessary contributions are forwarded to the plan; any risk of shortfall in funds is borne by the employees. Many firms have attempted in the last two decades to terminate their defined-benefit plans and to offer instead defined-contributions plans, which would effectively eliminate their risk, once the required contributions are made.

Typically, firms will set up a separate entity, the pension fund, that is administered jointly by employees and the firm's management (called the *investment* or *employee benefits committee*). A member of a union also may be involved. Employer contributions to the fund (called *funding*) increase the assets of the pension fund. Fund assets are also invested (typically in equities, governmental or corporate bonds, real estate, hedged funds, or company stock), and the return on these investments increases fund assets. Fund assets decrease when payments are made to current retirees, the market value of the investments fall, and to a much smaller extent, because of expenses in managing the fund. Pension plans are subject to the provisions of the Employee Retirement Security Act of 1974 (ERISA).

Defined-contribution plans pose few accounting problems. When employees earn the right to the contribution by the employer, the employer accrues the obligation as a current liability. Funding of the contribution to the designated fund discharges the employer's obligation. The employer is not legally concerned with the value of the assets in the fund or with making additional payments to existing and future retirees. Fund managers are hired to maximize the long-term returns on plan assets. An example of a defined-contribution plan is one in which the employer transfers a specified percentage of the employee's current compensation to a fund chosen by the employee. Typically, these contributions are not taxable to the employee until drawn from the fund.

Defined-benefit plans, on the other hand, pose great difficulties from an accounting point of view. Here, the employer retains the responsibility for the specified future benefits until the employee or the employee's survivors are no longer eligible for those benefits. Thus the employer is liable for these benefits

until all future promised payments are made. The major accounting issues are how to estimate the value of this liability and how it should be recorded in the financial statements. The major concern for the cash-flow analyst is the effect of the liability on cash flows and the long-term solvency of the firm, as well as adjusting the current leverage ratio.

Initially, firms reported no liability for pension obligations and included in the income statement an expense that was equal to the actual payment to existing retirees during the accounting period. This practice was stopped by APB Opinion No. 8, which required firms to estimate their liability to employees and disclose in a footnote to the financial statements some information about that liability. The next example will help you to better understand the nature of the liability and the associated accounting.

Example:

This a hypothetical example, although many firms have most features employed in this example. The pension plan is a defined-benefit plan. It promises that employees who reach retirement age (65 years) will get, for each year of service, annual compensation that is equal to 2 percent of their average annual salary during the five-year period prior to retirement. Thus an employee who worked for the firm 30 years is entitled to 60 percent of his or her average annual salary prior to retirement. These benefits will continue until the employees dies, at which point only 50 percent of the benefits will be paid to the surviving spouse. The plan has other restrictions. For example, employees who leave the firm before they have spent at least five years with the firm are not eligible to any pension benefits. Employees who remain in the employment of the firm for more than five years but for less than 10 years will get only 50 percent of their pension benefits when they reach retirement age, even if they are no longer employed by the firm. After 10 years, employees are eligible for 100 percent of the earned pension benefits when they reach retirement age, even if they are no longer employed by the firm.

Several factors affect the estimation of the firm's liability under this plan. First, the firm has to consider the current age of employees so that it will know how many years are left before pension benefits begin. Second, the firm has to estimate the life expectancy of the employees because it is *not* necessary to accrue pension obligations for employees who will not remain with the firm for at least five years and only 50 percent of the benefits for employees who remain with the firm between five and ten years. The firm then should estimate the average annual salary of the employee on which pension benefits will be based.[19] Finally, these future payments should be discounted to estimate the present value

[19] In some pension plans, payments received from Social Security reduce payments to employees. In such cases, it is important to estimate the future level of payments from the Social Security system and how they integrate with the company's plan.

of the pension obligation. The estimated liability is called *actuarial present value of pension benefits* because actuarial assumptions are made in estimating future payments under the plan.

Typically, when firms initiate pension plans, or when firms make amendments to existing pension plans (e.g., increasing the rate of compensation from 1.5 to 2 percent for each year of service), the benefits are applied retroactively to employees who were eligible for these benefits when the plan was adopted or amended. Thus, in addition to the continuous accumulation of pension benefits for current services by employees, firms may be liable to pay pension benefits to employees for past and prior services. These lump-sum additions to the pension liability may be spread over future periods by amortizing the liability for prior services over the remaining time until employees retire.

As already explained, the firm makes contributions to the pension fund, and fund assets are invested further to yield greater assets in the future.[20] Thus, at any point in time, the pension plan will have a liability for future pension benefits and assets from which this liability can be paid in the future. One describes the fund as *underfunded* when liabilities exceed assets and as *overfunded* when assets exceed the liabilities.

The funding status of the plan may change every year. The firm may increase contributions to the plan, or investments may yield a rate of return beyond that which was expected initially. Also, there may be actuarial gains and losses that are caused by changes in the actuarial assumptions that underlie the estimated liability. For example, when the turnover rate of employees surpasses expectations, the pension liability decreases because fewer employees will reach the point at which benefits vest, which is the point when benefits will have to be paid even if the employee leaves the firm before retirement.[21] Another example is when employees die earlier than the actuarial projection, known as the *mortality assumption*. This reduces future benefits as well as current liabilities, thus producing an actuarial gain. Such gains and losses are not incorporated into income in the year in which they occur but are amortized over future years if they are material.

APB Opinion No. 8 (1968) required firms to estimate pension liability using an acceptable actuarial method and to include in the pension expense an amortization of

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[20] Sometimes the contribution to the pension fund will not be in cash but will be in the form of real estate properties or even the firm's own common stock. In an effort to reduce its liability in its underfunded pension plans, General Motors contributed its own common stock to its pension fund.

[21] For the pension liability, one cannot necessarily use the rule of thumb, according to which increases in liabilities are economically bad for the firm, and decreases are necessarily beneficial to the firm. For example, an increase in the turnover rate will decrease pension liability, but it also means that the firm loses skilled, trained employees. Thus the economic loss from the higher turnover ratio actually may exceed the economic benefits from reduced pension payments in the future.

prior service costs. It also required firms to disclose in a footnote to the financial statements the unfunded vested benefit obligation and pension expense for the period. Unfunded vested benefits are equal to the actuarial present value of pension obligations that will be paid whether or not employees remain with the firm minus fund assets that are available for payments to employees. In addition, the SEC required firms to disclose the unfunded prior service cost.

In 1976, the FASB changed the accounting and disclosure requirements as they relate to the pension fund. First, fund assets were required to be disclosed using the fair market value of those assets, not their accounting carrying cost. This usually tended to increase the value of fund assets because equity and real estate investments, typically, were understated when historical cost values were used. Second, the FASB required additional disclosure about pension plans in a footnote to the financial statements. Firms had to supply information about the actuarial present value of their vested and nonvested pension benefits about the fair market value of pension plan assets, about the average discount rate used in the estimation of the liability, and about the projected rate of return on pension plan investments. Still, no liabilities or assets were incorporated into the financial statements by these pronouncements.

In 1985, the FASB issued SFAS 87, which imposed new accounting and disclosure requirements on firms. SFAS 87 required for the first time the recording of a pension liability on the balance sheet under certain conditions (described below). It also broadened the disclosure in the footnotes to the financial statements. The standard became effective in 1987, although some firms chose to adopt it earlier. Let's examine some of these major changes.

Probably the most significant effect of this standard is the requirement to use the "projected benefit obligations" instead of the "accumulated benefit obligations" in some tests employed by the standard and in disclosure of the liability. The difference between *projected* and *accumulated* benefits relates to the forecast of future salary increases. Recall that a pension plan usually sets a formula for pension benefits based on the average salary at some point close to retirement. Naturally, the longer the service is with the firm, the more likely the employee is to have a higher salary owing to promotions and salary increases as a result of inflation. Thus, in estimating the actuarial present value of *projected* benefit obligations, the actuary takes into account expected future salary increases. However, to estimate the actuarial present value of *accumulated* pension benefits, the actuary uses current salary levels. The difference between the two measures is substantial; for the average firm, it increases the actuarial present value of the liability by about 20 to 40 percent.

If the analyst determines that the projected benefit obligation understates the true liability, such as those instances where the workforce is growing, an

adjustment should be made to the balance sheet to reflect the additional liability. Shareholders' equity should be adjusted by the difference between the amount accrued on the balance sheet and the net amount of either the over- or underfunded obligation, net of any tax effect.

The second major change in SFAS 87 is the requirement to accrue a liability *on the balance sheet* that is equal to the excess of the actuarial present value of accumulated pension benefits over plan assets. Thus, if a firm's actuarial present value of accumulated pension benefits is larger than the value of plan assets to satisfy this liability, the difference is shown as a liability on the balance sheet. This requirement becomes effective for firms with large shortfalls in their pension plans and is known as the *minimum liability requirement*.

SFAS 87 also required firms to disclose information in a footnote to the financial statements, some of which is just a carryover of prior FASB pronouncements, but most of which is new and broadened information. The required information generally is of three types: (1) information about pension plan assets and liabilities, whether incorporated on the balance sheet or not, (2) information that provides additional details about the pension expense for the period, and (3) information about the pension plan, funding policy, and assumptions used in estimating the liability. Later I will provide a description of these information items.

The standard required firms to disclose information about the actuarial present value of accumulated pension benefits and of projected pension benefits. Since the old disclosure requirements are still in effect, the pension liability is broken down into vested and nonvested benefits. The footnote also discloses the fair market value of pension plan assets so that analysts could determine if the pension plan is overfunded or underfunded. The standard also required firms to reconcile the funding status or the amount of over- or underfunding with the pension plan assets/liabilities that were not yet recognized and incorporated on the balance sheet.

The standard required firms to disclose information about the major components of the pension expense for the accounting period. The first component is the normal service cost for the period. This represents the additional pension benefits that employees earned during the period simply because they spent one additional year of service with the firm. Recall that the pension plan has a formula that provides pension benefits according to the number of service years with the firm. Thus this additional year entitles employees to greater pension benefits, and the actuarial present value of those additional benefits is the normal service cost.

The second component of the pension expense is the interest expense. This component represents the fact that the balance of the pension liability as of the beginning of the year has come one year closer to maturity. As is true of debt, when a loan is one year closer to maturity, its present value increases, and the increase in the present value of the loan from the beginning of the year to its end

represents interest expense. Similarly, since the actuarial present value of the pension liability that existed at the beginning of the year is larger at the end of the year, the increase in the present value is considered interest expense and is shown as the second component of the pension expense for the year.

The third component of the pension expense is actually a pension revenue in most cases—the rate of return on pension plan assets. As a mirror image of the interest expense on the pension plan liability at the beginning of the year, the return on plan assets represents the interest revenue on assets that existed at the beginning of the year. Recall that in most cases the pension plan will have assets in the fund at the beginning of the period. These assets were intended to offset the liability that existed at the beginning of the period. Just as we recognize the increase in the present value of the liability over the year as interest expense, we should recognize as revenue the increase in plan assets owing to profitable investments during that same year.

The final component of the pension expense in the footnote to the financial statements is the amortization and deferral of various amounts. Among the amounts that need to be amortized and included in the pension expense are items such as actuarial gains and losses that are incorporated into the balance sheet over a period of time.[22] Other items that will be amortized are prior service costs owing to adoption and amendments of pension plans and the transition amount. Also, if the pension fund had an actual return on assets that exceeded or fell short of the assumed long-term rate of return, the excess (or shortfall) is deferred and is amortized slowly if it exceeds a minimum amount. Finally, firms may from time to time decide to provide current retirees with benefits increases. These also would be added to the pension expense.

The last type of information disclosed in the footnote on pensions is about assumptions made to estimate the pension liability, a description of the pension plans and pension formulas, and the funding policy of the firm. For example, the firm usually will disclose the discount rates, the rate of return on plan assets, and the rate at which salaries are expected to grow in the future. Interestingly enough, most firms assume that the rate of return on plan assets and the rate used to discount the pension liability are higher than the rate at which salaries are expected to grow. Thus employees in these firms are estimated to have an erosion of their real earnings power.

The firm usually describes its pension plans in general terms: who is eligible for participation in the plan, the major elements of the plan formula, and any other plans that are not standard U.S. plans. Thus information is provided separately about foreign pension plans and about multiemployer plans within the United

[22] SFAS 87 allowed firms to amortize actuarial gains and losses only if they exceed a certain minimum amount. This is the *corridor* approach adopted by this standard.

States (multiemployer plans are common to all employees of a particular union regardless of the specific employer; all employers are responsible together for pension liabilities and assets). The firm also will describe its funding policy.

SFAS 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Benefits*, effective December 31, 2006, requires an employer to recognize the funded status of each of its defined pension and postretirement benefit plans as a net asset or liability in its statement of financial position with an offsetting amount in accumulated other comprehensive income and to recognize changes in that funded status in the year in which changes occur through comprehensive income. Following the adoption of SFAS 158, additional minimum pension liabilities and related intangible assets are no longer recognized. Adoption of the statement does not affect cash flows.

Although SFAS 158 requires a company to recognize the underfunded status of defined-benefit plans as a liability on its balance sheet and to recognize changes in that funded status in the year that such changes occur, the ultimate liability is still uncertain because it can really be determined only when the last retiree is paid in full. In my determination of operating cash flow, I adjust cash flow from operations if the periodic accrual differs from the actual contribution.

Beginning in 2008, resulting from the Pension Protection Act of 2006, an employer must fund 100% of a liability of its defined pension plan over nor greater than 7 years. The funding shortfall must take place each year. By 2008 the shortfall is recalculated each year and to the extent any additional shortfall has taken place, the total must be contributed to the plan over a new 7 year period. This is in addition to the normal costs that must be funded.

In December 2008, the FASB issued SFAS 132(R)–1, *Employers' Disclosures about Postretirement Benefit Plan Assets*. This requires additional disclosures about plan assets for sponsors of defined-benefit pension and postretirement plans, including expanded information regarding investment strategies, major categories of plan assets, and concentrations of risk within plan assets. We shall see how this plays out in the years ahead, but I believe that the only true way to complete transparency is to make public the complete actuarial valuation. The information that is currently included in and part of financial statements relates to the current closed group of employees. For defined-benefit plans that have a growing business, the difference in the liabilities thus can be substantial.

To summarize terms found in the pension footnote that are important to the cash-flow analyst:

1. *Service cost.* This is the increase in the pension benefit obligation owing to current employees resulting from an added year of service.
2. *Interest cost.* The interest expense related to the pension benefit obligation, which is determined by the settlement rate.

3. *Settlement rate.* The benefits if the plan were closed out today.
4. *Discount rate.* Discount rates are used to calculate the present value of pension obligations and the service and interest cost portions of net periodic pension cost. The discount rate is intended to represent the rate at which pension benefit obligations could be settled by purchase of an annuity contract. A number of measures can be used as bases for determining the discount rate, including a current annuity rate, current Pension Benefit Guaranty Corporation (PBGC) rates, or available rates on high-quality fixed-income investments. This is an important variable because it applies to all employees, and a small change will have a large effect on the liability. The higher the discount rate, the less conservative is the assumption.
5. *Actual and estimated return on plan assets.* The actual return on plan assets is computed as beginning value plus contributions minus benefits paid. Estimated return is calculated as estimated return multiplied by the beginning value. The difference between the two is amortized or can be satisfied through an additional employer contribution. Owing to swings in the financial markets, actuaries smooth investment performance over a period of years, with the difference between the estimated and actual returns placed into unexpected gains and losses. The expected return on assets is a negative component of net periodic pension cost; that is, it lowers the cost.
6. *Unrecognized gains and losses.* This represents deviations of actual amounts from estimated amounts. The entity is required to amortize the unrecognized gains and losses only if they exceed 10 percent of the greater of the pension benefit obligation or market related value (both as of the beginning of the year). Such gains or losses then are amortized over the remaining service life of the active employee workforce. The pension benefit obligation is that amount due to vested and nonvested employees at their retirement salary. This differs from the accumulated benefit obligation, which is the amount owed based on current salary.

The importance of the funding and actuarial methodologies are extremely significant to the cash-flow and credit analyst because liberal assumptions may be hiding large prospective cash requirements the entity is ill-prepared to make. Even if the entity has the financial flexibility to contribute additional amounts of cash into the plan, it represents cash that is unavailable for distribution to shareholders, place into the business to generate additional free cash flow, or leave as surplus equity. Also, since the periodic cost may differ from the actual contribution, the underfunding, if it were to continue and not be offset by an increase in the market value of the plan's assets, would result in a large legal liability.

Defined-benefit obligations for retirees, including pensions and health care coverage, and other forms of deferred compensation are financial obligations that must be paid over time, just as any legal obligation must be serviced, so typically they should be included in debt ratios if they are deemed to result in a probable outflow of capital outside the normal historical funding pattern. Contributions within the normal funding pattern should not be included as part of total debt and represent an expense similar to compensation. A company that wishes to pre-fund its obligation, or part of it, offsets the financial burden and to that extent may understate its normalized operating cash flow.

Campbell Soup contributed $70 million into its retirement plans during 2009 and expected the cash contribution to rise to $80 million in 2010. It states in its 10K filing that the cash payment will increase owing, in part, to a lowering of its discount rate from 6.87 to 6 percent. Even for a company as large as Campbell Soup, with $7.6 billion in revenue, $80 million represents 7.4 percent of pretax income and 10.9 percent of after-tax income. The discount rate change thus has important ramifications for investors and creditors, increasing the total debt of the firm while affecting cash flows with the rising contributions. Credit agencies often place peers on equal actuarial footing.

To the extent that certain of an entity's actual experiences (e.g., mortality rate, changes in Social Security level) are below those assumed, it could be overfunding its pension or postretirement obligations, and operating and free cash flow will be understated. The firm would have the option of adjusting future contributions downward. If actual experience were worse than planned, cash flows would have been overstated.

Example:

Of interest with regard to 3M is the additional substantial cash outlay required to improve the funding status of its pension and postretirement plans resulting from the decline in the financial markets. Since pension and other postretirement actuarial methods allow for various market-value smoothing techniques, the full brunt of a particular year's investment performance may not result in immediate stepped-up contributions. The analyst must review the pension and other postretirement footnote to determine the reasonableness of the size of the company contribution in relation to any liability, and annual outflows from the fund for, as seen for 3M in Table 6-12, a contribution can represent a very significant cash expense, even during years the plans' assets are meeting actuarial expectations.

Additionally, any large change in the investment returns of the financial assets during the course of the fiscal year would affect the following year's contribution level. A gain in the firm's operating performance could be offset by the increased funding to its plans.

During 2008, 3M's plan assets fell despite total contributions in the prior three years exceeding $1.1 billion. Thus it should be presumed that if plan returns for 2009 were to be disappointing relative to their actuarial assumptions, including plan experience (i.e., return on plan assets, new hiring, changes in plan benefits, etc.), another large contribution would be necessary. Fortunately for 3M and plan participants, 2009 was a strong year for the financial markets.

TABLE 6-12

3M Statement of Cash Flows

3M COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF CASH FLOWS
Years Ended December 31
(Millions)

	2008	2007	2006
Cash Flows from Operating Activities			
Net income	**$3,460**	$4,096	$3,851
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation and amortization	**1,153**	1,072	1,079
Company pension and postretirement contributions	**(474)**	(379)	(385)
Company pension and postretirement expense	**105**	255	440
Stock-based compensation expense	**202**	228	200
(Gain)/loss from sale of businesses	**23**	(849)	(1,074)
Deferred income taxes	**118**	11	(316)
Excess tax benefits from stock-based compensation	**(21)**	(74)	(60)
Changes in assets and liabilities			
Accounts receivable	**197**	(35)	(103)
Inventories	**(127)**	(54)	(309)
Accounts payable	**(224)**	(4)	68
Accrued income taxes	**(162)**	(45)	138
Product and other insurance receivables and claims	**153**	158	58
Other, net	**130**	(105)	252
Net cash provided by operating activities	**4,533**	4,275	3,839
Cash Flows from Investing Activities			
Purchases of property, plant, and equipment (PPE)	**(1,471)**	(1,422)	(1,168)
Proceeds from sale of PPE and other assets	**87**	103	49
Acquisitions, net of cash acquired	**(1,394)**	(539)	(888)
Purchases of marketable securities and investments	**(2,211)**	(8,194)	(3,253)
Proceeds from sale of marketable securities and investments	**1,810**	6,902	2,287
Proceeds from maturities of marketable securities	**692**	886	304
Proceeds from sale of businesses	**88**	897	1,209
Net cash used in investing activities	**(2,399)**	(1,367)	(1,460)

	2008	2007	2006
Cash Flows from Financing Activities			
Change in short-term debt, net	**361**	(1,222)	882
Repayment of debt (maturities greater than 90 days)	**(1,080)**	(1,580)	(440)
Proceeds from debt (maturities greater than 90 days)	**1,756**	4,024	693
Purchases of treasury stock	**(1,631)**	(3,239)	(2,351)
Reissuances of treasury stock	**289**	796	523
Dividends paid to stockholders	**(1,398)**	(1,380)	(1,376)
Distributions to minority interests	**(23)**	(20)	(38)
Excess tax benefits from stock-based compensation	**21**	74	60
Other, net	**(61)**	—	(14)
Net cash used in financing activities	**(1,766)**	(2,547)	(2,061)
Effect of exchange rate changes on cash and cash equivalents	**(415)**	88	57
Net increase/(decrease) in cash and cash equivalents	**(47)**	449	375
Cash and cash equivalents at beginning of year	**1,896**	1,447	1,072
Cash and cash equivalents at end of year	**$1,849**	$1,896	$1,447

I now show both 3M's pension and postretirement footnote and a template (Table 6-13) that summarizes relevant information the investor can use when evaluating a plan. It is apparent that 3M's plans are underfunded by $2.2 billion, although the status is subject to very wide swings. At the end of 2006, the plans ended the year $2.3 billion overfunded and were overfunded at the end of 2007.

While 3M shows an accumulated benefits obligation of $15.5 billion, it also reveals in a footnote an ending projected benefit obligation of $14.4 billion.

3M reveals the following footnoted information:

> In September 2006, the FASB issued SFAS No. 158, "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans, an Amendment of FASB Statements No. 87, 88, 106 and 132(R)." This standard eliminated the requirement for a "minimum pension liability adjustment" that was previously required under SFAS No. 87 and required employers to recognize the underfunded or overfunded status of a defined benefit plan as an asset or liability in its statement of financial position. In 2006, as a result of the implementation of SFAS No. 158, the company recognized an after-tax decrease in accumulated other comprehensive income of $1.187 billion and $513 million for the U.S. and International pension benefit plans, respectively, and $218 million for the postretirement benefit plans.

In its pension footnote, 3M reports that it made discretionary contributions of $421 million to its pension plan in 2008, with its contribution for international growing at a much quicker rate. Aside from actuarial experience, the analyst must possess a complete understanding of plan investments, asset allocation, current financial market levels, and potential claims on plan assets to fully grasp the current funding status and size of a liability. If 3M's contributions for its international employees continues to grow at its current rate, in three years it will be greater than its U.S. contributions and

TABLE 6-13

3M Pension Summary

	Annual Data as of:				
	2008	**2007**	**2006**	**2005**	**2004**
Benefit obligation					
Accumulated benefit obligation	13,525	14,064	13,316	12,716	11,706
Pension plan assets					
Beginning plan assets	15,520	14,030	12,625	11,727	9,825
Actual return	(2,367)	1,564	1,397	1,242	1,846
Employer contributions	421	376	348	654	596
Participant contributions	5	4	4	9	11
Benefits paid (−)	800	740	676	659	731
Other	(514)	286	332	(348)	180
Plan assets	12,265	15,520	14,030	12,625	11,727
Pension-funded status	(2,167)	449	(569)	2,332	2,043
Balance sheet reconciliation					
Long-term asset	36	1,378	395		
Current liability (−)	36	33	31	0	0
Long-term liability (−)	2,167	896	933		
Pension-funded status	(2,167)	449	(569)	2,332	2,043
AOCI-related					
Unrecognized prior service cost	(18)	23	(1)	7	6
Other adjustments	4,957	2,095	2,929	3,636	3,155
Net pension cost (credit)					
Service cost	312	317	320	279	265
Interest cost	849	796	722	679	649
Return on assets	(1,194)	(1,130)	(1,009)	(882)	(829)
Other periodic cost components, net	122	207	314	255	240
Periodic pension cost	89	190	347	331	325
Pension expense					
Pension expense	103	190	347	331	325
Assumptions used for pension plans					
Discount rate					
Discount rate	6.1%	6.0%	5.8%	5.5%	5.8%
Conpensation rate—obligation					
Compensation rate increase	4.3%	4.3%	4.3%	4.3%	4.3%
Asset return rate—periodic cost					
Asset return rate	8.5%	8.8%	8.8%	8.8%	9.0%
Periodic cost discount rate					
Discount rate	6.0%	5.8%	5.5%	5.8%	6.0%

Source: 3M Financial Filings, Research Insight.

represent a considerable percentage of the total firm's cash flows. In fact, international growth in the benefits area deserves special recognition because large multinational employers have not had the success in bringing down those overseas costs as they have in the United States. This step-up for overseas employee funding is to be expected for entities whose international operations are seeing their cash flows grow more quickly than their U.S. operations. Currently, the pension contribution accounts for approximately 10 percent of 3M's operating cash flows.

As investors saw with General Motors, older-line companies can be suffocated by outsized employee benefits. And as reported, 3M had a considerable loss in its plans during 2008, even after raising the discount rate from 6 to 6.14 percent. Despite 3M's investment-grade credit rating, which is confirmed with CT Capital's credit model, the unfunded pension liability represents an item that deserves careful watching because its funding is responsible for consuming a large amount of cash that might cause the company to miss cash-flow estimates (affecting its stock price), even if the liability does not turn out to represent a threat to survivability.

	Qualified and Nonqualified Pension Benefits				Postretirement	
	United States		International		Benefits	
(Millions)	2008	2007	2008	2007	2008	2007
Change in benefit obligation						
Benefit obligation at beginning of year	**$10,215**	$10,149	**$4,856**	$4,450	**$1,809**	$1,841
Acquisitions	**22**	—	**—**	3	—	—
Service cost	**192**	192	**120**	125	**53**	57
Interest cost	**597**	568	**252**	228	**100**	104
Participant contributions	—	—	**5**	4	**56**	47
Foreign exchange rate changes	—	—	**(620)**	337	**(20)**	14
Plan amendments	**9**	18	**(9)**	17	**(148)**	(98)
Actuarial (gain) loss	**(40)**	(154)	**(369)**	(114)	**(93)**	(16)
Medicare Part D reimbursement	—	—	—	—	**12**	10
Benefit payments	**(606)**	(565)	**(194)**	(175)	**(158)**	(159)
Settlements, curtailments, special termination benefits, and other	**6**	7	**(4)**	(19)	**—**	9
Benefit obligation at end of year	**$10,395**	$10,215	**$4,037**	$4,856	**$1,611**	$1,809
Change in plan assets						
Fair value of plan assets at beginning of year	**$11,096**	$10,060	**$4,424**	$3,970	**$1,355**	$1,337
Acquisitions	**13**	—	—	1	—	—
Actual return on plan assets	**(1,495)**	1,376	**(872)**	188	**(377)**	127
Company contributions	**235**	225	**186**	151	**53**	3
Participant contributions	—	—	**5**	4	**56**	47
Foreign exchange rate changes	—	—	**(527)**	300	—	—
Benefit payments	**(606)**	(565)	**(194)**	(175)	**(158)**	(159)
Settlements, curtailments, special termination benefits, and other	—	—	**—**	(15)	—	—
Fair value of plan assets at end of year	**$9,243**	$11,096	**$3,022**	$4,424	**$929**	$1,355
Funded status at end of year	**$(1,152)**	$881	**$(1,015)**	$(432)	**$(682)**	$(454)

Source: 3M 2008 10K.

Example:

Aluminum Co. of America, Alcoa, is the largest manufacturer of aluminum and aluminum products in the United States. In its December 2008 financial statements, it disclosed the following information about its comprehensive income, which includes its prior service cost and change in recognized losses owing to the fall in the company's pension plan assets. Also seen in comprehensive income are the effects of hedging activities and fair-value accounting.

As is seen in Tables 6-14, 6-15, and 6-16, Alcoa's pension fund also suffered from market-value losses during 2008 that could have large funding implications. The beginning of the reporting year saw the plan reporting $10.6 billion in assets, and resulting from negative investment returns of about 20 percent ($2,058 loss/$10,562 beginning market value), benefits paid of $769 million, and employer contributions of $523 million, the plan saw the end of the year with $7.9 billion in assets. This resulted in a net recognized liability of $2.8 billion versus just $933 million the prior year. If the plan were to experience another year of negative returns, it would be expected that the 2009 contribution would need to be considerably larger than the $523 million in 2008, thus having a material negative cash impact. On the other hand, a rebound in the financial markets would save the company from making such an increased payment, benifitting operating cash flows. The pension fund and other postretirement benefit accounts, as we have seen through these examples, can be a cause of major cash-flow uncertainty.

What are the implications of the pension plan's liabilities and assets as they relate to total debt and free cash flow? The firm may have an underfunded pension plan, and the liability that is recorded on the balance sheet (if one is recorded at all) may be smaller than the projected benefit obligation. In such cases, as stated, the cash-flow analyst could (if not brought on by unusual factors or to be settled with company stock) add to total debt the difference between the projected benefit obligations and the pension liability net of any tax effect. This additional liability is considered an off-balance-sheet liability, just like operating leases, and can be added to debt ratios. If the firm has a growing workforce, the liability is forced by market conditions, and the analyst deems the funding policy otherwise sound, the debt should not be added to total liabilities. When reviewing the pension and other postretirement footnotes, plans that are overfunded could see contributions eliminated, with that cash redirected into the underfunded plans, thus having a net neutral effect of cash outlays.[23] Bear in mind, though, that companies are no longer required to report a breakout of over- and underfunded plans.

TABLE 6-14

Alcoa: Actuarial Plan Assumptions

	2008	2007	2006
Discount rate	6.20%	5.95%	5.70%
Expected long-term rate of return on plan assets	9.00	9.00	9.00
Rate of compensation increase	4.00	4.00	4.00

[23] Many actuaries do not agree with this approach, believing that future salary levels are (1) in conflict with Concept Statement 6 and (2) misrepresent the value of the contract. Moreover, (3) including future salary levels in pension liabilities does not provide shareholders with relevant information about the current value of their obligations.

TABLE 6-15

Statement of Shareholders' Equity: Alcoa, December 30, 2008

December 31,	Comprehensive income	Preferred stock	Common stock	Additional capital	Retained earnings	Treasury stock	Accumulated other comprehensive loss	Total shareholders' equity
Balance at end of 2007		55	925	5,774	13,039	(3,440)	(337)	16,016
Comprehensive loss:								
Net loss	$(74)				(74)			(74)
Other comprehensive (loss) income:								
Change in unrecognized losses and prior service cost related to pension and postretirement benefit plans, net of tax benefit and minority interests of $799	(1,382)							
Foreign currency translation adjustments	(1,457)							
Unrealized losses on available-for-sale securities, net of tax benefit of $233	(432)							
Unrecognized gains on derivatives, net of tax expense and minority interests of $180 (X):								
Net change from periodic revaluations	282							
Net amount reclassified to income	157							
Net unrecognized gains on derivatives	439							
Comprehensive loss	$(2,906)						(2,832)	(2,832)
Cash dividends: Preferred @ $3.75 per share					(2)			(2)
Common @ $0.68 per share					(554)			(554)
Stock-based compensation				94				94
Common stock issued: compensation plans				(18)		196		178
Repurchase of common stock						(1,082)		(1,082)
Cumulative effect adjustment due to the adoption of the measurement date provisions of SFAS 158, net of tax and minority interests					(9)			(9)
Balance at end of 2008		$55	$925	$5,850	$12,400	$(4,326)	$(3,169)*	$11,735

*Comprised of unrecognized losses and prior service cost, net, related to pension and postretirement benefit plans of $(2,690); unrealized foreign currency translation adjustments of $74; unrealized losses on available-for-sale securities of $(428); and unrecognized net losses on derivatives of $(125); all net of tax and applicable minority interests.

Alcoa reported in its footnotes that in 2008 it increased the discount rate by 25 basis points. This would have the effect of reducing the accumulated benefits obligation and is not normally recommended when the funding status is deteriorating. If the discount rate were left unchanged, the net charge in comprehensive income, as well as the company's contribution to the plans, would have been greater. In the prior year, Alcoa also increased the discount rate on plan assets by 25 basis points. *The discount rate is a more powerful influence than is the salary assumption because the latter applies only to the active workforce.* The expected return on plan assets was kept at 9 percent, but as Alcoa claims in its footnotes, its 20-year return has exceeded this expectation.

It is also important to track the spread between the discount rate and the expected return on plan assets. As we see in the case of Alcoa, the spread decreased from 3.2 percentage points in 2006 to 2.8 percentage points, a red flag. The spread also would depend on plan history, age of the workforce, Social Security integration level, mortality experience, and so on.

Alcoa reports that the adoption of SFAS 158 resulted in the following impact: a reduction of $119 million in existing prepaid pension costs and intangible assets, the recognition of $1,234 million in accrued pension and postretirement liabilities, and a charge of $1,353 million ($877 million after taxes) to accumulated other comprehensive loss.

TABLE 6-16

Alcoa: Pension Plan and Other Postretirement Benefits

Obligations and Funded Status

	Pension Benefits		Postretirement Benefits	
December 31:	**2008**	**2007**	**2008**	**2007**
Change in benefit obligation				
Benefit obligation at beginning of year	$11,601	$11,614	$3,260	$3,511
Service cost	185	200	25	28
Interest cost	693	666	193	195
Amendments	11	67	—	(27)
Actuarial gains	(457)	(311)	(16)	(153)
Divestitures	(71)	(5)	(58)	(5)
Settlements	(27)	(62)	—	—
Curtailments	(2)	—	3	(9)
Benefits paid, net of participants' contributions	(771)	(710)	(308)	(303)
Medicare Part D subsidy receipts	—	—	29	20
Other transfers, net	23	(51)	—	—
Exchange rate	(420)	193	(7)	3
Benefit obligation at end of year	$10,765	$11,601	$3,121	$3,260
Change in plan assets				
Fair value of plan assets at beginning of year	$10,652	$10,097	$203	$189
Actual return on plan assets	(2,058)	836	(41)	14
Employer contributions	523	374	—	—

	Pension Benefits		Postretirement Benefits	
December 31:	**2008**	**2007**	**2008**	**2007**
Participants' contributions	33	36	—	—
Benefits paid	(769)	(716)	—	—
Administrative expenses	(22)	(19)	—	—
Divestitures	(46)	(3)	—	—
Settlements	(27)	(64)	—	—
Other transfers, net	18	(51)	—	—
Exchange rate	(396)	162	—	—
Fair value of plan assets at end of year	$7,908	$10,652	$162	$203
Funded status	$(2,857)	$(949)	$(2,959)	$(3,057)
Amounts attributed to joint venture partners	14	16	9	9
Net funded status	$(2,843)	$(933)	$(2,950)	$(3,048)
Amounts recognized in the consolidated balance sheet consist of:				
Noncurrent assets	$122	$216	$—	$—
Current liabilities	(24)	(24)	(220)	(295)
Noncurrent liabilities	(2,941)	(1,098)	(2,730)	(2,753)
Liabilities of operations held for sale	—	(27)	—	—
Net amount recognized	$(2,843)	$(933)	$(2,950)	$(3,048)
Amounts recognized in accumulated other comprehensive loss consist of:				
Net actuarial loss	$3,650	$1,385	$724	$784
Prior service cost (benefit)	89	118	(143)	(150)
Total, before tax effect	3,739	1,503	581	634
Less: Amounts attributed to joint venture partners	13	11	2	2
Net amount recognized, before tax effect	$3,726	$1,492	$579	$632
Other changes in plan assets and benefit obligations recognized in other comprehensive loss (income) consist of:				
Net loss (gain)	$2,364	$(344)	$(16))	$(160)
Amortization of net loss	(99)	(127)	(44)	(55)
Prior service (benefit) cost	(11)	67	(4)	(30)
Amortization of prior service (cost) benefit	(18)	(15)	11	3
Total, before tax effect	2,236	(419)	(53)	(242)
Less: Amounts attributed to joint venture partners	2	—	—	(2)
Net amount recognized, before tax effect	$2,234	$(419)	$(53)	$(240)

Pension Plan Benefit Obligations

	Pension Benefits	
	2008	2007
The projected benefit obligation and accumulated benefit obligation for all defined benefit pension plans was as follows:		
Projected benefit obligation	$10,765	$11,601
Accumulated benefit obligation	10,485	11,216
The aggregate projected benefit obligation and fair value of plan assets for pension plans with projected benefit obligations in excess of plan assets was as follows:		
Projected benefit obligation	10,233	9,933
Fair value of plan assets	7,256	8,771
The aggregate accumulated benefit obligation and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets was as follows:		
Accumulated benefit obligation	9,660	9,550
Fair value of plan assets	6,923	8,771

Components of Net Periodic Benefit Costs

	Pension Benefits			Postretirement Benefits		
	2008	2007	2006	2008	2007	2006
Service cost	$166	$200	$209	$24	$28	$32
Interest cost	678	666	628	193	195	208
Expected return on plan assets	(805)	(787)	(740)	(18)	(17)	(15)
Amortization of prior service cost (benefit)	18	15	14	(11)	(3)	10
Recognized actuarial loss	99	127	118	44	55	63
Settlements	20	—	—	—	—	—
Curtailments	2	—	—	9	(3)	—
Net periodic benefit costs	$178	$221	$229	$241	$255	$298

Amounts Expected to be Recognized in Net Periodic Benefit Costs

	Pension Benefits	Postretirement Benefits
	2009	2009
Prior service cost (benefit) recognition	$16	$(11)
Actuarial loss recognition	104	51

Example:

A sensitivity analysis is useful because it reveals how changes in actuarial assumptions would affect future contributions. Siemens, a German electronics company, in its 20F reveals the potential impact on its following year's pension costs recorded in its income statement (NPBC) owing to various scenarios.

Pension Benefits: Sensitivity Analysis

A one-percentage-point change of the established assumptions mentioned above, used for the calculation of the NPBC for fiscal 2010, or a change in the fair value of plan assets of 500, as of September 30, 2009, respectively, would result in the following increase (decrease) of the fiscal 2010 NPBC:

	Effect on NPBC 2010 Due to a	
	One-Percentage-Point/€500 Increase	**One-Percentage-Point/€500 Decrease**
Discount rate	18	(29)
Expected return on plan assets	(195)	195
Rate of compensation increase	26	(23)
Rate of pension progression	139	(109)
Fair value of plan assets	(32)	32

Increases and decreases in the discount rate, rate of compensation increase, and rate of pension progression which are used in determining the DBO do not have a symmetrical effect on NPBC primarily due to the compound interest effect created when determining the net present value of the future pension benefit. If more than one of the assumptions were changed simultaneously, the cumulative impact would not necessarily be the same as if only one assumption was changed in isolation.

Source: Siemens Aktiengesellschaft 20F.

Example:

In some cases, the pension plan is overfunded to such a degree that the plan has more assets than what is forecast by its projected benefit obligation. In such cases, the cash-flow analyst could increase net assets of the firm and net equity by the difference between these two amounts, net of any tax effect. The difference represents additional assets that will save future cash contributions into the plan by the firm aside from benefiting the capital structure.

The analyst must establish *whether the company under analysis has an appropriate asset allocation given its funding status, cash flows, credit strength, financial flexibility, growth in workforce, and time horizon of its liabilities. The analyst also must determine the company's success in managing the plans assets.*

As seen for L. S. Starrett Company, a manufacturer of precision tools and electronic gauges, the 2008 economic recession moved its plan from overfunded to underfunded status. Primarily because the company's domestic defined-benefit plan had been overfunded, retirement benefits

in total generated approximately $1.6 million, $2.8 million, and $1.1 million of noncash income in fiscal years 2009, 2008, and 2007, respectively. The company's plans were, in essence, a profit center. The company shifted its asset allocation during 2008 as plan cash rose to 6 percent, debt investments rose by 150 percent, and the equity allocation fell from 70 to 41 percent. It appears as if the management of Starrett feared the impact of further equity market deterioration as a basis for changing its plan asset allocation. Since the equity market rebounded during 2009, one could argue that management overreacted. However, since Starrett's business was quite negatively affected by the recession, the move to reign in risk probably was warranted.

Also provided is Starrett's balance sheet, which shows the transition of overfunded to underfunding status and the commensurate effect on the capital structure.

Domestic and U.K. Plans Combined

The status of these defined-benefit plans, including the ESOP, is as follows (in thousands):

	2009	2008	2007
Change in benefit obligation			
Benefit obligation at beginning of year	$109,837	$120,849	$115,485
Service cost	2,090	2,376	2,727
Interest cost	6,754	6,980	6,807
Participant contributions	244	300	282
Exchange-rate changes	(7,306)	11	2,242
Benefits paid	(6,017)	(5,287)	(5,210)
Actuarial (gain) loss	(9,435)	(15,392)	(1,484)
Benefit obligation at end of year	$96,167	$109,837	$120,849
Weighted-average assumptions—benefit obligations (domestic)			
Discount rate	6.50%	6.75%	6.20%
Rate of compensation increase	2.64%	3.25%	3.25%
Cost of living increase	2.50%	2.50%	2.50%
Change in plan assets			
Fair value of plan assets at beginning of year	$140,829	$157,505	$138,044
Actual return on plan assets	(38,015)	(12,368)	21,700
Employer contributions	511	622	588
Participant contributions	244	300	282
Benefits paid	(6,017)	(5,287)	(5,210)
Exchange-rate changes	(6,691)	57	2,102
Fair value of plan assets at end of year	$90,864	$140,829	$157,505
Funded status at end of year			
Funded status	$(5,303)	$30,992	$36,656
Unrecognized actuarial gain	N/A	N/A	N/A
Unrecognized transition asset	N/A	N/A	N/A

	2009	2008	2007
Unrecognized prior service cost	N/A	N/A	N/A
Net amount recognized	$(5,303)	$30,992	$36,656
Amounts recognized in statement of financial position			
Noncurrent assets	$—	$34,643	$36,656
Current liability	(23)	(23)	—
Noncurrent liability	(5,280)	(3,628)	—
Net amount recognized in statement of financial position	$(5,303)	$30,992	$36,656

THE L. S. STARRETT COMPANY
Consolidated Balance Sheets
(In Thousands Except Share Data)

	June 27, 2009	June 28, 2008
ASSETS		
Current assets:		
Cash (Note 4)	$10,248	$6,515
Investments (Note 4)	1,791	19,806
Accounts receivable (less allowance for doubtful accounts of $678 and $701)	27,233	39,627
Inventories:		
Raw materials and supplies	19,672	15,104
Goods in process and finished parts	20,265	16,653
Finished goods	20,289	29,400
Total inventories	60,226	61,157
Current deferred income tax asset (Note 9)	5,170	5,996
Prepaid expenses and other current assets	8,054	5,535
Total current assets	112,722	138,636
Property, plant, and equipment, at cost, net (Note 7)	56,956	60,945
Property held for sale (Note 7)	2,771	1,912
Intangible assets (less accumulated amortization of $3,724 and $2,477) (Note 5)	2,517	3,764
Goodwill (Note 5)	981	6,032
Pension asset (Note 10)	—	34,643
Other assets	275	1,877
Long-term taxes receivable (Note 9)	2,807	2,476
Long-term deferred income tax asset (Note 9)	15,212	
Total assets	$194,241	$250,285

(*Continued*)

	June 27, 2009	June 28, 2008
Liabilities and Stockholders' Equity		
Current liabilities:		
Notes payable and current maturities (Note 11)	$10,136	$4,121
Accounts payable and accrued expenses	10,369	18,041
Accrued salaries and wages	5,109	6,907
Total current liabilities	25,614	29,069
Long-term taxes payable (Note 9)	9,140	8,522
Deferred income taxes (Note 9)	—	6,312
Long-term debt (Note 11)	1,264	5,834
Postretirement benefit and pension liability (Note 10)	15,345	13,775
Total liabilities	51,363	63,512
Stockholders' equity (Note 12):		
Class A common stock $1 par (20,000,000 shares authorized, 5,769,894 outstanding at June 27, 2009, 5,708,100 outstanding at June 28, 2008)	5,770	5,708
Class B common stock $1 par (10,000,000 shares authorized, 869,426 outstanding at June 27, 2009, 906,065 outstanding at June 28, 2008)	869	906
Additional paid-in capital	49,984	49,613
Retained earnings reinvested and employed in the business	127,707	134,109
Accumulated other comprehensive loss	(41,452)	(3,563)
Total stockholders' equity	142,878	186,773
Total liabilities and stockholders' equity	$194,241	$2,502
Asset category:		
Cash	6%	1%
Equities	41%	79%
Debt	53%	20%
	100%	100%

Source: L. S. Starrett 2009 10K.

The cash-flow and credit analyst should examine the cash-flow contributions into the pension plan and compare that amount with the accrued pension expense. Any discrepancies should be added to or subtracted from operating cash flow. If the expense is greater than the cash outflow, the difference should be subtracted from operating cash flow or added to operating cash flow if the cash contribution is greater than the amount accrued. For example, during 2008, Boeing expensed almost $1.3 billion on its income statement but contributed just $531 million. Merck, however, contributed $1.1 billion to its plans but expensed just $356 million.

If, in a given year, the firm makes a "catchup" contribution intended to reduce the unfunded obligation, cash flow from operations will be understated. It also may be a sign that management has confidence about future operating prospects because firms that are concerned about near-term events would tend to hold onto cash. The contribution would equate to a debt payment on an outstanding bond issue, although the pension contribution would be classified as an operating activity.

SFAS 158 did not change the computation of the periodic pension cost from SFAS 87.

PENSION PLAN SURPLUS OR DEFICIENCY

The growth in corporate unfunded pension liabilities resulting from the 2007–2009 recession and ensuing period of slow economic growth has made firms, unions and union members, employees, Congress, security analysts, and investment bankers aware of the potential risk in these long-term liabilities. Plan analysis, with a focus on the soundness of liabilities, assets, and funding methodology, are an integral part of business combinations. Prior to the 1970s, a detailed analysis of an entity's pension plan usually was not undertaken until after a merger. With the enormous growth in pension liabilities and its effects on cash flows, this situation changed dramatically. Owing to the large impact of contributions into pension plans on cash flows and debt ratios, the pension liability is examined very closely by potential buyers, investors, analysts, and creditors.

Table 6-17 shows the liability owing to the pension benefit obligation for some large companies, and as seen, the pension benefit obligation can represent a significant percentage of total debt. As of January 2010, there were 786 public companies having a then market value of greater than $100 million whose projected benefit obligations exceeded 20 percent of their total debt. Just like debt, pension obligations must be serviced, and for many companies on the table, leverage ratios are currently understated, especially those with liberal actuarial assumptions.

As seen with Delta Airlines, Federal-Mogul, and countless other entities, the liability of the pension plan can be too great for the firm's cash flows. Many firms have chosen to file for bankruptcy protection to avoid large pension payments. For example, during 2002, Bethlehem Steel shut down its pension plan, leaving the PBGC (Pension Benefit Guaranty Corporation to worry about the $3.7 billion in unfunded obligations to retirees.

For firms whose pension assets exceed pension obligations, there is a temptation to terminate the pension plan, settle existing obligations, and use the assets in the plan to purchase guaranteed insurance contracts and convert new employees to defined-contribution plans. Any excess, of course, may be viewed as hidden free cash flow, which gets recognized with a formal action of the firm. In reality, as we see next, it is quite difficult to take pension plan assets and convert them back to the entity.

TABLE 6-17

Pension Benefit Obligation and Total Debt

Company Name	Ticker Symbol	Market Value	PBO/Total Debt	PBO/ Shareholders Eq
3M CO	MMM	58,526.887	2.130	1.461
ABB LTD -ADR	ABB	43,599.285	3.284	0.696
ABBOTT LABORATORIES	ABT	83,508.389	0.448	0.317
ACUITY BRANDS INC	AYI	1,519.297	0.643	0.222
AECOM TECHNOLOGY CORP	ACM	3,049.475	3.171	0.314
AES CORP	AES	8,884.198	0.223	1.105
AETNA INC	AET	13,741.950	1.231	0.579
AGCO CORP	AGCO	2,989.898	0.789	0.275
AGILENT TECHNOLOGIES INC	A	10,750.220	0.743	0.861
AIR PRODUCTS & CHEMICALS INC	APD	17,124.735	0.752	0.707
AIR TRANSPORT SERVICES GROUP	ATSG	167.537	1.237	7.884
AK STEEL HOLDING CORP	AKS	2,334.964	5.554	3.634
AKZO NOBEL NV -ADR	AKZOY	15,458.018	3.117	1.537
ALASKA AIR GROUP INC	ALK	1,218.274	0.614	1.709
ALBANY INTL CORP -CLA	AIN	692.689	0.605	0.782
ALBEMARLE CORP	ALB	3,334.511	0.556	0.486
ALCATEL-LUCENT -ADR	ALU	7,502.251	4.379	4.815
ALCOA INC	AA	15,706.957	1.018	0.917
ALEXANDER & BALDWIN INC	ALEX	1,404.867	0.623	0.293
ALLEGHENY ENERGY INC	AYE	3,980.400	0.265	0.395
ALLEGHENY TECHNOLOGIES INC	ATI	4,390.952	4.059	1.055
ALLETE INC	ALE	1,140.532	0.728	0.532
ALLIANT ENERGY CORP	LNT	3,347.785	0.455	0.292
ALLIANT TECHSYSTEMS INC	ATK	2,906.554	1.369	3.238
ALLSTATE CORP	ALL	16,101.440	0.800	0.361
ALTRIA GROUP INC	MO	40,670.004	0.715	1.889
AMCOR LTD -ADR	AMCRY	4,721.984	0.299	0.281
AMEREN CORP	AEE	6,618.560	0.407	0.461
AMERICAN COMMERCIAL LINES	ACLI	233.103	0.399	1.055
AMERICAN ELECTRIC POWER CO	AEP	16,608.709	0.235	0.400
AMERICAN GREETINGS -CL A	AM	859.528	0.359	0.265
AMERICAN STATES WATER CO	AWR	655.510	0.296	0.325
AMERICAN WOODMARK CORP	AMWD	278.452	2.933	0.394
AMERON INTERNATIONAL CORP	AMN	584.784	3.971	0.439
AMETEK INC	AME	4,123.763	0.393	0.339
AMPCO-PITTSBURGH CORP	AP	322.237	12.870	1.182

Company Name	Ticker Symbol	Market Value	PBO/Total Debt	PBO/ Sharehlders Eq
AMPHENOL CORP	APH	7,919.731	0.475	0.277
ANIXTER INTL INC	AXE	1,629.330	0.266	0.300
AON CORP	AON	10,502.202	2.891	1.076
ARBITRON INC	ARB	621.379	0.510	(2.989)
ARCH CHEMICALS INC	ARJ	772.000	1.711	1.574
ARKANSAS BEST CORP	ABFS	737.162	13.155	0.354
ARMSTRONG WORLD INDUSTRIES	AWI	2,232.869	4.195	1.195
ARTHUR J GALLAGHER & CO	AJG	2,291.518	0.378	0.272
ASHLAND INC	ASH	2,971.500	2.228	1.003
ASTRAZENECA PLC -ADR	AZN	68,050.186	0.728	0.542
AT&T INC	T	165,377.004	0.678	0.527
ATLAS COPCO AB -ADR	ATLCY	15,913.829	0.237	0.285
ATMOS ENERGY CORP	ATO	2,721.029	0.215	0.222
AVERY DENNISON CORP	AVY	3,838.420	0.480	0.607
AVISTA CORP	AVA	1,181.858	0.297	0.355
AVON PRODUCTS	AVP	13,452.261	0.550	2.027
BADGER METER INC	BMI	595.269	1.846	0.418
BALL CORP	BLL	4,862.281	0.584	1.297
BARNES GROUP INC	B	924.379	0.742	0.627
BASF SE -ADR	BASFY	57,640.069	0.783	0.647
BAXTER INTERNATIONAL INC	BAX	35,401.575	0.925	0.558
BAYER AG -ADR	BAYRY	66,666.891	0.834	0.865
BCE INC	BCE	21,181.178	1.106	0.786
BECKMAN COULTER INC	BEC	4,534.992	0.975	0.626
BECTON DICKINSON & CO	BDX	18,696.287	0.865	0.318
BELDEN INC	BDC	1,021.625	0.334	0.345

Example:

Alexander and Alexander, Inc., purchased annuity contracts for $37.4 million to settle the accumulated benefit obligations to certain retirees and recorded a pretax gain of $15.7 million. Alexander and Alexander recognized the gain as a reduction of its pension expense.

During the leveraged buyout era of the 1980s, the pension plan, once perceived to be a cost center for a firm, began to be considered a profit center because the investments of the pension plan yielded higher returns than were expected.

Example:

When speculation spread that USX was a candidate for a hostile takeover, many security analysts pointed to the seemingly large surplus of pension assets in the fund. Presumably, the acquirer could have used cash from the pension plan to pay down debt used to buy the company. The same argument was used when Lockheed Corp. was viewed, during the 1990s, as a takeover candidate.

However, the large surplus that seemed to exist when security analysts simply subtracted pension liabilities from the fair market value of pension assets at year end was drastically reduced in reality. What analysts ignored were the following:

1. There were taxes on the gains in the pension assets, including a 15 percent excise tax.
2. The rates on guaranteed insurance contracts (GICs) were lower than the discount rates assumed by the pension plan at that time. Thus, to satisfy the pension obligations, more assets would have had to be invested in low-yielding GICs.
3. For Lockheed, the U.S. government would be entitled to most of the surplus because the Pentagon funded the plan.

It is vital that potential acquirers and investors have a thorough understanding of the magnitude of the pension plan's liabilities, actuarial assumptions, and expected growth in contributions that would be assumed as a result of a business combination. Often, owing to the haste with which many business combinations are put together, the acquiring company is not fully mindful of the magnitude of the prospective liabilities it is assuming. This may be especially so for non-U.S. divisions, where unions and federal restrictions may be involved.

Many suitors are so overly desirous to complete an acquisition that they do not fully appreciate the drag on cash flows resulting from the benefits area. All too often it is not until they "get in there" that are they able to wrap their arms around the pension and related liability issues. Other entities are more than happy to sell divisions because of the size of the associated pension fund liabilities and the future negative impact on cash flows of funding those liabilities. The wording in a purchase agreement concerning the meaning of a particular liability can be so vague that not all parties can later agree on what was meant when the initial agreement was signed.

Example:

Banner Industries charged Pepsi-Cola with dumping a large liability in its lap when Banner purchased Pepsi's trucking subsidiary.

If the acquiring entity continues the plan of the acquired entity, under ERISA Section 4062.6, it assumes a liability for that portion of the plan's vested liability that is not funded (the unfunded vested liability) up to 30 percent of the acquiring entity's net worth.[24] The vested liability is the actuarial present value of benefits that must be paid even if current employees leave the company. In addition, the acquiring company may assume other liabilities. Nonvested benefits or benefits that will become vested only if the employee remains employed by the company may be assumed, and such liabilities may be substantial. If the acquired entity was publicly held, information about vested and nonvested benefits is included, as we saw, in the pension footnote in the financial filings. More typically, the acquiring entity elects to terminate the acquired entity's plan, preferring to meld the new employees into its own plan, with appropriate credits given for length of service.

Liabilities under a multiemployer pension plan must be evaluated by the analyst because of the penalties associated by withdrawal. Severe penalties could be imposed on the acquirer if it decided to terminate its proportionate interest. The extent of outstanding claims and lawsuits related to the plans also must be reviewed. Other postretirement benefits such as life insurance or catastrophic claims also need reviewing. The annual (cash) expenses surrounding all benefit plans of the acquired company, including any additional contributions that may be necessary, must be determined, if it is not well specified.

Example:

As part of a business restructuring during 2009, A. Schulman Company withdrew from its multiemployer plan. When this occurs, it normally places additional burden on the remaining pension sponsors, and so the analyst must study the health of multiemployer plans if the company being studied is included in one or more. The following is from A. Schulman's 2009 10K:

> During fiscal 2009, the company received notification from a U.S. multiemployer pension plan that it was being assessed for partial and complete withdrawal liabilities from the plan. This plan covered the company's employees who previously worked at the company's Orange, Texas warehouse. The company terminated over 70 percent of this location's workforce in fiscal 2004, and then terminated the remaining workforce in fiscal 2007. In accordance with the Employee Retirement Income Security Act ("ERISA") guidelines these workforce reductions qualified as partial and complete withdrawals from the plan. Accordingly, the plan assessed the company for withdrawal liabilities of $1.8 million for the fiscal 2004 partial withdrawal and $0.6 million for the fiscal 2007 complete withdrawal for its share of the underfunded multiemployer plan. The company revised the consolidated financial information for the fiscal years 2004 and 2007 to

[24] The liability for termination is true for any single-employer plan. Additional information may be found on the PBGC Web site at www.pbgc.gov/practitioners/law-regulations-informal-guidance/content/page14767.html.

reflect the correction of an immaterial error identified in fiscal 2009 that related to prior periods. The company reflected in its consolidated statements of stockholders' equity a change of $1.8 million to the August 31, 2006 ending retained earnings balance and a change of $0.6 million to fiscal 2007 income from continuing operations, net income and total stockholders' equity. The fiscal 2007 change of $0.6 million was included in the restructuring expense line item in the company's consolidated statements of operations. In addition, the company reflected a change of $2.4 million as a liability in the consolidated balance sheets as of August 31, 2009 and 2008.

The Pension Benefit Guaranty Corporation (PBGC) was established by the Employee Retirement Income Security Act of 1974 (ERISA) to ensure that participants in defined-benefit pension plans receive their pensions if their plans terminate without sufficient assets to pay promised benefits. The PBGC administers separate insurance programs to protect participants in single-employer and multiemployer plans. It has been speculated that the existence of PBGC represents a "put" option to which the entity could use to dump its poorly funded and cash-draining plan into the lap of the federal government. While it is doubtful the PBGC would allow an entity capable of servicing its liabilities to do this, for entities that are not sponsoring well-funded plans, the put option has been taken advantage of.

LIABILITIES FOR POSTRETIREMENT BENEFITS OTHER THAN PENSIONS

While the pension expense has justly received important recognition, health care, and other postretirement obligations also could represent unrecognized debt on the sponsoring employer's balance sheet. Taken together, the potential cost to the system is so great that in 2005, S&P warned that the United States, Germany, France, and the United Kingdom face junk debt status within 30 years unless something is done to control their costs.

In November 1984, the FASB issued SFAS 81, which required firms to disclose information about postretirement health care and life insurance benefits. Under this standard, firms are to disclose the cost of health care and/or life insurance benefits to retirees, their dependents, or survivors. If such costs to retirees cannot be separated from costs to current employees, total costs are required to be disclosed, as well as the number of active employees and the number of retirees covered by the plan. A general description of the plan, covered employees, and benefits also is required.

In December 1990, the FASB issued SFAS 106, which required companies to report and accrue their obligations for postemployment benefits—including

retiree health plans—for current and future retirees. The rate of growth in the cost of health care benefits, which must be projected well into the future, can be the most significant assumption in calculating the obligation, a present-value item. Thus the model and assumptions used in these projections are critical. Firms also have to include an expense that is equal to the actuarial present value of additional benefits that *current active employees* earned during the period. In addition, footnote information provides data about the liability associated with these benefits, as well as any assets that were set aside to discharge the liability.

For most firms, "pay as you go" continues to be the preferred funding route for other postretirement obligations as companies endeavor to lay out as little current cash as possible (not prefund) and do not wish to show another (potentially large) liability on the balance sheet. In an effort to control costs, many employers are capping contributions and/or subsidies and are changing plan designs from defined-benefit plans to defined-contribution plans. It also has proven cost-efficient to separate the retiree population from the active group because this results in more effective Medicare integration for the post–65 population given that this population is covered by the federal government.

When SFAS 106 was adopted, most corporate plan sponsors assumed that health care costs would grow by 9 percent in the near term. They also assumed that the rate of growth would ramp down to 5 percent over the coming six years and remain there for the long term. During the ensuing period, the health care cost trend rate used by firms indeed has declined steadily, although the long-term 5 percent assumption remains. Health care costs, however, can be subject to large and unexpected increases given that agreements with health providers are typically set for one year at a time, and unexpected experiences in provider payouts to doctors would lead them to pass on the increase.

SFAS 106 was amended by SFAS 132R (December 2003) and SFAS 158 (September 2006). SFAS 132R required, to the extent that postretirement benefits are funded, the firm to state the percentage of the fair value of plan assets held, as well as provide a narrative of the sponsor's investment strategy and policies. SFAS 158 required full recognition of other postretirement obligations be placed on the balance sheet.

Example:

When General Motors adapted SFAS 106, analysts considered it to be another accounting rule providing little information of value because GM's shareholders' equity was about $28 billion at the time. When the rule was adopted, GM took a $24 billion hit to earnings to set up the reserve for postretirement health benefits.

To understand the provisions of the FASB pronouncements, let us assume initially that it relates only to health care benefits that are paid after retirement. Suppose that the plan promises health care benefits to all employees who attain age 55 while in service and only if they have at least 10 years of service with the firm. Suppose that we wish to determine the obligation for an employee who is 45 years old, who had been with the firm for 13 years already, and who is expected to remain employed by the firm until retirement at age 65. The employee is expected to live until age 75, and health care benefits are assumed to be $1,500 during the first year after retirement and to increase by 8 percent each year. For simplicity, assume that the employee is single and that all benefits are paid at the end of the year. The firm assumes a discount rate of 9 percent for the postretirement benefits.

The first step in estimating the obligation is to determine the expected payments after retirement age (i.e., at ages 66 through 75). We then discount the obligation to the present. The discounting is done by using the assumed rate of, say, 9 percent. At the current age, 45, the present value of those future postretirement costs is $2,357. This is the actuarial present value of *expected* benefit obligations. It is the actuarial present value because we had to make actuarial assumptions about life expectancy, length of service, marital status, and the like. However, note that at present the employee is not yet fully eligible for the postretirement benefits. The employee will become fully eligible only at the age of 55 and then only if he or she is still employed by the firm. Thus the employee has not yet attained the date of *full eligibility.*

The standards attribute postretirement benefits to years of service in an equal manner. Thus, at the age of 45 with 13 years of service, the employee has 10 more years to attain the full eligibility age of 55. Regulations require recognition of the portion of the obligation that accumulated by the employee to date using the number of years of service to date divided by the total expected number of years until the employee become fully eligible. At the age of 45, this yields 13/(13 + 10), and at age 50, the ratio increases to 18/23. Thus the actuarial present value of the accumulated benefit obligations at the age of 45 is 13/23 of the expected benefit obligation, or $1,332. At age 55, the employee becomes fully eligible, and the accumulated and expected benefit obligations are identical, $5,579. From then on, the actuarial present value of the two benefit obligations is identical.

From age 55 to age 56, the actuarial present value of the accumulated benefit obligation increases by $502 (6,081 – 5,579). This increase represents the interest cost component of the expense and is equal to 9 percent of the accumulated benefit at age 55 ($5,579). This seems intuitively reasonable because at age 55 the employee is fully eligible, and an additional year of service does not add any new postretirement benefits. The only change is that the obligation's maturity is one year shorter at age 56 than at age 55, which represents the interest-expense component

(this would be the same methodology used to calculate pension benefits). However, before age 55, the increase in the liability comprises both an interest expense and a service cost component because some of the postretirement benefits are attributed to that year's services.

Unlike pension plans, postretirement plans are largely unfunded and typically highly underfunded, as we see in the case of IBM. Whether a firm chooses to recognize the expense immediately or delay its recognition depends on the firm's current and prospective cash flows. If cash flows for the year are high, the firm may choose to increase funding. If cash flows in the future are expected to be low, the firm may delay incorporation of the expense into earnings of future years.

Note that under the standard, as seen in the IBM example, the company shows payments out of the fund. *This has no effect on reported cash flows to shareholders.* The only cash-flow effects are the actual contributions. Since the introduction of the standard, it appears, in general, that credit-rating agencies behave as if they were aware of this liability even prior to its incorporation into a footnote or the balance sheet.

Disclosure requirements are similar to those of pensions. For example, a firm is required to disclose the amount of the net periodic postretirement cost, showing separately the service cost component, the interest cost component, the actual return on plan assets for the period, amortization of the transition amount, and other amortizations and deferrals. A firm is also required to provide information about assets and liabilities: the fair value of plan assets, the actuarial present value of the accumulated benefit obligation (identifying separately the portion attributable to retirees, other fully eligible employees, and other active plan participants), unrecognized prior service cost, unrecognized net gain or loss, unrecognized transition amount, and the amount included on the balance sheet (whether an asset or a liability).

A firm is also required to disclose information about the terms of the plans, the participants, the assumed rates (including health care cost trend rate), the effects of a one-percentage-point increase in the assumed health care cost trend rates, and the types of assets held to discharge postretirement obligations.

What are the implications for the analyst? The direct effects of the accounting standards regarding other postretirement benefits on cash flows are likely to be minimal, although the impact on the balance sheet resulting from the increased liability could prove sizable, as seen in the table for some reporting companies. As with pensions, a high ratio of retirees to active workers will raise the liability. To the extent that the liability interferes with financial flexibility and cash flows, the impact could force cash to be allocated among operating companies in a different manner, especially if particular subsidiaries have younger workforces allowing for lower contributions. Unlike debt obligations, the sponsor could amend plan benefits to reduce the liability but might require employee or union acceptance. If the company is successful in reducing health care costs, operating cash flows will improve.

Regarding the financial structure, if the health care cost trend rate is inappropriately low, the potential liability would be greater than portrayed by the company and future operating cash flows lower than expected. This would include any tax subsidies received by the entity that are used to offset health care costs.

A decrease in the discount rate would result in an increase in the real benefit obligation and a decline in the funded status, whereas an increase in the discount rate would result in a decrease in the benefit status obligation and an improvement in the funded status. But because there is no legal requirement to fund these plans, the company could continue to fund current costs without addressing the liability, unlike pension obligations. To the extent that such benefits are implied, the analyst should consider the effect the postretirement liability might have on leverage ratios and debt covenants.

POSTRETIREMENT BENEFITS OTHER THAN PENSIONS COMPARED WITH TOTAL DEBT AND SHAREHOLDERS' EQUITY

Company Name	Ticker Symbol	Market Value	Postretirement Benefit Liab.	Debt – Total	Bal Sheet Post Ret/Share Eq.
AMERICAN AXLE & MFG HOLDINGS	AXL	445.639	(514.900)	1,139.900	1.182
AMR CORP/DE	AMR	2,543.632	(2,618.000)	10,957.000	0.892
ARVINMERITOR INC	ARM	827.320	(638.000)	1,177.000	0.500
BLOUNT INTL INC	BLT	481.911	(38.071)	325.520	0.875
BOEING CO	BA	37,737.320	(7,780.000)	7,512.000	6.012
CHINA EASTERN AIRLINES -ADR	CEA	1,709.290	(222.145)	8,757.826	0.116
CINCINNATI BELL INC	CBB	705.518	(283.800)	1,960.700	0.400
CLOROX CO/DE	CLX	8,528.288	(70.000)	3,149.000	0.400
COMMERCIAL VEHICLE GROUP INC	CVGI	129.989	(2.311)	164.895	(0.053)
EASTMAN KODAK CO	EK	1,130.960	(1,471.000)	1,303.000	(1.531)
FORD MOTOR CO	F	33,071.011	(16,279.000)	154,196.000	0.940
INTERCONTINENTAL HOTELS -ADR	IHG	4,109.820	(19.000)	1,355.000	3.167
LEAR CORP	LEA	5,243.588	(172.400)	3,526.800	(0.867)
LIBBEY INC	LBY	115.943	(61.881)	550.257	1.069
MONEYGRAM INTERNATIONAL INC	MGI	237.658	(13.416)	978.881	0.339
NAVISTAR INTERNATIONAL CORP	NAV	2,732.555	(1,158.000)	5,406.000	0.643
QWEST COMMUNICATION INTL INC	Q	7,267.150	(2,509.000)	13,659.000	1.732
TENNECO INC	TEN	841.147	(143.000)	1,451.000	0.570
UAL CORP	UAUA	1,911.093	(1,901.000)	8,149.000	0.771
US AIRWAYS GROUP INC	LCC	779.734	(122.000)	3,996.000	0.242
VERISK ANALYTICS INC	VRSK	4,335.702	(28.640)	669.754	0.110

Firms have taken steps to decrease future cash payments to their retirees and to reduce the potential liability. For example, Safeway became a self-insurer and set up programs to encourage healthy behavior. Most companies ask their workforce to pay a percentage of health benefits. Ralston Purina introduced an ESOP instead of a retiree medical plan. Other firms discontinued such benefits to new employees, and still others introduced health maintenance organizations (HMOs) to reduce future medical costs. Despite these cost-savings measures, the direct cash-flow effects have been significant because the cost of providing health care has risen.

Example:

Alcoa states that it assumes a health care cost trend rate of 6.5 percent that is gradually reduced to 5 percent. However, based on current health care surveys from leading actuarial firms, including Aon Consulting, Buck Consultants, and Segal Company, among others, it is the general belief that employers should expect to see increases in their health care expense of at least 10 percent over the coming years. Analysts should be aware of current research by independent sources when evaluating the actuarial assumptions of health plans. To the extent that companies such as Alcoa are understating health care expenditures, the analyst should adjust cash flow from operations as well as ask the firm's financial officer why the firm's assumed rate is vastly different from consultants' expectations. One also should measure the company's historical and recent growth rates in this expenditure, in addition to recent price increases announced by health care firms, as reported in their financial filings or gleaned from conference calls. For instance, poor medical cost experience on the part of health organizations (providers) will assuredly lead to future price increases.

Alcoa points out that during its past three years, its experience has been considerably below the 6.5 percent assumption; three years, however, is a short period of time (including a recession), and while a 1 percent increase might result in a relatively small expense for Alcoa (Table 6-18), for other entities, an increase could be material. Additionally, stock investors normally react harshly to even small bottom-line disappointments, and if Alcoa were to experience a higher than forecasted estimated trend rate, investors surely would take notice and reduce expected cash flows while marking up the cost of equity capital to account for the increased risk.

TABLE 6-18

Alcoa Health Care Trend Rates, 2006–2008

	2008	2007	2006
Health care cost trend rate assumed for next year	6.5%	7.0%	7.0%
Rate to which the cost trend rate gradually declines	5.0%	5.0%	5.0%
Year that the rate reaches the rate at which it is assumed to remain	2013	2012	2011

The health care cost trend rate in the calculation of the 2007 benefit obligation was 7.0 percent from 2007 to 2008 and 6.5 percent from 2008 to 2009. Actual annual company health care cost trend experience over the past three years has ranged from (6.2) to 4.1 percent. Owing to the decline in Alcoa's health care cost trend experience in recent years, a 6.5 percent trend rate will be used for 2009. Recently, the low end of the range of actual annual health care costs turned favorable; however, this change was not considered indicative of expected future actual costs. As a result, the assumed health care cost trend rate for next year was not affected significantly.

Assumed health care cost trend rates have an effect on the amounts reported for the health care plan. A one-percentage-point change in these assumed rates would have the following effects:

	1% Increase	1% Decrease
Effect on total of service and interest cost components	$4	$(4)
Effect on postretirement benefit obligations	61	(55)

Example:

Tenant Corp., a manufacturer of cleaning equipment, reports a health care cost trend rate more in line with the predictions of market consultants. While many companies decreased their trend rate during the 2008 recession, resulting in a lower liability, Tennant increased its rate while at the same time very gradually reducing the rate over a longer time period, a conservative action having the effect of forcing a higher liability:

> As of December 31, 2008 and 2007, the U.S. Nonqualified, U.K. Pension, and German Pension Plans had an accumulated benefit obligation in excess of plan assets.
>
> Assumed Health Care Cost Trend Rates on December 31, 2008 and 2007, are as follows:

	2008	2007
Health care cost trend rate assumption for the next year	**11.3%**	10.1%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	**5.0%**	5.1%
Year that the rate reaches the ultimate trend rate	**2029**	2028

Example:

Becton Dickinson is a global medical technology company. Its significant pension and postretirement benefits forced management to better control its costs.

> The company has defined benefit pension plans covering substantially all of its employees in the United States and certain foreign locations. The company also provides certain postretirement health care and life insurance benefits to qualifying domestic retirees. Postretirement health care and life insurance benefit plans in foreign countries are not

material. The measurement date used for the company's employee benefit plans is September 30.

During 2007, the company redesigned its U.S. pension plans to provide for a cash benefit formula by offering a one-time, irrevocable election to existing employees to change to this provision and mandating all new employees hired after April 1, 2007 to participate in the new formula. The company also amended its other postretirement benefits plan to provide that new hires, as of April 1, 2007 or later, will no longer be eligible for company subsidized benefits. These amendments did not have a material impact on the net pension and postretirement cost of the company in 2007.

Source: Becton, Dickinson and Company 2009 10K.

Example:

Table 6-19 shows IBM's benefit obligations and plans assets for its pension plans and plans for other postretirement benefits. While the size of the benefit obligation for IBM's nonpension plans is about 10 percent of the size of its pension plans, it is nonetheless substantial because benefits paid from the trust are about 20 percent of its assets, whereas the plan is underfunded by over $5 billion This underfunding of other postretirement benefits amounted to about 37 percent of IBM's shareholders' equity.

As is seen from its footnoted table, IBM contributed $457 million less during 2008 than 2007 into its postretirement plans despite its negative funded status, with the company's contribution covering only a small fraction of benefits paid. One could presume that IBM will need to increase funding to these plans or change the benefits packages offered to employees. If it chooses to increase funding, its effect on cash flows will be significant, as it has in the past when it provided for special contributions. Notice the gap in non-U.S., nonpension plan funding status. For these reasons, IBM stated that it intended to contribute $1 billion into its plans during 2009.

TABLE 6-19

IBM Pension and Nonpension Plan Obligations: 2007 and 2008

	Defined-Benefit Pension Plans				Nonpension Postretirement Benefit Plans			
	U.S. Plans		Non-U.S. Plans		U.S. Plan		Non-U.S. Plans	
($ in Millions)	**2008**	**2007**	**2008**	**2007**	**2008**	**2007**	**2008**	**2007**
Change in benefit obligation:								
Benefit obligation at beginning of year	**$47,673**	$47,839	**$42,291**	$40,861	**$5,472**	$5,773	**$769**	**$**680
Service cost	**—**	773	**660**	688	**55**	69	**10**	12
Interest cost	**2,756**	2,660	**2,042**	1,825	**312**	311	**53**	46
Plan participants' contributions	**—**	—	**63**	67	**216**	199	**—**	—

(*Continued*)

TABLE 6-19 *(Continued)*

IBM Pension and Nonpension Plan Obligations: 2007 and 2008

	Defined-Benefit Pension Plans				Nonpension Postretirement Benefit Plans			
	U.S. Plans		Non-U.S. Plans		U.S. Plan		Non-U.S. Plans	
($ in Millions)	**2008**	**2007**	**2008**	**2007**	**2008**	**2007**	**2008**	**2007**
Acquisitions/divestitures, net	**—**	5	**(6)**	85	**—**	—	**(1)**	—
Actuarial losses/(gains)	**1,183**	(484)	**(64)**	(2,388)	**(191)**	(203)	**(12)**	(44)
Benefits paid from trust	**(2,999)**	(3,046)	**(1,814)**	(1,638)	**(656)**	(650)	**(31)**	(6)
Direct benefit payments	**(81)**	(75)	**(486)**	(492)	**(24)**	(38)	**(21)**	(16)
Foreign-exchange impact	**—**	—	**(3,357)**	3,279	**—**	—	**(146)**	98
Medicare subsidy	**—**	—	**—**	—	**37**	10	**—**	—
Plan amendments/curtailments/ settlements	**224**	—	**(157)**	3	**3**	—	**(13)**	—
Benefit obligation at end of year	**$48,756**	$47,673	**$39,171**	$42,291	**$5,224**	$5,472	**$608**	$769
Change in plan assets:								
Fair value of plan assets at beginning of year	**$57,191**	$52,913	**$41,696**	$38,207	**$504**	$47	**$121**	$99
Actual return on plan assets	**(8,274)**	7,324	**(7,678)**	1,483	**4**	15	**10**	11
Employer contributions	**—**	—	**858**	474	**45**	893	**10**	3
Acquisitions/divestitures, net	**—**	—	**16**	52	**—**	—	**—**	—
Plan participants' contributions	**—**	—	**63**	67	**216**	199	**—**	—
Benefits paid from trust	**(2,999)**	(3,046)	**(1,814)**	(1,638)	**(656)**	(650)	**(31)**	(6)
Foreign-exchange impact	**—**	—	**(3,978)**	3,054	**—**	—	**(30)**	14
Plan amendments/curtailments/ settlements	**—**	—	**2**	(3)	**—**	—	**—**	—
Fair value of plan assets at end of year	**$45,918**	$57,191	**$29,164**	$41,696	**$113**	$504	**$79**	$121
Funded status at end of year	**$(2,838)**	$9,519	**$(10,007)**	$(595)	**$(5,111)**	$(4,968)	**$(529)**	$(648)
Accumulated benefit obligation	**$48,756**	$47,673	**$37,759**	$40,598	**N/A**	N/A	**N/A**	N/A

In December 2003, the U.S. Congress enacted the Medicare Prescription Drug, Improvement and Modernization Act of 2003 for employers sponsoring postretirement health care plans that provide prescription drug benefits. The act

introduced a prescription drug benefits under Medicare as well as a federal subsidy to sponsors of retiree health care benefit plans. Under the act, the Medicare subsidy amount is received directly by the plan sponsor and not the related plan. Further, the plan sponsor is not required to use the subsidy amount to fund postretirement benefits and may use the subsidy for any valid business purpose. Under the Obama health care legislation, this subsidy is to be taxed, which forced many firms to lower their deferred tax asset.

YIELD SPREADS

Yield spreads are important for the analyst to monitor because they indicate the willingness of banks, funds, and other creditors to lend, at what price, and the associated market liquidity. This is particularly important for current and potential creditors and investors. The spread between the risk-free rate and that of an entity's fixed-income instruments can signal whether there are factors within the firm that investors, in general, may not be aware of. The yield spread has a direct bearing on financial structure and cost of capital; investor perception and pricing of risk will help to determine the ability to issue debt and equity. The greater the spread relative to the risk-free rate, the more costly is the debt capital, if cash needs to be raised. Higher spreads, which imply lower bond prices, result in a lower cost for the enterprise to repurchase its outstanding debt. And in both these instances the capital structure is affected.

A widening of the yield spread is a telltale sign that investors are concerned about the ability of the entity to satisfy its obligations, and for this reason, significant spread widening (defined in Chapter 8) has been incorporated into my credit model. This is especially important for entities that have become increasingly reliant on the capital markets for funding.

During 2007, at the time many entities were reporting positive growth in earnings, the spreads on their bonds were increasing, often very significantly. For financial firms and industrial companies with financing arms (e.g., General Electric), investors were devaluing their investment portfolios, recognizing the real prospect for further deterioration of such assets and feeling increasingly uncertain about financial market stability and liquidity. *Market efficiency often does a good job, in real time, signaling changes in the fundamental outlook*, and investors and analysts must be cognizant of such shifts in perception. Even if the financial marketplace's perception turns out wrong and events correct back, during the time that such shifts exist, their effect on the cost of capital is real. It is commonly accepted that credit-rating agencies erred during the credit crisis by not paying adequate attention to existing market conditions and the

ongoing perceptible shift in risk associated with the broad decline in the economic value of financial assets. The growth rate in mortgage delinquencies was picking up at an alarming rate, yet many firms were reluctant to write down the value of those assets. This fundamental shift was picked up through widening yield spreads signaling the increase in default risk.

Credit-rating agencies historically have done a good job accessing risk but typically are lagging indicators. The companies responsible for credit ratings normally react to events, such as earnings announcements or financial filings, rather than act as events are taking place.

One of the more important of the yield-spread indicators is the LIBOR-OIS spread, which has been a closely watched barometer of distress in money markets. The three-month London Interbank Offered Rate (LIBOR) is the interest rate at which banks borrow unsecured funds from other banks in the London wholesale money market. Alternatively, if a bank enters into an overnight indexed swap (OIS), it is entitled to receive a fixed rate of interest on a notional amount called the *OIS rate*. In exchange, the bank agrees to pay a (compound) interest payment on the notional amount to be determined by a reference floating rate (in the United States this is the effective federal funds rate) to the counterparty at maturity. For instance, according to Bloomberg data, the OIS spread contracted from a peak of 384 basis points in June 2008 to 25 basis points during July 2009 as central banks flooded the system with liquidity and the fear of large-scale financial failure abated. The borrowing window was essentially closed to almost all borrowers when the spread was over 200 points.

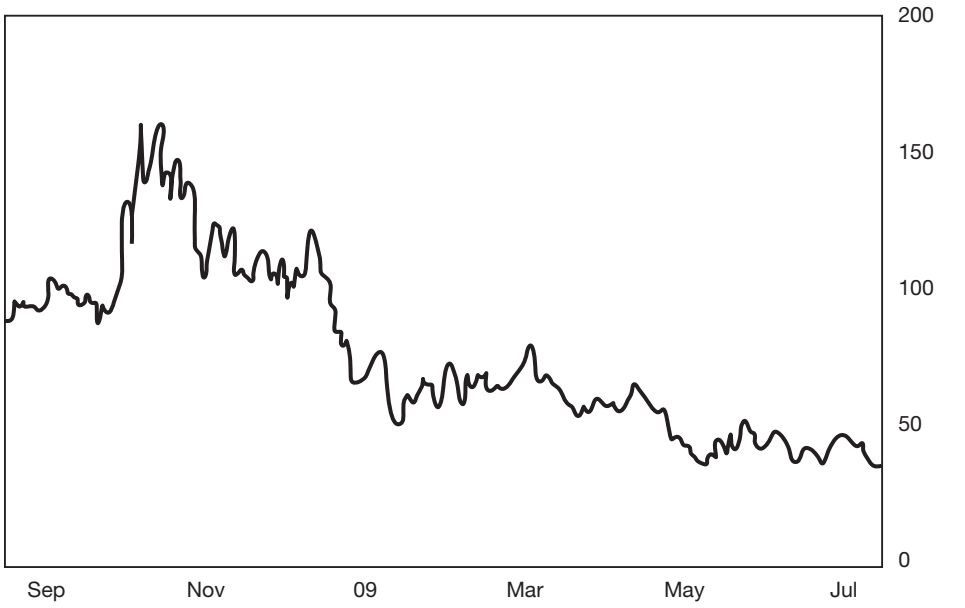
During that period of widened yield spreads, levered companies saw their cost of capital, both equity and debt, surge, severely compressing valuation metrics. In fact, as the spread widened to historic levels—the world's credit machine became inactive—the very basis of the economy was thrown into doubt, as reflected by the spread.

Although one could track the LIBOR-OIS spread of almost any maturity, the two-year swap spread showed over the credit crisis to be the preferred indicator of economic health, counterparty risk, and market liquidity and a key benchmark for pricing and hedging. In essence, the two-year swap spread is the price to exchange fixed- for floating-rate payments for two years.

As shown in Fig. 6-6, the two-year spread rose to over 150 basis points, and later, as the financial crisis abated, it fell to 25 basis points. Normally, higher Treasury yields induce swap spreads to widen because they are associated with a tighter monetary policy, economic uncertainty, and upcoming liquidity concerns. While the swap spread is used commonly to hedge variable-rate debt, it is also used by hedge funds to speculate. When the spread rises, it is more costly to convert variable-to fixed-rate debt, affecting cost of capital and a firm's financial structure.

FIGURE 6-6

Two-Year Swap Spread



Source: Bloomberg.

IMPROVING FINANCIAL STRUCTURE THROUGH EXCHANGE OF SECURITIES

Companies have been quite innovative in swapping their own securities, enabling them, at times, to reduce their outstanding principal on debt while at the same time boosting equity capital. Such was seen in a swap by Legg Mason during August 2009, when the company exchanged cash on hand and stock (which was issued) for its "Corporate Units." It was only a year earlier that Legg Mason sold the units (raising $1.1 billion), consisting of (1) a purchase contract obligating the holder to purchase Legg Mason stock and (2) 5.6 percent senior notes, which were used by Legg Mason as collateral until the stock was purchased. Through the swap, Legg Mason then was able to reduce its long-term debt by the $1.1 billion and associated interest expense while offering 18.6 million shares. The swap was viewed positively by investors, who were receiving more value than the current units were selling for while giving the company needed debt relief and additional equity.[25]

[25] To view the prospectus and details on Edgar, please see http://www.sec.gov/Archives/edgar/data/704051/000119312509172535/d424b3.htm

At the time of the exchange, the units were selling for $29.50 and the common stock of Legg Mason for $28.25. Holders who exchanged thus received 0.881 times $29.50 (the exchange's offer) plus $6.25, or $32.45, versus the $28.25 current value of the stock. Thus it paid for holders to exchange, and not surprisingly, the offer was fully subscribed. For Legg Mason, the swap saved the company $60 million in interest and dividends (yield on the units was higher than on the common stock), wiped off $1.1 billion in long-term debt from the books (investors were concerned about their leverage), and saved the company the worry about market conditions two years hence when the $1.1 billion would have been due.

CAPITALIZATION

The following table sets forth our capitalization as of June 30, 2009 on an actual basis and on an adjusted basis to give effect to the tender of 21,850,000 Corporate Units to us under the exchange offer. You should read the information set forth in the table below in conjunction with "Selected Consolidated Financial and Operating Data" and our audited financial statements and the accompanying notes incorporated by reference in this prospectus.

	As of June 30, 2009	
	Actual	**As Adjusted**
Legg Mason Inc.	**(Unaudited, in Thousands)**	
Cash and cash equivalents[1]	$1,539,295	$1,397,732
Restricted cash[2]	42,929	42,929
Total	$1,582,224	$1,440,661
Long-term debt		
2.5% Convertible senior notes	$1,025,162	$1,025,162
5.6% Senior notes from equity units	1,150,000	57,500
5-Year term loan	550,000	550,000
Third-party distribution financing	3,288	3,288
Other term loans	18,038	18,038
Subtotal	2,746,488	1,653,988
Less: Current portion	7,964	7,964
Total long-term debt	2,738,524	1,646,024

	As of June 30, 2009	
	Actual	As Adjusted
Legg Mason Inc.	**(Unaudited, in Thousands)**	
Stockholders' equity:		
Legg Mason, Inc., stockholders' equity		
Common stock, par value $0.10, authorized 500,000,000 shares, 142,452,080 shares outstanding	14,245	16,186
Preferred stock, par value $10, authorized 4,000,000 shares, 0 shares outstanding	—	—
Shares exchangeable into common stock	2,830	2,830
Additional paid-in capital	3,467,437	4,459,358
Employee stock trust	(33,238)	(33,238)
Deferred compensation employee stock trust	33,238	33,238
Retained earnings	1,177,376	1,163,370
Accumulated other comprehensive income, net	38,527	38,527
Total stockholders' equity	4,700,415	5,680,271
Total capitalization	$7,446,903	$7,334,259

[1]As adjusted amounts include payment of the cash portion of the offer consideration and other transaction related costs.

[2]Includes non-current portion of restricted cash of $8.2 million.

Source: Legg Mason, Prospectus, August 12, 2009.

IMPORTANCE OF CREDIT RATING

After many decades of having unquestioned integrity and analytic ability, the credit-rating companies came under harsh attack with the prominence of the worldwide credit crisis. The credit-rating authorities are relied on by investors worldwide, and hence their effect on individual companies and the financial system is profound. Changes in the credit rating of an entity, one of its large customers or suppliers, or of an asset held by such an entity could have a material impact on the cost of capital.[26]

[26] In 2009, the SEC completed a 10-month study of the three largest rating agencies and found that they struggled significantly with the increase in the number and complexity of subprime residential mortgage-backed securities (RMBS) and collateralized debt obligation (CDO) deals since 2002. The SEC also said that the problems are being fixed, with the agencies agreeing to broad reforms.

Investors rely on the credit-rating services, and many pension funds are prohibited from owning the securities of entities below a given ratings grade. Credit-rating agencies could have access to confidential information shared by the issuer that may not factor into its current risk assessment, giving the agencies additional credence with investors.

Much of the public criticism that took place during 2007–2008 was a result of rating agencies being late in making changes to information that had been negatively affecting the market value of the rated securities for some time. And by the time the rating changes were made, many tens of billions of dollars had been lost. As a result of public outcry, the Credit Rating Reform Act was passed, which provided for censure, suspension, or revocation of SEC registration of any national rating organization or, as they were called, nationally recognized statistical rating organizations (NRSRO). Ten organizations were designated as NRSROs:

1. Moody's Investor Service
2. Standard and Poor's
3. Fitch Ratings
4. A. M. Best Company
5. Dominion Bond Rating Service
6. Japan Credit Rating, Ltd.
7. Egan-Jones Rating Co.
8. LACE Financial
9. R&I, Inc.
10. Realpoint, LLC

Under the law, any credit-rating agency having three years of experience that meets certain standards would be allowed to register with the SEC as a statistical ratings organization. It remains to be seen if a new competitive arena takes hold for the credit-rating industry. In 2010, the Senate approved a provision having the Securities and Exchange Commission establish a credit-rating board that would act as a middleman between issuers and rating agencies. Many legislators and investors believe the rating agencies, due to their system of pay, loses objectivity in favor of revenues. The newly anointed European Securities and Markets Authority is now also responsible for regulating the credit rating agencies, including having the power of investigation, which includes access to their rating methodologies.

Higher credit ratings are strongly associated with a lower cost of capital, both debt and equity. While this has always been the case, nowhere was this seen

more acutely than in the financial sector during 2007–2009, when the survivability of the largest financial intermediaries was put into question. As many investors, policyholders, and state regulators looked to the large rating agencies for answers, many other large investors, notably hedge funds, were selling short the shares of companies in question.

Most companies are not rated by any NRSRO, so it is the investor's responsibility to assign his or her own risk proxy. Also, there might be a size bias with ratings firms because they tend to assign higher ratings to firms having high market valuations. If this exists, the credit model in Chapter 8 should be used, and if a credit rating does exist, the model can confirm the accuracy of the credit-rating organizations. If the investor believes that the model's rating deviates from a credit rating assigned by an NRSRO, an investor can take advantage by buying long or selling short the firm's securities. If the analyst deems the credit of a large company to be considerably weaker than commonly perceived, one could leverage one's knowledge through derivatives such as credit default swaps, although that is a proven risky alternative if the markets don't agree.

For companies that are rated, the analyst should examine when the rating was assigned. Have conditions changed? It is also the responsibility of the analyst to determine if the entity under consideration had its securities rated as a one-time evaluation (called a *point-in-time rating*) or is under a *regular review* rating service. Even for entities undergoing regular reviews, ratings may be dated compared with real-time information being reflected in the marketplace.

Rating agencies consider net debt/EBITDA as the leading leverage credit metric. As has been pointed out, this ratio, because of the failings of EBITDA, is deficient. Free cash flow has superior information content because it represents real cash, so it and adjusted operating cash flows are used in my credit model. Operating cash flow includes taxes, depreciation, and working capital changes and may include other adjustments for classification, timing, and comparability.

Example:

Moody's dropped the rating for the New York Times Co.'s (NYSE:NYT) corporate family of debt a notch. The Gray Lady's debt totaled 6.6 times the company's EBITDA at the end of March. Moody's had expected a multiple of 5 at its last rating, and the firm suggested it would be difficult for the company to lower the multiple below 6 in the current ad market.

Source: thedeal.com, April 14, 2009.

Some firms attempt to persuade credit-rating agencies through metrics that they believe cast them in the most favorable light. For example, Sprint, in its fourth quarter 2009 press release, stated: "Net Debt is consolidated debt, including current maturities, less cash and cash equivalents, short-term investments and restricted cash. We believe that net debt provides useful information to investors, analysts and credit rating agencies about the capacity of the company to reduce the debt load and improve its capital structure."

A drop in the credit rating can affect both the cost of capital and the ability to receive supplies, as reported in Semco Energy's 2009 10K.

Example:

In March 2003, Moody's Investors Service, Inc. reduced the credit rating on the company's senior unsecured debt from Baa3 to Ba2. Since June 2003, Standard & Poor's Ratings Group has lowered the company's corporate credit rating from BBB– to BB–. These downgrades have required the company to pay higher interest rates for financing, increasing the company's cost of capital. Any additional downgrades could further increase the company's capital costs (including the rates for borrowing under the company's Bank Credit Agreement) and limit its pool of potential investors and funding sources, possibly increasing the costs of operations or requiring the company to use a higher percentage of its available borrowing capacity for ordinary course purposes.

In addition, on February 23, 2007, Moody's Investors Service, Inc., changed the company's ratings outlook to "Developing" from "Stable" upon the announcement of the company's entry into the Exchange Agreement.

Further credit downgrades or ratings outlook changes could also negatively affect the terms on which the company can purchase gas and pipeline capacity. As a result of the company's non-investment grade credit rating noted above, the interstate pipelines the company utilizes require prepayment for their services. In addition, certain of the company's gas suppliers may require the company to prepay or provide letters of credit for gas purchases over and above the levels of credit they may have extended to the company. The company can provide no assurance that suppliers will not impose additional requirements or restrictions on the conduct of the company's business.

Source: SEMCO Energy 2009 10K.

Example:

For insurance and other financial companies that are reliant on the debt market, there is a very direct measureable effect of a downgrade (upgrade), as illustrated for the Hartford Insurance Company.

Hartford Insurance Company: Presentation to Security Analysts

We are well-positioned to withstand both a decline in equity markets and significant investment-related impacts

	($ in millions)
Projected Sources of Capital	**2H 2009**
– Estimated 6/30/09 P&C and Life capitalization in excess of "AA-" ratings	$2,300
– Statutory earnings P&C and Life (excluding investment-related impacts)	700
– Q209 Holding Company resources (including CPP funds)	3,600
– Untapped contingent capital facility and bank lines	2.400
Total Sources of Capital	**$9,000**
Potential Uses of Capital	
– Global VA impact @ YE09 S&P 968 (including VA CARVM) [1]	1,300
– Investment-related impacts (2% of invested assets) [2]	1,600
– Holding company interest/dividends	300
– Expiration of Life DTA permitted practice	200
– Allianz payment	200
Total Potential Uses of Capital	**$3,600**
Equity Market Sensitivity	
– Global VA impact @ YE09 S&P 700 [1]	$2,100

[1] VA impacts include changes in surplus and required capital

[2] Based on approximately $90 billion of statutory invested assets at 6/30/09. Includes impairments, net realized gains (losses) from sales, mark-to-market, downgrades, partnership investment losses, and risk-based capital asset risk charges

The Hartford Financial Services Group, Inc. **12**

Source: Hartford Insurance Q2 2009 earnings conference call slides material.

The illustration, taken from a slide prepared by Hartford Insurance during a quarterly investor and analyst conference call, reveals the approximate amount of excess capital the company *believed* it had over an AA– rating, which was its credit rating prior to a cut to A. Nevertheless, Hartford compares itself to a company rated AA– because it is that level grade that it would like investors (and the agencies) to believe it deserves. Factors aside from capital position that rating agencies take into consideration when evaluating Hartford include earnings, cash flow, investments and potential losses in the investment portfolio, amount of hedging and reinsurance, market share, and trajectory of these factors.

Hartford, which sells annuities, although it is not a major player in the market, reinsures about 25 percent of that business, according to its second quarter 2009 10Q. As such, underperformance in the equity market versus what was promised its clients would be harmful to its business because its fee income hinges on the investment returns and hence its assets under management.

For the financial sector, and especially the insurers, ratings downgrades cause a capital drag, forcing such firms to raise additional capital needed for the capacity to write new business. Better capital efficiency allows for increased market share growth, as it did for one of Hartford's competitors, MetLife, when its competitors withdrew or cut back on their variable annuity business. MetLife has shown that business has a lot of earnings power but can eat up "risk-based capital"—if business deteriorates, it affects capital ratios.[27] State regulatory relief took place in 2009, helping insurers by allowing their insurance subsidiaries to operate with lower capital requirements resulting from mark-to-market accounting changes and reductions in their credit ratings.

FAIR-VALUE ACCOUNTING

Perhaps no accounting standard has received more publicity nor is better known to the lay investor than SFAS 157, *Fair Value Measurements*. While the FASB was understandably desirous of fairness in reporting practices and asset and balance-sheet values, the standard's application, when liquidity dried up during the worldwide financial and credit crises, resulted in distorted valuations.

In this section I provide a brief discussion of the fair-value rules and how two insurance firms, Hartford and MetLife, applied the accounting rules. The accounting promulgation would affect any entity with substantial investments.

Fair-value rules affected many companies holding low credit assets, and analysts are required to understand how a change in rated asset level tier would affect the financial structure. For these companies, it is often more a matter of understanding the value of their investment assets than of understanding their primary business. For example, during MetLife's fourth quarter of 2009, the company reported a significant improvement in the size of its unrealized losses. Unfortunately, the company also reported a smaller gain in the size of its unrealized gains, causing its stock to drop despite strength in its basic insurance operations (see following table).

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[27] *Risk-based capital* is the required capital an insurance company must maintain based on the risks of its various operations.

Why is Use of Fair Value Controversial?

- Widely divergent and strongly held views
- Some (many users, academics, standard-setters) believe that current values (fair value) are more relevant than historical costs:
  - Greater comparability
  - Basic to economic theory/grounded in the reality of the market
  - Basis of investment decisions as reflect current data/expectations
  - More understandable — reduce complexity and improve transparency
- Many feel that the use of fair value measurements have been important and beneficial to investors during the credit crisis

Source: Marc Siegel, FASB, April 2008 presentation to security analysts.

The standards for fair-value accounting, contained in SFAS 157, as amended, were effective for both annual and quarterly financial statements issued under GAAP for fiscal periods beginning after November 15, 2007. SFAS 157 created a single definition of fair value, established a framework for measuring fair value, and required enhanced disclosures surrounding an entity's fair-value measurements.

Prior to SFAS 157, there were various definitions of fair value and limited guidance for applying those definitions within the realm of GAAP. The threshold for credit impairment was higher and was recognized only when such was probable. SFAS 157 eliminated the word *probable*. This former lack of guidance and the differences in what limited advice the guidance provided added to the ever-increasing complexity of applying GAAP. There was wide belief that this inconsistent application of GAAP, coupled with different views of how fair value should be measured, led to the standard that caused so much controversy with the outset of the 2007 financial crisis. Undoubtedly, both the FASB and investors in general believed that most investments were not listed at fair value, and hence SFAS 157 was adopted.

As spelled out by the FASB in its initial summary of SFAS 157:

> This Statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles (GAAP), and expands disclosures about fair value measurements. This Statement applies under other accounting pronouncements that require or permit fair value measurements, the Board having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, this Statement does not require any new fair value measurements. However, for some entities, the application of this Statement will change current practice.

Reason for Issuing This Statement

> Prior to this Statement, there were different definitions of fair value and limited guidance for applying those definitions in GAAP. Moreover, that guidance was dispersed among the many accounting pronouncements that require fair value measurements. Differences in that guidance created inconsistencies that added to the complexity in applying GAAP. In developing this Statement, the Board considered the need for increased consistency and comparability in fair value measurements and for expanded disclosures about fair value measurements.

Source: FASB.

The theory behind the statement was to improve transparency because accounting rule makers felt that corporate officers were taking refuge in and taking advantage of the dark veil of GAAP to mislead investors and creditors through the placement of higher than realistic values on many of their less than liquid securities, with the cash flows from said assets not supporting the balance-sheet values. For instance, Enron took full advantage of mark-to-market accounting, using the rule to allow it to prop up values and, with it, record substantial profits.

During meetings with investors, many sound financial institutions made clear that it was neither their desire nor their need to sell assets that were forced under SFAS 157 to be written down owing to the then disorderly and illiquid marketplace where those assets traded yet whose underlying cash flows were, for the most part, coming in as scheduled. However, owing to application of the statement, as defined by the FASB (see application of Hartford), many firms and credit-rating agencies went scrambling. The capital of financial intermediaries, the largest owners of the affected financial instruments, was put into question, and banks were unable to furnish loans and other credits to worthy industrial and service firms, causing a severe economic shock wave to the rest of the economy.

The market for structured credit products[28] held in certificate form, which had grown so rapidly during the previous five years, was in chaos, often showing bids of 20 cents on the dollar for credits that had always been timely. Therefore, to comply with SFAS 157, the financial statements of the entities holding these securities had their net worth's taking deep hits, causing another round of cuts by

[28] A structured credit included portfolios of credit instruments that can include credit derivatives. For insurers, they were primarily collateralized debt obligations (CDOs), asset-backed securities made up from mortgage pools.

credit and equity analysts who questioned the ability of many of these financial companies to survive owing to a deterioration of their financial cushion (net worth). Liquidity spreads on even the highest credits increased to unprecedented levels. Asset prices were being set by weak institutions that had to dump their holdings to raise cash, but in so doing were setting a market not supported by long-term fundamentals.

Mark-to-market accounting required companies to set a value on most securities every quarter based on market prices. To credit analysts, if the asset is not up for sale, it is timely payment and probability for retirement of the obligations that matter. Cash-flow analysts would ask: *Are the statement of cash flows and the income statement telling the same story?* Impairments, to the extent that they are actual, should affect free cash flows; if they do not, they should not have been required to be written down.

If assets are impaired, *What do you expect the new cash flows to be, and what is the new capital structure?*

To others, including the chairman of Goldman Sachs, it was not fair-value accounting that failed but a disregard for risk. When assets are not impaired temporarily, the loss must be run through earnings, according to the statement. Financial institutions and the industrial entities with credit arms must show the loss related to both the changes in the credit and the noncredit portion in accordance with SFAS 115–2, which is explained in greater detail in the next section. Both the credit and noncredit pieces go through the income statement, but only the noncredit piece is shown in comprehensive income.

While very large errors in credit judgment were made by banks, there also was no question that SFAS 157 also was to blame by not allowing valuation based on the underlying assets cash flows and recognition of investors' desire to hold these assets long term. It was concluded, in March 2009, that the rule had been responsible for enough damage, and so it was modified.

In essence, the FASB pronounced, in a Staff Position in April 2009:

> **Previous Rule:** The holder of an investment must maintain the positive *intent and ability to hold* an impaired security to the recovery of invested principal in order to conclude that an impairment is temporary in nature and not reflected in earnings.
>
> **New Rule:** The entity must maintain that it *does not intend to sell,* or *will likely not be required to sell,* prior to invested principal recovery in order to conclude that an impairment is temporary.

The provision under SFAS 157 that lay at the center of the fair-value accounting controversy is tier 3 level assets. These are financial assets and liabilities whose

values are based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair-value measurement. Level 3 assets trade infrequently; as a result, reliable market prices may be unavailable. Valuations of these assets typically are based on management assumptions or expectations.

Of importance to the analyst and creditor when evaluating tier 3 assets (also see definition of levels 1 and 2 in Hartford footnotes below) is (1) how the assets were valued, (2) the size of the tier 3 capital, and quite importantly, (3) any migration of tier 1 and 2 assets into tier 3 assets. If assets are indeed migrating into tier 3, the entity indeed has had credit impairment, affecting prospective cash flows, the financial structure, and the cost of capital; such impairments are rare for industrial concerns unless they have financing arms or large investment accounts. One also must evaluate the discount rate used to value the tier 3 assets if those assets are priced using a cash-flow model.

Not included in SFAS 157 is the fair value of liabilities, which is being addressed in a new proposal for loans under existing standard SFAS 107, *Fair Value of Financial Instruments*.

Example:

The following footnote is from Harford Insurance company's 2008 10K, including an explanation of the three levels of pricing of their financial instruments as required under FAS 157.

THE HARTFORD FINANCIAL SERVICES GROUP, INC., NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Fair Value Measurements

The following financial instruments are carried at fair value in the company's condensed consolidated financial statements: fixed maturities and equity securities, available-for-sale ("AFS"), short-term investments, freestanding and embedded derivatives, and separate account assets. These fair value disclosures include the fair value measurement and disclosure requirements of SFAS 157 and related FSPs including FSP FAS 157–4 and FSP FAS 107–1.

The following section applies the SFAS 157 fair value hierarchy and disclosure requirements for the company's financial instruments that are carried at fair value. SFAS 157 establishes a fair value hierarchy that prioritizes the inputs in the valuation techniques used to measure fair value into three broad Levels (Level 1, 2, or 3).

Level 1 Observable inputs that reflect quoted prices for identical assets or liabilities in active markets that the company has the ability to access at the measurement date. Level 1 securities include highly liquid U.S. Treasury securities, money market funds, certain

mortgage backed securities, and exchange traded equity and derivative securities.

Level 2 Observable inputs, other than quoted prices included in Level 1, for the asset or liability or prices for similar assets and liabilities. Most debt securities and preferred stocks are model priced by vendors using observable inputs and are classified within Level 2. Also included in the Level 2 category are derivative instruments that are priced using models with significant observable market inputs, including interest rate, foreign currency and certain credit swap contracts, and no or insignificant unobservable market inputs.

Level 3 Valuations that are derived from techniques in which one or more of the significant inputs are unobservable (including assumptions about risk). Level 3 securities include less liquid securities such as highly structured and/or lower quality asset-backed securities ("ABS"), commercial mortgage-backed securities ("CMBS"), residential mortgage-backed securities ("RMBS") primarily backed by sub-prime loans, and private placement debt and equity securities. Collateralized debt obligations ("CDOs") included in Level 3 primarily represent commercial real estate ("CRE") CDOs and collateralized loan obligations ("CLOs") which are primarily priced by independent brokers due to the illiquidity of this sector. Embedded derivatives and complex derivatives securities, including equity derivatives, longer dated interest rate swaps and certain complex credit derivatives are also included in Level 3. Because Level 3 fair values, by their nature, contain unobservable market inputs as there is little or no observable market for these assets and liabilities, considerable judgment is used to determine the SFAS 157 Level 3 fair values. Level 3 fair values represent the company's best estimate of an amount that could be realized in a current market exchange absent actual market exchanges.

In many situations, inputs used to measure the fair value of an asset or liability position may fall into different levels of the fair value hierarchy. In these situations, the company will determine the level in which the fair value falls based upon the lowest level input that is significant to the determination of the fair value. In most cases, both observable (e.g., changes in interest rates) and unobservable (e.g., changes in risk assumptions) inputs are used in the determination of fair values that the company has classified within Level 3. Consequently, these values and the related gains and losses are based upon both observable and unobservable inputs. The company's fixed maturities included in Level 3 are classified as such as they are primarily priced by independent brokers and/or within illiquid markets. Corporate securities included in Level 3 primarily relate to private placement securities which are thinly traded and priced using a pricing matrix which includes significant non-observable inputs. RMBS included in Level 3 primarily represent sub-prime and Alt-A securities which are classified as Level 3 due to the lack of liquidity in the market.

These disclosures provide information as to the extent to which the company uses fair value to measure financial instruments and information about the inputs used to value those financial instruments to allow users to assess the relative reliability of the measurements. The following tables present assets and (liabilities) carried at fair value by SFAS 157 Hierarchy Level.

	June 30, 2009			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets accounted for at fair value on a recurring basis				
Fixed maturities, AFS				
ABS	$2,450	$—	$1,948	$502
CDOs	2,563	—	1	2,562
CMBS	8,290	—	8,092	198
Corporate	30,835	—	24,305	6,530
Government/government agencies				
Foreign	1,031	—	963	68
United States	4,240	271	3,969	—
RMBS	4,506	—	3,153	1,353
States, municipalities, and political subdivisions	10,953	—	10,739	214
Total fixed maturities, AFS	64,868	271	53,170	11,427
Equity securities, trading	30,813	2,285	28,528	—
Equity securities, AFS	1,308	241	839	228
Other investments				
Variable annuity hedging derivatives	604	—	3	601
Other derivatives	342	—	305	37
Total other investments	946	—	308	638
Short-term investments	12,701	10,478	2,223	—
Reinsurance recoverable for U.S. Guaranteed Minimum Withdrawal Benefit ("GMWB")	632	—	—	632
Separate account assets	131,069	98,229	32,167	673
Total assets accounted for at fair value on a recurring basis	**$242,337**	**$111,504**	**$117,235**	**$13,598**
Liabilities accounted for at fair value on a recurring basis				
Other policyholder funds and benefits payable				
Guaranteed living benefits	$(3,344)	$—	$—	$(3,344)
Institutional notes	2	—	—	2
Equity linked notes	(6)	—	—	(6)

	June 30, 2009			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Total other policyholder funds and benefits payable	(3,348)	—	—	(3,348)
Other liabilities				
Variable annuity hedging derivatives	391	—	(143)	534
Other liabilities	(579)	—	(260)	(319)
Total other liabilities	(188)	—	(403)	215
Consumer notes	(4)	—	—	(4)
Total liabilities accounted for at fair value on a recurring basis				
	$(3,540)	$—	**$(403)**	**$(3,137)**
			$24,511	$31,159

Source: Harford June 30, 2009, 10Q, footnote 4.

Example: METLIFE

The following example illustrates how MetLife, the large life insurer, coped with and applied the FASB rules. Although I am illustrating another insurance company, the accounting rules apply to all companies covered under the standard. Industrial companies typically are less affected unless they have finance subsidiaries, like Caterpillar, which also footnotes its Level 1, 2, and 3 assets.

MetLife, which saw its stock trade as high as $70 per share in 2007, saw it fall to $11.37 in 2009, during the height of the credit crunch. The value of its fixed-income mortgage assets dropped owing to the adoption of fair-value rules and, resulting from weakened credits reflected in "ratings migration," the requirement that MetLife hold a greater amount of risk-based capital against those lower-rated assets.

For MetLife and other companies in its industry, SFAS 115 and the related follow-on standards had a pronounced effect owing to their investment portfolios being a large multiple of shareholders' capital. Even a small swing in MetLife's investment portfolio resulted in a substantial swing in book value and reported earnings because MetLife's balance sheet listed $211.5 billion in fixed-income assets relative to $27.6 billion shareholders' equity. Despite MetLife's $1.1 billion loss during their second quarter of 2009, the improved market pricing in its investment accounts (as seen through the comprehensive income section), resulting from shrinking yield spreads from the improved market for real estate mortgage instruments, allowed the company to record an 18 percent rise in book value that propelled a greater than 30 percent rise in its stock price.

MetLife's prior quarter's investment accounts were not, for the most part, the result of severely weakened underlying cash flows. It would, however, have affected potential and expected cash flows if the securities were forced to be sold prior to maturity.

Obviously, changing yield spreads have a pronounced effect on a financial enterprise but also can affect industrial enterprises if (1) they are levered, (2) they own a financial entity, (3) they have a large investment account, or (4) they or their clients rely on the credit markets. All these are true for MetLife.

MetLife's results for their second quarter of 2009 were influenced by adoption of SFAS 115 under its recognition of other than temporary impairments of debt securities. Under the FASB guidance, the credit loss or the portion of the decline in value that represents the reduction of expected cash flows is included as a change to net income, whereas the remainder of the decline in value or the noncredit portion is recognized within accumulated other comprehensive income (AOCI). As a result of the transition adjustment required by the guidance, equity as of April 1, 2009, was increased by $76 million after tax and DAC[29] with a corresponding reduction due AOCI.

This transition adjustment represented the noncredit portion of previously reported other than temporary impairments on debt securities. For the second quarter of 2009, the other than temporary impairments of debt securities in total were $566 million on a pretax basis, of which $332 million was included in realized investment losses, whereas the remaining $234 million was recorded in other comprehensive income. So again, the SFAS 115 adjustment would have been $234 million. This charge to shareholders' equity would be reversed as asset prices improved and had no effect on cash flow.

MetLife's consolidated statement of shareholders' equity reveals a $4.473 billion gain on the market value of its investments that did not flow through net income, in conformity with the SFAS pronouncement. The gain did boost net worth by 16.2 percent and represents investments that could be sold if MetLife decided it had a good use (or need) for that near cash, such as investments in higher-yielding instruments or to place additional cash on the balance sheet of its insurance subsidiaries, to fund additional growth. Some of these investments would in fact be sold later to help finance part of the firm's $15.5 billion acquisition of ALICO from AIG.

The financial statements on the following pages clearly show the impact of SFAS 115–2 and 124–2, *Recognition of Other than Temporary Investments*, on the various schedules. The standard is available at www.fasb.org and is discussed in the next subsection.

As MetLife wrote in its first quarter 2009 10Q:

> The above critical accounting estimates are described in *Management's Discussion and Analysis of Financial Condition and Results of Operations—Summary of Critical Accounting Estimates* and Note 1 of our 2008 Annual Report. We have updated the disclosures below due to the adoption of Financial Accounting Standards Board ("FASB") Staff Position ("FSP") No. FAS 115–2 and FAS 124–2, *Recognition and Presentation of Other-Than-Temporary Impairments* ("FSP 115–2"), which affects the recognition and measurement of impaired securities and significant changes in DAC estimates due to market volatility.
>
> ## Investment Impairments
>
> One of the significant estimates related to available-for-sale securities is the evaluation of investments for other-than-temporary impairments. The assessment of whether

[29] DAC refers to *deferred acquisition costs*, which in the case of large insurance companies include losses or gains above or below what was assumed they would be able to earn for investors on their annuities.

impairments have occurred is based on management's case-by-case evaluation of the underlying reasons for the decline in estimated fair value. The company's review of its fixed maturity and equity securities for impairments includes an analysis of the total gross unrealized losses by three categories of securities: (i) securities where the estimated fair value had declined and remained below cost or amortized cost by less than 20%; (ii) securities where the estimated fair value had declined and remained below cost or amortized cost by 20% or more for less than six months; and (iii) securities where the estimated fair value had declined and remained below cost or amortized cost by 20% or more for six months or greater. An extended and severe unrealized loss position on a fixed maturity security may not have any impact on the ability of the issuer to service all scheduled interest and principal payments and the company's evaluation of recoverability of all contractual cash flows or the ability to recover an amount at least equal to its amortized cost based on the present value of the expected future cash flows to be collected. In contrast, for certain equity securities, greater weight and consideration are given by the company to a decline in estimated fair value and the likelihood such estimated fair value decline will recover.

Additionally, management considers a wide range of factors about the security issuer and uses its best judgment in evaluating the cause of the decline in the estimated fair value of the security and in assessing the prospects for near-term recovery. Inherent in management's evaluation of the security are assumptions and estimates about the operations of the issuer and its future earnings potential. Considerations used by the company in the impairment evaluation process include, but are not limited to:

(i) the length of time and the extent to which the estimated fair value has been below cost or amortized cost;

(ii) the potential for impairments of securities when the issuer is experiencing significant financial difficulties;

(iii) the potential for impairments in an entire industry sector or sub-sector;

(iv) the potential for impairments in certain economically depressed geographic locations;

(v) the potential for impairments of securities where the issuer, series of issuers, or industry has suffered a catastrophic type of loss or has exhausted natural resources;

(vi) with respect to equity securities, whether the company's ability and intent to hold the security for a period of time sufficient to allow for the recovery of its value to an amount equal to or greater than cost or amortized cost;

(vii) with respect to fixed maturity securities, whether the company has the intent to sell or will more likely than not be required to sell a particular security before recovery of the decline in fair value below amortized cost;

(viii) unfavorable changes in forecasted cash flows on mortgage-backed and asset-backed securities; and

(ix) other subjective factors, including concentrations and information obtained from regulators and rating agencies.

The cost of fixed maturity and equity securities is adjusted for impairments in value deemed to be other-than-temporary and charged to earnings in the period in which the determination is made. For equity securities, the carrying value of the equity security is impaired to its fair value, with a corresponding charge to earnings. When an other-than-temporary impairment of a fixed maturity security has occurred, the amount of the other-than-temporary impairment recognized in earnings depends on whether the company intends to sell the security or more likely than not will be required to sell the security before recovery of its amortized cost basis. If the fixed maturity security meets

either of these two criteria, the other-than-temporary impairment recognized in earnings is equal to the entire difference between the security's amortized cost basis and its fair value at the impairment measurement date. For other-than-temporary impairments of fixed maturity securities that do not meet either of these two criteria, the net amount recognized in earnings is equal to the difference between the amortized cost of the fixed maturity security and the present value of projected future cash flows to be collected from this security. Any difference between the fair value and the present value of the expected future cash flows of the security at the impairment measurement date is recorded in other comprehensive income (loss). The company does not change the revised cost basis for subsequent recoveries in value.

The determination of the amount of allowances and impairments on other invested asset classes is highly subjective and is based upon the company's periodic evaluation and assessment of known and inherent risks associated with the respective asset class. Such evaluations and assessments are revised as conditions change and new information becomes available. Management updates its evaluations regularly and reflects changes in allowances and impairments in operations as such evaluations are revised.

Source: MetLife August 3, 2009, 10Q.

METLIFE, INC.

INTERIM CONDENSED CONSOLIDATED BALANCE SHEETS

June 30, 2009 (Unaudited) and December 31, 2008

(In Millions, Except Share and Per-Share Data)

	June 30, 2009	December 31, 2008
Assets		
Investments:		
Fixed-maturity securities available for sale at estimated fair value (amortized cost: $225,494 and $209,508, respectively)	$211,563	$188,251
Equity securities available for sale at estimated fair value (cost: $3,679 and $4,131, respectively)	3,045	3,197
Trading securities, at estimated fair value (cost: $1,523 and $1,107, respectively)	1,471	946
Mortgage and consumer loans:		
Held for investment, at amortized cost (net of valuation allowances of $543 and $304, respectively)	48,229	49,352
Held for sale, principally at estimated fair value	4,271	2,012
Mortgage and consumer loans, net	52,500	51,364
Policy loans	9,907	9,802
Real estate and real estate joint ventures held for investment	7,295	7,585
Real estate held for sale	1	1
Other limited partnership interests	5,193	6,039
Short-term investments	8,117	13,878
Other invested assets	13,071	17,248
Total investments	312,163	298,311
Cash and cash equivalents	13,213	24,207
Accrued investment income	3,019	3,061

	June 30, 2009	December 31, 2008
Premiums and other receivables	16,730	16,973
Deferred policy acquisition costs and value of business acquired	20,323	20,144
Current income tax recoverable	253	—
Deferred income tax assets	3,856	4,927
Goodwill	5,036	5,008
Other assets	7,896	7,262
Assets of subsidiaries held for sale	—	946
Separate account assets	126,968	120,839
Total assets	$509,457	$501,678
Liabilities and Stockholders' Equity		
Liabilities:		
Future policy benefits	$132,823	$130,555
Policyholder account balances	147,883	149,805
Other policyholder funds	8,319	7,762
Policyholder dividends payable	881	1,023
Short-term debt	4,757	2,659
Long-term debt	12,940	9,667
Collateral financing arrangements	5,297	5,192
Junior subordinated debt securities	2,691	3,758
Current income tax payable	—	342
Payables for collateral under securities loaned and other transactions	24,607	31,059
Other liabilities	14,679	14,284
Liabilities of subsidiaries held for sale	—	748
Separate account liabilities	126,968	120,839
Total liabilities	481,845	477,693
Contingencies, Commitments, and Guarantees (Note 11)		
Stockholders' Equity:		
MetLife, Inc., stockholders' equity:		
Preferred stock, par value $0.01 per share, 200,000,000 shares authorized, 84,000,000 shares issued and outstanding, $2,100 aggregate liquidation preference	1	1
Common stock, par value $0.01 per share, 3,000,000,000 shares authorized, 822,359,818 shares and 798,016,664 shares issued at June 30, 2009 and December 31, 2008, respectively, 818,586,271 shares and 793,629,070 shares outstanding on June 30, 2009 and December 31, 2008, respectively	8	8
Additional paid-in capital	16,849	15,811
Retained earnings	20,472	22,403
Treasury stock, at cost, 3,773,547 shares and 4,387,594 shares on June 30, 2009 and December 31, 2008, respectively	(203)	(236)
Accumulated other comprehensive loss	(9,834)	(14,253)
Total MetLife, Inc., stockholders' equity	27,293	23,734
Noncontrolling interests	319	251
Total equity	27,612	23,985
Total liabilities and stockholders' equity	$509,457	$501,678

METLIFE, INC.
INTERIM CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FOR THE SIX MONTHS ENDED JUNE 30, 2009 (Unaudited)
(In Millions)

	Preferred Stock	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock at Cost
Balance on December 31, 2008	$1	$8	$15,811	$22,403	$(236)
Cumulative effect of changes in accounting principle, net of income tax (Note 1)				76	
Common stock issuance—newly issued shares			1,035		
Treasury stock transactions, net			2		33
Deferral of stock-based compensation			1		
Dividends on preferred stock				(61)	
Change in equity of noncontrolling interests					
Comprehensive income (loss):					
Net loss				(1,946)	
Other comprehensive income (loss):					
Unrealized gains (losses) on derivative instruments, net of income tax					
Unrealized investment gains (losses), net of related offsets and income tax					
Foreign currency translation adjustments, net of income tax					
Defined benefit plans adjustment, net of income tax					
Other comprehensive income (loss)					
Comprehensive income (loss)					
Balance at June 30, 2009	$1	$8	$16,849	$20,472	$(203)

See accompanying notes to the interim condensed consolidated financial statements.

Accumulated Other Comprehensive Loss						
Net Unrealized Investment Gains (Losses)	Other-Than-Temporary Impairments	Foreign Currency Translation Adjustments	Defined Benefit Plans Adjustment	Total MetLife, Inc.'s Stockholders' Equity	Noncontrolling Interests	Total Equity
$(12,564)	$—	$(246)	$(1,443)	$23,734	$251	$23,985
	(76)					
				1,035		1,035
				35		35
				1		1
				(61)		(61)
					95	95
				(1,946)	(20)	(1,966)
(57)				(57)		(57)
4,624	(145)			4,479	(7)	4,472
		(6)		(6)		(6)
			79	79		79
				4,495	(7)	4,488
				2,549	(27)	2,522
$(7,997)	$(221)	$(252)	$(1,364)	$27,293	$319	$27,612

METLIFE, INC.
INTERIM CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
FOR THE SIX MONTHS ENDED JUNE 30, 2008 (Unaudited)
(In Millions)

	Preferred Stock	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock at Cost
Balance at December 31, 2007	$1	$8	$17,098	$19,884	$(2,890)
Cumulative effect of changes in accounting principles, net of income tax				27	
Balance at January 1, 2008	1	8	17,098	19,911	(2,890)
Treasury stock transactions, net			408		(1,157)
Deferral of stock-based compensation			141		
Dividends on preferred stock				(64)	
Dividends on subsidiary common stock					
Change in equity of noncontrolling interests					
Comprehensive loss:					
Net income				1,594	
Other comprehensive income (loss):					
Unrealized gains (losses) on derivative instruments, net of income tax					
Unrealized investment gains (losses), net of related offsets and income tax					
Foreign currency translation adjustments, net of income tax					
Other comprehensive loss					
Comprehensive loss					
Balance at June 30, 2008	$1	$8	$17,647	$21,441	$(4,047)

See accompanying notes to the interim condensed consolidated financial statements.

Accumulated Other Comprehensive Loss						
Net Unrealized Investment Gains (Losses)	Foreign Currency Translation Adjustments	Defined Benefit Plans Adjustment	Total MetLife, Inc.'s Stockholders' Equity	Noncontrolling Interests		Total Equity
				Discontinued Operations	Continuing Operations	
$971	$347	$(240)	$35,179	$1,534	$272	$36,985
(10)			17			17
961	347	(240)	35,196	1,534	272	37,002
			(749)			(749)
			141			141
			(64)			(64)
				(16)		(16)
				14	(65)	(51)
			1,594	71	(9)	1,656
(33)			(33)			(33)
(3,624)			(3,624)	(128)	(7)	(3,759)
	80		80	(3)		77
			(3,577)	(131)	(7)	(3,715)
			(1,983)	(60)	(16)	(2,059)
$(2,696)	$427	$(240)	$32,541	$1,472	$191	$34,204

As one can see, security analysis has evolved to a profession of requiring good credit analyst skills, especially for financial entities, given the size of their investment accounts in relation to their equity. Their holdings must be scrutinized as closely as one would go about an analysis of the operating company.

Without the credit foundation, it would be difficult to determine the risk to the cash flows and financial structure along with the potential for "unforeseen" surprises not discounted by investors in general. This is important in understanding industrial enterprises as well because they rely on the credit market to function properly. Even though an investor may have little interest in direct ownership of a financial security, understanding how to evaluate such securities will aid their analysis of other sectors. There have been many examples of this. For example, there have been construction cancellations and delays of large industrial projects owing to financial impairment of both the creditor and the builder. Many home builders were weakened or placed into bankruptcy owing to their financial subsidiaries' and joint ventures' leverage; large investor loss might have been avoided if such an analysis had taken place. The ability of a financial intermediary to produce sufficient and timely letters of credit also affects industrial concerns. The financial enterprise is expected to provide these funding requirements; if this support is not reliable or is weakened, the industrial entity is weakened as well.

Shifting market, financial, and economic conditions would be sure to cause a magnified affect to the equity of MetLife owing to changes in the market value of its large investment portfolio and the potential for ratings migration. Credit analysis, by forcing recognition of current risks with concurrent evaluation of the integrity of the financial structure, permits the analyst to place a more accurate discount rate onto the firm, yielding a fair value that can differ significantly from the current market value. In the case of MetLife, the company's financial strength was not being reflected in its cost of capital, forced on it by accounting regulation. The company had no need to sell assets at distressed levels given that both the cash flows from its high-quality investment portfolio and its operating businesses were holding up. The decline in its operating cash flows, as seen from its interim statement, resulted from a negative (hedge) bet the company made against itself by which it would gain if its yield spread rose. Such are the oddities of financial enterprises.

SFAS 115

SFAS 115–2 and SFAS 124–2, *Recognition and Presentation of Other-Than-Temporary Impairments on Debt Securities*, while chiefly affecting financial institutions, also affect entities having finance subsidiaries and other enterprises holding financial instruments. Where the predisposition to sell a financial instrument exists, the entire difference between the security's cost and fair value is recognized in earnings on the balance-sheet date. This practice is consistent with previous GAAP guidance, where the absence of intent to hold resulted in a write-down of the entire difference between amortized cost and fair value.

Where the ongoing intent of the organization is not to sell and the requirement to sell is unlikely, securities in an unrealized loss position that are identified for impairment on the balance-sheet date must have the difference between the security's cost and fair value bifurcated into two segments:

1. That attributable to credit loss, and
2. That attributable to all other factors

FSP SFAS 115–2 provides that an entity should use its best estimate of the present value of expected cash flows from the debt security to determine the presence of a credit loss. Contributing factors may include

- Length of time and extent to which the fair value has been less than the amortized cost
- Adverse conditions specifically related to the security, an industry, or a geographic area
- Historic and implied volatility of the security
- Payment structure of the debt security and the likelihood of the issuer's ability to make payments in the future
- Failure of the security issuer to make scheduled interest payments
- NRSRO rating agency changes to the security's rating
- Any subsequent events to the balance-sheet date that affect fair value

The credit-loss component then is recognized in earnings on the balance-sheet date, whereas all the other factor segments are carried in accumulated other comprehensive income.

One methodology to employ when estimating future cash-flow collections would be to follow the guidance prescribed in paragraphs 12 through 16 of SFAS 114, *Accounting by Creditors for Impairment of a Loan.* In this statement, the projected cash-flow collection is calculated using the present value of expected future cash flows discounted at the effective interest rate implicit in the security at the date of acquisition.

SFAS 166 AND SFAS 167

Adopted by the FASB in June 2009, for adoption beginning in 2010, SFAS 166, Accounting for Transfers of Financial Assets, and SFAS 167, Amendments to FASB Interpretation No. 46(R), change the method by which entities account for securitizations and special-purpose entities. SFAS 166 relates to the consolidation of variable-interest entities, and SFAS 167 amends existing guidance for when a company "derecognizes" transfers of financial assets. A variable-interest entity is a business structure that allows an investor to hold a controlling interest in the entity without that interest translating into possessing enough voting privileges to result

in a majority. The new standard requires noncontrolling interests be reported as a separate component of equity and that net income or loss attributable to the parent and noncontrolling interests be separately identified in the statement of operations.

Example:

Marriot International, Inc., is a worldwide operator and franchisor of hotels and related lodging facilities. The company periodically sells notes receivable, on a nonrecourse basis, originated by its timeshare segment in connection with the sale of timeshare intervals and other timeshare-like products. The company continues to service the notes and transfers all proceeds collected to its special-purpose entities. If the notes have higher than projected default rates, there are provisions to which the cash flows of the pool will be maintained as extra collateral, affecting the cash flows to Marriott. The principal continues to be nonrecourse, however.

Even though nonrecourse notes legally remove Marriot from any default liability on the receivables, the company, based on the additional collateral it maintains, leaves doubt that it would allow the security holder to suffer a substantial loss. As such, a high default rate would negatively affect Marriott's cash flow.

For purpose of analysis, since the receivables are sold on a nonrecourse basis, the securitization pool would not be included as part of total liabilities, even though the debt from the SPE would be consolidated because Marriott exercises control over the subsidiary, in accordance with FSAS 166 and 167. Cash flow would remain the same, being the proceeds from the sale of the receivables and any interest not due to the note holders. If the owners of a timeshare default on their loan, Marriot could foreclose and resell the property. The following is from the company's 2008 10K:

> The company expects to adopt FAS 166 and 167 at the beginning of 2010, which will impact its accounting for securitized timeshare loans. Assuming the consolidation of the existing portfolio of securitized loans, the company expects assets to increase by $950 million to $1,025 million, liabilities to increase by $1,020 million to $1,120 million, and shareholders' equity to decline by $70 million to $95 million. Pretax earnings in 2010 would increase by $30 million to $50 million as a result of the accounting change, but no change in cash flow is anticipated.

LEASES

There are two major types of leases—capital leases and operating leases. Assets under capital leases are recorded as assets on the balance sheet with offsetting liabilities (usually denoted *capital lease obligations*) among the long-term liabilities of the firm. Assets under operating leases are not shown on the balance sheet as assets, nor are balance-sheet liabilities recorded owing to these leases.

From a credit viewpoint, operating leases should be capitalized to account for the acquired obligation while permitting comparability by taking into consideration all assets and liabilities, whether on or off the balance sheet. The capital base, by adjusting for the present value of lease commitments, more appropriately reflects actual returns on measures such as ROIC. To exclude operating leases would be to understate the capital base, especially relative to a firm that tended to sign capitalized leases, in both leverage and ROIC metrics.

To the cash-flow analyst, the signing of capital leases may artificially enhance operating cash flows. This is so because while the interest portion of capital leases

is counted as an operating activity, the reduction in the lease, through those principal payments, is reported as a financing activity.

Weaker credit entities find it easier to enter operating leases because the credit hurdle is not as severe, especially since these obligations do not impair reportable shareholders' equity. Also, leasing assets, especially when technological innovation is rapid or if the entity is not completely sure the extent the asset is needed, may be preferable to an operating lease. Since lessees may not show imputed interest in fixed-charge coverage ratios, the analyst would need to include that charge in addition to typical interest expense in the calculation, although it is preferable to include the entire lease expense, that related to both capital and operating leases, because this is the cash payment actually due. Also, in the event the lessee has a low tax rate and thus the benefit of depreciation is enjoyed by the lessor, lower lease payments would result in additional cash savings to the lessee. In my credit model, I include the entire lease payment in fixed-charge coverage.

There is also greater flexibility to entering an operating lease because when the lease term is over, or if downsizing is required, the asset is handed back. If the same asset is purchased, it may be difficult to sell or can be sold only for a price that is less than its depreciated value. Such risk is borne by the lessor.

Information about operating leases is disclosed only through a footnote to the financial statements, hence the name *off-balance-sheet liability*. Accounting and disclosure requirements for leases are covered primarily by SFAS 13 and later pronouncements by the FASB that served to explain or slightly modify SFAS 13. It appears the FASB will, in the near future, modify existing standards because it is widely recognized by investors, credit-rating agencies, and the SEC (all of whom have voiced opposition to the current methodology) that operating leases represent a true liability. On March 12, 2009, the FASB and the IASB jointly issued a discussion paper, "Leases: Preliminary Views," that presents possible new approaches to lease accounting, including capitalizing operating leases. In August, 2010, the IASB and the FASB grew one step closer to the placement of operating leases on the balance sheet through the issuance of an exposure draft. The proposal requires a variety of assumptions in the estimation of the liability, and at this time a final standard has not been issued. Once issued, the analyst would need to monitor the lease expense versus any discrepancy in the reporting of cash flows.

Operating and capital leases are distinguished mainly though tests that are intended to examine whether the benefits and risks of ownership were in fact transferred from the lessor to the lessee. If they were, the lease is classified as a *capital lease*, and the asset with an offsetting liability is included on the balance sheet. Otherwise, the lease is classified as an *operating lease*, and the information is reported in the footnote. There are four major tests for the classification of leases as capital or operating leases. If any of these tests are satisfied, the lease is classified as a capital lease. The determination as to whether a lease should appear

on the balance sheet is rather straightforward: Is it a right-of-use contract under which the user is legally bound to make periodic payments? Does the entity derive a perceived economic benefit? There is no question under current GAAP that similar transactions can be accounted for differently.

To the cash-flow analyst, the questions are rather straightforward: What are the entity's expected operating cash flows, and can they cover the liabilities assumed from undertaking the additional lease liability? What is the expected cash return, adjusted for taxes, for assuming the lease obligation and placing the asset in service under a variety of economic and business conditions? What is the effect of the additional liability on leverage ratios and ROIC? The question is not whether operating leases, even short-term leases, should be considered debt and placed onto the balance sheet—of course, they should! However, if the free-cash-flow yield from the asset under lease is above the firm's cost of capital, it is a value-enhancing proposition. If it is free-cash-flow-neutral, it is not rewarding to shareholders.

It is atypical to see an entity include equipment under operating leases in the property, plant, and equipment account through capitalization, although the number has been growing in recent years, especially because credit agencies have made it known that they take operating leases into account when constructing debt ratios.

Example: UPS

United Parcel Service (UPS), the world's largest package delivery company, while being a very large lessee, is also a lessor of aircraft. In its PPE account, the company includes equipment under operating leases for aircraft, which, in turn, the company may lease out, depending on its own needs. All the following tables for the UPS example to follow are taken from the UPS 2008 10K.

TABLE 6-20

United Parcel Service, Inc, and Subsidiaries

PROPERTY, PLANT, AND EQUIPMENT (In Millions)

	2008	2007
Vehicles	$5,508	$5,295
Aircraft (including aircraft under capitalized leases)	14,564	13,541
Land	1,068	1,056
Buildings	2,836	2,837
Building and leasehold improvements	2,702	2,604
Plant equipment	5,720	5,537
Technology equipment	1,620	1,699
Equipment under operating leases	136	153
Construction in progress	944	889
	35,098	33,611
Less: Accumulated depreciation and amortization	(16,833)	(15,948)
	$18,265	$17,663

Tests to Determine Whether a Lease Is Capital or Operating

1. If the lease life exceeds 75 percent of the life of the asset
2. If there is a transfer of ownership to the lessee at the end of the lease term
3. If there is an option to purchase the asset at a "bargain price" at the end of the lease term
4. If the present value of the lease payments, discounted at an appropriate discount rate, exceeds 90 percent of the fair market value of the asset

From a tax standpoint, the lessor can claim the tax benefits of the leased asset only if it is an operating lease, although the revenue code uses slightly different criteria for determining whether the lease is an operating lease.

If the lease is classified as an operating lease, at the end of the lease period, the lessee returns the property to the lessor. Since the lessee does not assume the risk of ownership, the lease expense is treated as an operating expense in the income statement with no effect on the recording company's balance sheet. In the lease is a capital lease, the lessee is deemed to assume some of the risks of ownership and enjoys some of the benefits. Consequently, the lease, when signed, is recognized both as an asset and as a liability (for the lease payments) on the balance sheet. The firm gets to claim depreciation each year on the asset and also deducts the interest expense component of the lease payment each year. In general, capital leases recognize expenses sooner than equivalent operating leases.

The analyst should thoroughly review the entity's footnotes to detect SPEs or other arrangements (*synthetic leases*) that were set up to avoid placing a lease liability directly on the balance sheet. Since analysts must look beyond the balance sheet when formulating liability ratios, a review of such financial circumventions must take place, and liability ratios must be adjusted accordingly. A synthetic lease allows the lessee to maintain ownership and receive the tax advantages of ownership while keeping the liability off the balance sheet. It can, for tax purposes, be set up to treat the lease payments as debt service, allowing the lessee to deduct interest expense and allow for depreciation of the asset. The synthetic lease belonging to an SPE must be considered as part of total debt, just as any operating lease. A strategy similar to synthetic leases is a sale-leaseback arrangement, whereby the owner sells the asset for cash and then leases it back for a specified time period.

Example:

Korean Air (KAL) is believed to have opted for a sale/ leaseback for the financing of one A330 delivery in November instead of bank debt or the possibility of another Japanese operating lease (JOL). KAL elected not to put the aircraft forward for export credit financing.

Source: Airfinance Journal, November 2000.

Example:

UPS typically enters into operating leases for its delivery equipment, such as trucks, vans, and warehouse equipment. Its capital leases are used primarily for aircraft, as shown in Table 6-21. In its property, plant, and equipment account on its balance sheet, the $2.080 billion from Table 6-21 will be included as part of the $18.265 billion in total PPE.

In a related financial strategy, UPS purchased high-investment-grade financial assets that allowed it to circumvent placing some capital leases on its balance sheet. The company has, in accounting parlance, *defeased* those liabilities, thus allowing it to receive interest on the related investments while improving leverage ratios. If UPS needed that cash for its operations, those investments could be sold, and the defeased capital leases would need to be placed back on its balance sheet as an asset and related liability.

TABLE 6-21

UPS Lease Obligations

Capital Lease Obligations

We have certain aircraft subject to capital leases. Some of the obligations associated with these capital leases have been legally defeased. The recorded value of aircraft subject to capital leases, which are included in Property, Plant, and Equipment, is as follows as of December 31 (in millions):

	2008	2007
Aircraft	$2,571	$2,573
Accumulated amortization	(491)	(416)
	$2,080	$2,157

These capital lease obligations have principal payments due at various dates from 2009 through 2021. Once the capital leases have been defeased, that is the company has placed a sufficient amount of cash into the highest grade investments to cover those payments, that debt associated with the lease no longer appears as a liability on the balance sheet.

We see in Table 6-22 that UPS deducted $115 million in imputed interest from its total minimum capital lease obligations. In the capital lease, part of the expense is presumed to be interest, which is an estimated portion of its total payment. For tax purposes, companies can deduct the imputed interest as well as current depreciation on the leased asset because the asset is deemed to be owned. UPS is using a 21.3 percent tax rate in its estimate of imputed interest, which is the $115 million divided by the $540 million. If the same asset had been purchased with cash, the firm would only be able to deduct the depreciation, which may be different from the imputed interest and depreciation expense. From time to time, to incentivize capital spending, Congress allows for quicker depreciation through the use of investment tax credits on the purchase of new long-lived equipment. The investment tax credit is calculated as a percentage of the equipment's cost and is a direct offset to taxes otherwise payable.

For analysts who look at EBITDA or operating income, imputed interest is added back, aiding those metrics, a practice I do not agree with because it does not reflect distributable cash.

UPS uses both operating and capital leases in its fleet of aircraft, although it leans more heavily towards capital lease obligations. We see its projected minimum lease payments for the coming five years, with a single line entry for the subsequent years, in Table 6-22. The company also reveals in its footnote: "We lease certain aircraft, facilities, equipment and vehicles under operating leases, which expire at various dates through 2055." The analyst should resolve how the company determines which assets it places under operating and which it places under capital leases to the extent its cash flows can be expected to change if the scheme for determining lease structure also changes.

TABLE 6-22

UPS Lease and Debt Maturity Schedule

The following table sets forth the aggregate minimum lease payments under capital and operating leases, the aggregate annual principal payments due under our long-term debt, and the aggregate amounts expected to be spent for purchase commitments (in millions):

Year	Capital Leases	Operating Leases	Debt Principal	Purchase Commitments
2009	$83	$344	$2,007	$708
2010	121	288	18	658
2011	29	217	5	667
2012	30	147	22	406
2013	31	109	1,768	—
After 2013	246	423	5,658	—
Total	540	$1,528	$9,478	$2,439
Less: Imputed interest	(115)			
Present value of minimum capitalized lease payments	425			
Less: Current portion	(65)			
Long-term capitalized lease obligations	$360			

As of December 31, 2008, we had outstanding letters of credit totaling approximately $2.132 billion issued in connection with our self-insurance reserves and other routine business requirements. We also issue surety bonds as an alternative to letters of credit in certain instances, and as of December 31, 2008, we had $262 million of surety bonds written.

From a credit point of view, the analyst should consider any legal and, in some instances, moral obligation necessitating a cash outflow—including operating leases—as debt (Table 6-23). These include commitments and contingency obligations, although the latter items might be more difficult to quantify because not all may result in a cash outflow. The obligation to transfer cash resulting from a lease payment in a future period should result in a liability on the balance sheet whether or not the leased asset is a de facto purchase. Similarly, the right to obtain benefits from use of the leased asset in the future should be construed as an existing asset on the balance sheet. On the other hand, the flexibility of an operating lease can prove of value should the asset no longer be needed or has declined in value.

Thus, in order to estimate the total debt of the firm, we need to estimate the future payments under operating leases because the present value under capitalized lease obligations is already included in the long-term debt of the firm. To do this, we use information that is available in the footnotes to the financial statements, as is shown for UPS in Table 6-23. To discount the operating lease obligations, we rely on present-value tables.

TABLE 6-23

Expected Cash Outlays

We have contractual obligations and commitments in the form of capital leases, operating leases, debt obligations, purchase commitments, pension fundings, and certain other liabilities. We intend to satisfy these obligations through the use of cash flow from operations. The following table summarizes the expected cash outflow to satisfy our contractual obligations and commitments as of December 31, 2008 (in millions):

Year	Capital Leases	Operating Leases	Debt Principal	Debt Interest	Purchase Commitments	Pension Fundings	Other Liabilities
2009	$83	$344	$2,007	$331	$708	$778	$74
2010	121	288	18	326	658	593	71
2011	29	217	5	326	667	828	69
2012	30	147	22	325	406	945	67
2013	31	109	1,768	285	—	964	65
After 2013	246	423	5,658	4,526	—	—	139
Total	$540	$1,528	$9,478	$6,119	$2,439	$4,108	$485

Source: UPS 2008 10K.

Unlike UPS, FedEx Corp. has been active signing operating leases as its preferred method of financing aircraft. As the company states in its footnote:

> The amounts reflected in the table . . . for operating leases represent future minimum lease payments under noncancelable operating leases (principally aircraft and facilities) with an initial or remaining term in excess of one year at May 31, 2009. In the past, we financed a significant portion of our aircraft needs (and certain other equipment needs) using operating leases (a type of "off-balance sheet financing"). At the time that the decision to lease was made, we determined that these operating leases would provide economic benefits favorable to ownership with respect to market values, liquidity, or after-tax cash flows.

The following table shows, in conformity with GAAP, the reduction in capital leases as a financing activity and represents only 2.2 percent ($328/$14,656) of expected payments of the company's operating leases.

UPS, in its last fiscal year had $51 billion in revenue, and FedEx had $35 billion in revenue. Yet, because of their differing financial strategies regarding non-balance-sheet-listed operating leases, FedEx showed just $2.5 billion in short- and long-term reported debt compared with $9.9 billion for UPS.

Contractual Cash Obligations

The following table sets forth a summary of our contractual cash obligations as of May 31, 2009. Certain of these contractual obligations are reflected in our balance sheet, while others are disclosed as future obligations under accounting principles generally accepted in the United States. Except for the current portion of long-term debt and capital lease obligations, this table does not include amounts already recorded in our balance sheet as current liabilities at May 31, 2009. Accordingly, this table is not meant to represent a forecast of our total cash expenditures for any of the periods presented.

Payments Due by Fiscal Year (Undiscounted)
(In Millions)

	2010	2011	2012	2013	2014	Thereafter	Total
Operating activities:							
Operating leases	$1,759	$1,612	$1,451	$1,316	$1,166	$7,352	$14,656
Noncapital purchase obligations and other	234	137	111	62	11	125	680
Interest on long-term debt	157	144	126	98	97	1,815	2,437

(*Continued*)

Payments Due by Fiscal Year (Undiscounted)
(In Millions)

	2010	2011	2012	2013	2014	Thereafter	Total
Required quarterly contributions to our U.S. retirement plans	350	—	—	—	—	—	350
Investing activities:							
Aircraft and aircraft-related capital commitments	964	791	527	425	466	1,924	5,097
Other capital purchase obligations	69	—	—	—	—	—	69
Financing activities:							
Debt	500	250	—	300	250	989	2,289
Capital lease obligations	164	20	8	119	2	15	328
Total	$4,197	$2,954	$2,223	$2,320	$1,992	$12,220	$25,906

Source: FedEx 2009 10K.

Back to UPS, the analyst would be required to make an adjustment to his or her cash-flow/total-debt model by increasing overall debt by the present value (Table 6-29) of the operating leases. In reality, UPS is a growing concern whose operating leases have been growing by 5.6 percent per year (Table 6-24), and to discount the operating leases as called for by GAAP (contractual cash obligations) would not reflect the historical underpinnings. For this exercise, we will assume that the minimum amounts reported in the company's 10K are correct, and we need to adjust its liabilities based on the reported amount of the current lease portfolio. If the analyst would like to account for growth in operating leases above the stated minimum, this would be both acceptable and, in many cases, necessary but I would caution that the growth rate should be no greater than shown historically, in this case 5.6 percent per year. Keep in mind that enterprises are required to report only the minimum expected lease liability, meaning the leases currently under contract.

As disclosed in the statements and footnotes that follow, UPS reports $7.8 billion in long-term debt, exclusive of operating leases, which is reflected on its balance sheet. Its footnote reveals that it has signed $425 million in capital leases, which seems low, inasmuch some of those leases are not due until 2055, which, when using present value, significantly lowers its adjusted value. Recall that UPS defeased some of its obligations under capital lease, which improved reported balance-sheet debt. Its operating leases, listed at $1.5 billion, or about

TABLE 6-24

Growth Rate in Operating Lease Obligations: UPS, 1998–2008

Fiscal Year	Five-Year Operating Leases	Percentage Change
1998	643	
1999	617	−4.0%
2000	975	58.0%
2001	1210	24.1%
2002	993	−17.9%
2003	992	−0.1%
2004	1,236	24.6%
2005	1,301	5.3%
2006	1,269	−2.5%
2007	1,222	−3.7%
2008	1,105	−9.6%
Annualized 10-year growth rate		5.6%

22 percent of its net worth, are not included on its balance sheet. It is important that we note that UPS's shareholders' equity dropped in good part related to a $3.6 billion addition to its comprehensive loss section of shareholders' equity, resulting mostly from its pension and postretirement plans (despite an increase in its discount rate). Table 6-25 reveals details of this comprehensive loss, which, we will soon see, may be added back, under certain conditions, to shareholders' equity, as if the loss were the result of a temporary impairment and not a reflection of higher expected normalized contributions. Comprehensive actuarial losses/gains are commonly associated with large annual swings, which, in most instances, would not impair long-term creditworthiness and would cause an imprecise and unstable estimate of ROIC, as I have defined it, if included.

TABLE 6-25

Accumulated Comprehensive Income: UPS, 2006–2008

Accumulated Other Comprehensive Income (Loss)

We incur activity in AOCI for unrealized holding gains and losses on available-for-sale securities, foreign currency translation adjustments, unrealized gains and losses from derivatives that qualify as hedges of cash flows, and unrecognized pension and postretirement benefit costs. The activity in AOCI is as follows (in millions):

(*Continued*)

	2008	2007	2006
Foreign currency translation gain (loss):			
Balance at beginning of year	$81	$(109)	$(163)
Aggregate adjustment for the year	(119)	190	54
Balance at end of year	(38)	81	(109)
Unrealized gain (loss) on marketable securities, net of tax:			
Balance at beginning of year	9	12	11
Current period changes in fair value [net of tax effect of $(33), $4, and $(3)]	(78)	6	(4)
Reclassification to earnings [net of tax effect of $5, $(5), and $3]	9	(9)	5
Balance at end of year	(60)	9	12
Unrealized gain (loss) on cash flow hedges, net of tax:			
Balance at beginning of year	(250)	68	83
Current period changes in fair value [net of tax effect of $(33), $(177), and $(4)]	(54)	(294)	(7)
Reclassification to earnings [net of tax effect of $118, $(14), and $(5)]	197	(24)	(8)
Balance at end of year	(107)	(250)	68
Unrecognized pension and postretirement benefit costs, net of tax:			
Balance at beginning of year	(1,853)	(2,176)	(95)
Reclassification to earnings (net of tax effect of $81, $73, and $0)	133	122	—
Net actuarial gain/loss and prior service cost resulting from remeasurements of plan assets and liabilities [net of tax effect of $(2,235), $111, and $11]	(3,717)	201	16
SFAS 158 transition adjustment [net of tax effect $(1,258) in 2006]	—	—	(2,097)
Balance at end of year	(5,437)	(1,853)	(2,176)
Accumulated other comprehensive income (loss) at end of year	$(5,642)	$(2,013)	$(2,205)

UNITED PARCEL SERVICE, INC., AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(In Millions)

	December 31	
	2008	**2007**
Assets		
Current assets:		
Cash and cash equivalents	$507	$2,027
Marketable securities	542	577
Accounts receivable, net	5,547	6,084
Finance receivables, net	480	468
Deferred income tax assets	494	606
Income taxes receivable	167	1,256
Other current assets	1,108	742
Total current assets	8,845	11,760
Property, plant, and equipment, net	18,265	17,663
Pension and postretirement benefit assets	10	4,421
Goodwill	1,986	2,577
Intangible assets, net	511	628
Noncurrent finance receivables, net	476	431
Other noncurrent assets	1,786	1,562
Total assets	$31,879	$39,042
Liabilities and Shareowners' Equity		
Current liabilities:		
Current maturities of long-term debt and commercial paper	$2,074	$3,512
Accounts payable	1,855	1,819
Accrued wages and withholdings	1,436	1,414
Dividends payable	—	440
Self-insurance reserves	732	704
Other current liabilities	1,720	1,951
Total current liabilities	7,817	9,840
Long-term debt	7,797	7,506
Pension and postretirement benefit obligations	6,323	4,438
Deferred income tax liabilities	588	2,620
Self-insurance reserves	1,710	1,651
Other noncurrent liabilities	864	804

(*Continued*)

	December 31	
	2008	**2007**
Shareowners' equity:		
Class A common stock (314 and 349 shares issued in 2008 and 2007)	3	3
Class B common stock (684 and 694 shares issued in 2008 and 2007)	7	7
Additional paid-in capital	—	—
Retained earnings	12,412	14,186
Accumulated other comprehensive loss	(5,642)	(2,013)
Deferred compensation obligations	121	137
	6,901	12,320
Less: Treasury stock (2 shares in 2008 and 2007)	(121)	(137)
Total shareowners' equity	6,780	12,183
Total liabilities and shareowners' equity	$31,879	$39,042

TABLE 6-26

Debt Obligations and Commitments

Debt obligations, as of December 31, consist of the following (in millions):

	2008	**2007**
8.38% debentures	$741	$761
4.50% senior notes	1,739	—
5.50% senior notes	745	—
6.20% senior notes	1,479	—
Commercial paper	2,922	7,366
Floating-rate senior notes	438	441
Capital lease obligations	425	479
Facility notes and bonds	433	435
UPS notes	198	513
Pound sterling notes	730	989
Other debt	21	34
Total debt	9,871	11,018
Less current maturities	(2,074)	(3,512)
Long-term debt	$7,797	$7,506

The analyst might wonder why, when computing fixed-charge coverage's, we would compare today's cash flows against future debt requirements as it might be expected that cash flows in the future are also expected to grow, enabling UPS to more easily satisfy those obligations. It is so because operating cash-flow growth is not assured because UPS has seen its cash flows fall during recession and with spikes in fuel costs. Often creditors do build in growth in operating cash flows when making loan decisions, and many times those expected cash flows do not materialize, resulting in material loss.[30] Debt requirements, however, are legally obligated to be paid, and it is the operating cash flows that pay the interest but the free cash flow that pays the principal.

An analyst also might question the 8 percent discount rate in Table 6-27 used (as too high), which, if lower, would increase the debt added to the balance sheet. The discount rate for the capital lease obligations should be the cost of debt because we construe leases as a debt obligation. Also, it is normally wise to build some conservatism into the models, but note that UPS's bonds are not trading far from 8 percent (not tax adjusted for the 22 percent savings). The analyst would need to adjust the discounting of the payments for the period in the year the payments actually take place. In the example that follows, if one assumes that the $344 million of lease payments due in 2009 is to be paid in equal installments throughout the year, one would most likely discount those payments at a rate closer to 4 percent for that year because the first half-year payments will not be accruing interest for 12 full months. For the operating leases due after 2013, I used an 11-year average because UPS's footnote states that it has leases as far out as 2055, so an 11-year average is conservative. Another way of performing the calculation would be to divide the $109 million projected minimum lease obligations for the year 2013 by the $423 million remaining, or about four years, at the $109 million rate, and discount the $109 million at 8 percent for years 2013–2016.

It is best to use common sense in this analysis because it is most probable with UPS, unlike the table in the footnote, that operating leases will grow, not decline. Factoring in a 5 percent rate of growth in future operating leases would increase total debt by about $2.4 billion. Table 6-27 is based on a known stream of disclosed minimum future lease payments. If the company would share growth information, it would help in the model, although discounting many years out provides lower value added.

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[30]For example, Tishman Speyer Properties, LP, and Blackrock Realty purchased Manhattan's Stuyvesant Town for a very rich price of $5.4 billion from MetLife. The bonds sold to help pay for the purchase were bought by investors who believed the cash flows from the rentals would increase over the coming years, but they were not realized.

TABLE 6-27

UPS Operating Leases Discounted at 8 Percent

Year	As Listed	8% Discount Rate
2009	344	319
2010	288	247
2011	217	172
2012	147	108
2013	109	75
After 2013	423	181
Total	**1,528**	**1,101**

Therefore, I would add $1.1 billion[31] to UPS's total debt to arrive at an adjusted debt of $10.971 billion (from the $9.871 billion of Table 6-26), which assumes that there were no further adjustments to be made. To properly capitalize operating leases, the analyst would need to know the terms of all the lease agreements, including their current value, useful life, guaranteed residual value, and how quickly they would depreciate. Technology equipment, for instance, would depreciate more quickly than delivery trucks and would have differing useful lives, even though the payments on the leases and the contracted lease period could be similar. One would think, but it is not always true, that the lease life and the asset life would be similar. These factors would need to be captured when capitalizing the lease, but they are not available to the analyst. It is therefore up to the accounting promulgators to adopt changes to lease accounting regulations, but in the meantime, analysts must use their best estimate based on reported information while placing the value of the operating leased asset on the balance sheet.

Another factor that needs to be considered is the residual value of UPS's capital leases. Residual value, aside from determining whether a lease is classified as an operating or capital lease, affects the realized amount when the asset is remarketed. If the value of the asset has declined to a greater extent than that estimated (considered other than temporary), it would affect net income and cash flow. When leases are large, as in the case of UPS and FedEx, the analyst should perform a sensitivity analysis, with estimates of the various impacts 10 percent changes in residual value to cash flow would have on the entity.

My cost-of-capital credit model is not biased toward shareholders' equity, but total debt and debt coming due in relation to the capacity, ease of, and time

[31] I am operating under the simple assumption that all the operating leases are added the same day and that UPS is receiving no added tax benefits.

period it would take the entity to repay its total debt, as well as the ability of the enterprise to satisfy its coming year's debt, from free cash flow and available resources. Adding the value of the assets under operating lease obligations to the PPE account does not reduce the cost-of-capital model as much as its associated debt adds. The debt is a guaranteed obligation, whereas future cash flows are not assured. Those operating lease assets are important to the extent that they produce free cash flow. Therefore, my credit model focuses on the debt component.

By including the present value of operating leases in total debt, I am recognizing it in my ROIC metrics. *To fail to do so would distort the financial returns, especially so in industry comparisons against peers such as FedEx, which would be given an unfair advantage if operating leases were excluded.*

Thus adjusted total debt for UPS (more so for FedEx) would have a significant effect on shareholders' equity and cash flow/total debt. No adjustment would need to be made to the cash-flow side of the equation because those assets are already in place and are contributing existing cash flows.

To calculate the revised leveraged ratios with the operating leases capitalized, one would add $1.1 billion to the long-term asset section as *assets under lease*. This assumes that the assets were not valued at depreciated value and were all placed into service at the balance-sheet date. In reality, this would not be the case, however—UPS does not do this for us.

UPS ADJUSTED DEBT/EQUITY INCLUDING OPERATING LEASE OBLIGATIONS	
Total debt (including operating leases)	10,971
Total equity (including operating lease assets)	6,780/12,422

We must evaluate the appropriateness of including pension and postretirement pension obligations, included as part of comprehensive loss section of shareholders' equity, to total debt. Shown to the right (above) as part of total equity, $12,422 includes the addback of the comprehensive loss, if the analyst believes that the loss represents temporary market conditions that did not impair the entity's cash flows but was the result of an accounting rule unlikely to affect cash or temporary market conditions having a negligible prospective economic impact. To this end, one could make that case for UPS, especially given that by the end of its 2009 first quarter it was apparent to many market observers that the worst-case economic scenario some had feared was not going to occur. For instance, UPS recorded a $78 million charge to equity based on fair-value accounting in addition to the large market impairment to its pension assets resulting from the fall in the financial markets during the year. Despite the large non-realized loss to the fund, UPS contributed less cash into its

plans during 2008 than 2007, even considering the $5 billion decline in plan assets. During 2009, the plans rebounded strongly, coinciding with the general rise in equity prices, lending credence to not penalizing the strong cash-flow-producing entity's leverage ratios for noncash effects that may be viewed as temporary in nature, as all bear markets have proved to be. Not making the adjustment for other comprehensive loss only makes sense if the entity's cash flows are otherwise strong, allowing it the time for financial markets to normalize. This would not have been the case with General Motors, which had a high percentage of retirees/active workforce and whose operating business was not producing positive free cash flow.

Evidently the credit-rating agencies agreed because they rate UPS as AA– and Fedex, despite its lower balance-sheet debt/equity, as BBB. It is only when operating leases are included that Fedex and its $14.7 billion in operating leases shows much higher leverage. Capital lease obligations are roughly similar for the two firms, adjusted for their size.

The analyst also should note that capitalizing operating leases does not change net income or cash flows. The payments (cash outlays) on the leases do not change, and in the income statement, depreciation and interest expense on the lease are replaced with the lease expense. As stated, credit-rating agencies normally impute both an interest and depreciation component when calculating their adjusted financial ratios of fixed-charge coverages and EBITDA. Because I include the actual lease payment, no such adjustments are necessary. To calculate an imputed interest charge, credit agencies multiply the interest rate on existing debt by the current year's operating leases expense. In my model, I include the entire lease payment in addition to actual interest paid when evaluating fixed-charge converges.

Because operating leases run through the income statement as *lease expense* rather than interest, they can distort the credit metrics of analysts who consider interest-rate charge coverage an important indicator. For this reason, I include all lease payments in addition to interest expense to cover the omission. The reason I recommend including the entire operating lease expense and not just the imputed interest (also estimated as one-third the payment) is that the entire payment is required to be paid, just as interest is required to be paid on debt, even if principal payments in any particular year are not. Thus, in the case of UPS, we see

2008 interest expense	$359
2008 lease expenses (est.)	$344
2008 capital lease expenses (est.)	83
Total interest and operating lease expense	$786 million

In Table 6-23, management estimates the company's 2009 projected expense. The analyst should speak to the company's CFO for an estimate of more accurate lease expense payments for the coming five years, if the company is willing to do

this. For example, for UPS, one would ask the number of new aircraft on order waiting delivery and those to be retired. The same logic would apply to other firms that use leases.

As seen in Table 6-28, UPS's normalized cash flows can easily service its interest and lease expenses, although, as seen in the table, the company's cash flows are cyclic and subject to the vagaries of the business environment. For its fiscal year 2007, UPS had negative free cash flow, and for the first quarter of 2009, its operating and free cash flow declined by a third despite a large cutback in capital expenditures. The operating and free cash flows reflected in the table are after lease expense. UPS, due to its financial strength, had access to the commercial paper market and other back-up credit facilities.

Companies that have high and growing amounts of operating leases as compared with their operating cash flows should be penalized with lower valuation multiples. As to be explained in Chapter 8, we indeed penalize such companies by

TABLE 6-28

UPS Cash Flow Items Including Discretionary Overspending

Year	Dec-04	Dec-05	Dec-06	Dec-07	Dec-08	Most Recent Quarter Mar-09	Previous Quarter Mar-08
Net Operating Cash Flow	5331.0	5793.0	5589.0	1123.0	8426.0	2196.0	3305.0
Capital Expenditures	2127.0	2187.0	3085.0	2820.0	2636.0	382.0	661.0
Sale of PPE	75.0	27.0	75.0	85.0	147.0	6.0	57.0
Free Cash Flow – Including Discretionary Items	3279.0	3633.0	2579.0	(1612.0)	5937.0	1820.0	2701.0
Free Cash Flow – Excluding Discretionary Items	3279.0	3633.0	2681.4	(1533.8)	6233.0	—	—
Discretionary Capital Expenditures	0.0	0.0	69.9	40.1	0.0	—	—
Discretionary R&D	0.0	0.0	0.0	0.0	0.0	—	—
Discretionary Cost of Goods Sold	0.0	0.0	32.4	38.1	296.0	—	—
Discretionary SG&A	0.0	296.0	0.0	0.0	0.0	—	—
Discretionary Advertising	0.0	0.0	0.0	0.0	0.0	—	—
Large Buildup (Reduction) in Accounts Receivable	0.0	894.2	(53.1)	(1040.3)	472.1	(1502.2)	(788.1)
Large Buildup (Reduction) in Inventory	(345.5)	0.0	0.0	0.0	0.0	0.0	0.0
Large Buildup (Reduction) in Accounts Payable	0.0	265.5	(135.9)	(1039.0)	(491.8)	(1169.7)	(414.0)

Source: UPS and CT Capital, LLC.

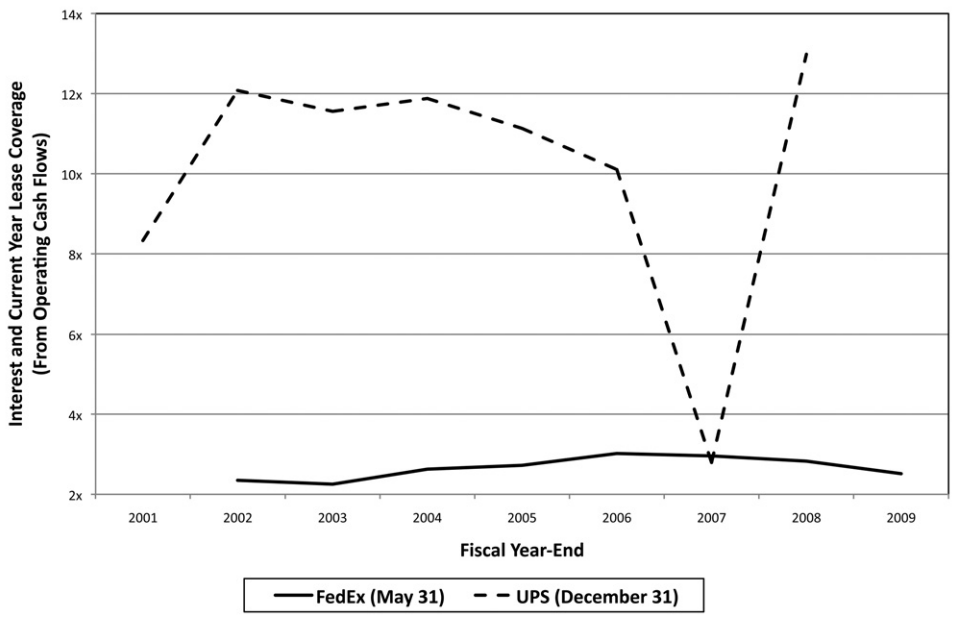
assigning them a higher cost of equity, in recognition of the increased financial burden. Of course, if the operating cash flows are growing as well, the credit would remain as is or perhaps strengthen.

Figure 6-7 depicts the fixed-charge coverage as defined by operating cash flows divided by interest and lease expense for both UPS and FedEx. The figure uses the actual interest expense from the statement of cash flows, not the amount reported on the income statement. FedEx covers its fixed obligations each year, but not with the great margin of UPS. To calculate the fixed-charge cover, I add back to the numerator (operating cash flow) the year's interest and lease expense, as I do in my worksheet for the cost-of-equity capital model in Chapter 8, to compute the number of times those charges were covered.

You will notice the sharp drop in coverage for UPS during 2007. The decrease in 2007 operating cash flows compared with 2006 and 2005 was due primarily to the $6.1 billion payment made to withdraw from the Central States Pension Fund in 2007. This was partially offset by reduced 2007 funding to its management pension and postretirement benefit plans. In 2007, the company funded $687 million to its pension and postretirement benefit plans as compared with $1.625 billion in 2006. This is another reason why I also consider power operating cash flows in

FIGURE 6-7

Percentage Coverage of Interest and Operating Leases



addition to the reported cash flow from operations. FedEx received a tax benefit related to the payment that resulted in a refund.

To calculate UPS's return on invested capital, we employ the definition espoused in Chapter 5 and the information contained in the appropriate charts (Table 6-29 also provides present value numbers):

ROIC = Free cash flow – Net Interest Income/Invested Capital (Equity + Total Interest Bearing Debt + PV of Operating Leases − Cash + Marketable Securities).

UPS had produced normalized $2.9 billion in free cash flow from which we exclude the $100MM in net interest income as we are seeking its return on capital employed.

= 2.9 − 0.1/6.78 + 9.87 + 1.1 − 1.05
= 2.8/16.7
= 16.8% excluding loss in comprehensive income
= 12.5% including loss on comprehensive income

Incorporating operating leases into the denominator lowers UPS's ROIC by about 6 percent. If the loss on comprehensive income (or part of it) were added back to shareholders' equity, the difference would have been meaningful, as shown. The company's ROIC is sufficiently above their weighted-average cost of capital (8.35 percent[32]) to state that UPS most likely has many value-adding investments it could make.

For FedEx, including its large operating leases into its ROIC metric quite substantially affected the ratio. Its three-year average free cash flow, when including excess expenditures, was $782 million; the company reported $26 million in interest income during its latest (2009) fiscal year and no comprehensive income or loss, so its

ROIC = 782 − 26/13,626 + 2,583 + 9,698 − 2,292
= 756/23,615
= 3.2%

The 3.2 percent was just for one recessionary year and is significantly below the company's three- and four-year average ROIC.

[32] Calculated using the model in Chapter 8.

TABLE 6-29

Present-Value Table

Periods	PRESENT VALUE OF $1																
	RATE PER PERIOD																
	0.25%	0.50%	0.75%	1.00%	1.50%	2.00%	2.50%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%
1	0.99751	0.99502	0.99256	0.99010	0.98522	0.98039	0.97561	0.97087	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286
2	0.99502	0.99007	0.98517	0.98030	0.97066	0.96117	0.95181	0.94260	0.92456	0.90703	0.89000	0.87344	0.85734	0.84168	0.82645	0.81162	0.79719
3	0.99254	0.98515	0.97783	0.97059	0.95632	0.94232	0.92860	0.91514	0.88900	0.86384	0.83962	0.81630	0.79383	0.77218	0.75131	0.73119	0.71178
4	0.99006	0.98025	0.97055	0.96098	0.94218	0.92385	0.90595	0.88849	0.85480	0.82270	0.79209	0.76290	0.73503	0.70843	0.68301	0.65873	0.63552
5	0.98759	0.97537	0.96333	0.95147	0.92826	0.90573	0.88385	0.86261	0.82193	0.78353	0.74726	0.71299	0.68058	0.64993	0.62092	0.59345	0.56743
6	0.98513	0.97052	0.95616	0.94205	0.91454	0.88797	0.86230	0.83748	0.79031	0.74622	0.70496	0.66634	0.63017	0.59627	0.56447	0.53464	0.50663
7	0.98267	0.96569	0.94904	0.93272	0.90103	0.87056	0.84127	0.81309	0.75992	0.71068	0.66506	0.62275	0.58349	0.54703	0.51316	0.48166	0.45235
8	0.98022	0.96089	0.94198	0.92348	0.88771	0.85349	0.82075	0.78941	0.73069	0.67684	0.62741	0.58201	0.54027	0.50187	0.46651	0.43393	0.40388
9	0.97778	0.95610	0.93496	0.91434	0.87459	0.83676	0.80073	0.76642	0.70259	0.64461	0.59190	0.54393	0.50025	0.46043	0.42410	0.39092	0.36061
10	0.97534	0.95135	0.92800	0.90529	0.86167	0.82035	0.78120	0.74409	0.67556	0.61391	0.55839	0.50835	0.46319	0.42241	0.38554	0.35218	0.32197
11	0.97291	0.94661	0.92109	0.89632	0.84893	0.80426	0.76214	0.72242	0.64958	0.58468	0.52679	0.47509	0.42888	0.38753	0.35049	0.31728	0.28748
12	0.97048	0.94191	0.91424	0.88745	0.83639	0.78849	0.74356	0.70138	0.62460	0.55684	0.49697	0.44401	0.39711	0.35553	0.31863	0.28584	0.25688
13	0.96806	0.93722	0.90743	0.87866	0.82403	0.77303	0.72542	0.68095	0.60057	0.53032	0.46884	0.41496	0.36770	0.32618	0.28966	0.25751	0.22917
14	0.96565	0.93256	0.90068	0.86996	0.81185	0.75788	0.70773	0.66112	0.57748	0.50507	0.44230	0.38782	0.34046	0.29925	0.26333	0.23199	0.20462
15	0.96324	0.92792	0.89397	0.86135	0.79985	0.74301	0.69047	0.64186	0.55526	0.48102	0.41727	0.36245	0.31524	0.27454	0.23939	0.20900	0.18270
16	0.96084	0.92330	0.88732	0.85282	0.78803	0.72845	0.67362	0.62317	0.53391	0.45811	0.39365	0.33873	0.29189	0.25187	0.21763	0.18829	0.16312
17	0.95844	0.91871	0.88071	0.84438	0.77639	0.71416	0.65720	0.60502	0.51337	0.43630	0.37136	0.31657	0.27027	0.23107	0.19784	0.16963	0.14564
18	0.95605	0.91414	0.87416	0.83602	0.76491	0.70016	0.64117	0.58739	0.49363	0.41552	0.35034	0.29586	0.25025	0.21199	0.17986	0.15282	0.13004
19	0.95367	0.90959	0.86765	0.82774	0.75361	0.68643	0.62553	0.57029	0.47464	0.39573	0.33051	0.27651	0.23171	0.19449	0.16351	0.13768	0.11611
20	0.95129	0.90506	0.86119	0.81954	0.74247	0.67297	0.61027	0.55368	0.45639	0.37689	0.31180	0.25842	0.21455	0.17843	0.14864	0.12403	0.10367
21	0.94892	0.90056	0.85478	0.81143	0.73150	0.65978	0.59539	0.53755	0.43883	0.35894	0.29416	0.24151	0.19866	0.16370	0.13513	0.11174	0.09256
22	0.94655	0.89608	0.84842	0.80340	0.72069	0.64684	0.58086	0.52189	0.42196	0.34185	0.27751	0.22571	0.18394	0.15018	0.12285	0.10067	0.08264
23	0.94419	0.89162	0.84210	0.79544	0.71004	0.63416	0.56670	0.50669	0.40573	0.32557	0.26180	0.21095	0.17032	0.13778	0.11168	0.09069	0.07379
24	0.94184	0.88719	0.83583	0.78757	0.69954	0.62172	0.55288	0.49193	0.39012	0.31007	0.24698	0.19715	0.15770	0.12640	0.10153	0.08170	0.06588
25	0.93949	0.88277	0.82961	0.77977	0.68921	0.60953	0.53939	0.47761	0.37512	0.29530	0.23300	0.18425	0.14602	0.11597	0.09230	0.07361	0.05882
30	0.92783	0.86103	0.79919	0.74192	0.63976	0.55207	0.47674	0.41199	0.30832	0.23138	0.17411	0.13137	0.09938	0.07537	0.05731	0.04368	0.03338
35	0.91632	0.83982	0.76988	0.70591	0.59387	0.50003	0.42137	0.35538	0.25342	0.18129	0.13011	0.09366	0.06763	0.04899	0.03558	0.02592	0.01894
40	0.90495	0.81914	0.74165	0.67165	0.55126	0.45289	0.37243	0.30656	0.20829	0.14205	0.09722	0.06678	0.04603	0.03184	0.02209	0.01538	0.01075
50	0.88263	0.77929	0.68825	0.60804	0.47500	0.37153	0.29094	0.22811	0.14071	0.08720	0.05429	0.03395	0.02132	0.01345	0.00852	0.00542	0.00346

The companies relative stock price performance quite accurately reflected its financing leverage and credit health surrounding the deep 2007–2009 recession. The equity security of UPS substantially outperformed FedEx going into and during the bottom of the recession, whereas the equity security of FedEx outperformed UPS as the stock market recovered. Investors believed that UPS's superior financial strength and total debt, including operating lease obligations, would enable the company to survive the economic downdraft, whereas investors in Fedex were, unsurprisingly, more concerned. The differences are clearly captured in the companies' stock prices (Figure 6-8).

Table 6-30 lists companies having high operating lease obligations relative to both their market value and total debt. If one excludes entities that were selling at very low prices (<$2 per share), such as Air Tran Holdings and Stein Mart, whose stocks jumped on the belief that the recession was over and were part of a wave of very leveraged companies trading near bankruptcy, the balance of companies underperformed the general market by a wide margin, indicating that even though rating agencies consider operating leases as part of their analysis, investors in general may not. It would appear, then, that analysts who capitalize operating leases may be able to avoid large, underperforming stocks, especially during periods of slow or negative economic growth. The table also might reflect weaker firms' preference for operating leases.

FIGURE 6-8

Cumulative Return: UPS versus FEDEX

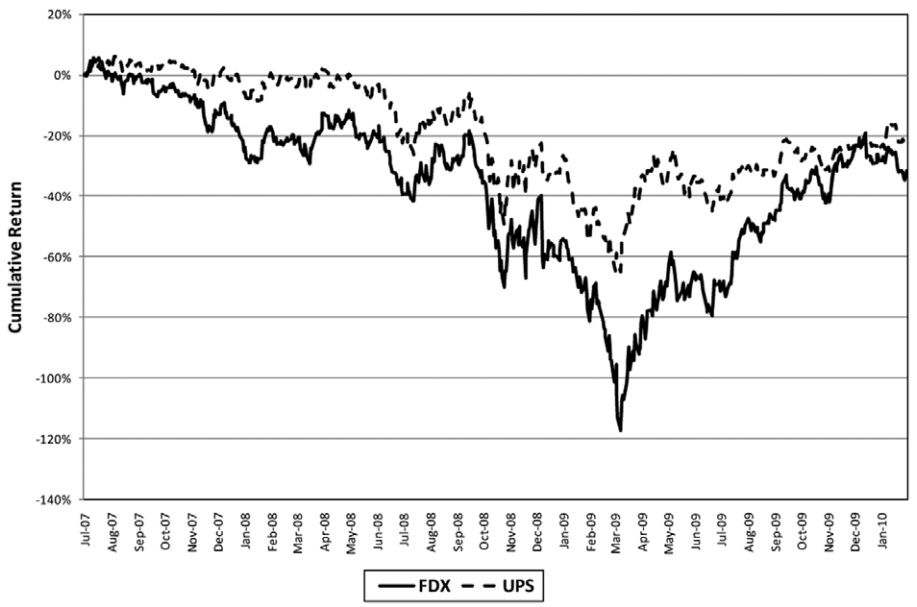


TABLE 6-30

Companies with Large Operating Leases Relative to Total Debt

Company Name	Ticker	Operating Leases/Total Debt	Operating Leases/Market Value	One-Year Total Return
Airtran Holdings, Inc.	AAI	2.8	6.0	147.9
American Apparel, Inc.	APP	3.5	2.8	−34.7
AMR Corp./DE	AMR	0.8	3.1	−40.8
Arden Group, Inc.–CL A	ARDNA	106.7	0.3	4.7
Big 5 Sporting Goods Corp.	BGFV	3.2	2.9	70.5
Brown Shoe Co., Inc.	BWS	3.2	4.2	−50.0
CBIZ, Inc.	CBZ	0.9	0.4	−20.1
Charming Shoppes, Inc.	CHRS	3.0	7.6	−11.4
Chicago Bridge & Iron Co.	CBI	1.8	0.3	−57.2
Conn's, Inc.	CONN	2.8	0.6	−19.7
Continental Airlines, Inc.–CL B	CAL	2.5	7.5	−18.6
Corinthian Colleges, Inc.	COCO	6.8	0.5	−2.0
CRA International, Inc.	CRAI	1.3	0.4	−28.4
Delta Airlines, Inc.	DAL	0.8	3.5	−8.1
Duff & Phelps Corp.	DUF	3.5	0.2	5.8
Ensign Group, Inc.	ENSG	2.0	0.4	35.0
Great Atlantic & Pacific Tea Co.	GAP	1.6	9.8	−63.7
Great Lakes Dredge & Dock CP	GLDD	0.6	0.6	−9.5
HHGregg, Inc.	HGG	4.6	0.9	83.3
Infineon Technologies AG–ADR	IFNNY	0.6	0.3	−34.8
Jetblue Airways Corp.	JBLU	0.6	1.1	−3.0
Jones Lang Lasalle, Inc.	JLL	0.9	0.5	−19.3
Ligand Pharmaceutical, Inc.	LGND	20.8	0.3	−15.0
Live Nation, Inc.	LYV	1.2	2.4	−53.7
Madden Steven, Ltd.	SHOO	4.4	0.3	42.6
Moduslink Global Solutions	MLNK	161.3	0.1	−41.7
Movado Group, Inc.	MOV	1.3	0.5	−32.8
Pep Boys–Manny, Moe & Jack	PBY	2.2	5.2	40.6
PHI, Inc.	PHIIK	1.0	1.0	−45.6
Pricesmart, Inc.	PSMT	3.4	0.2	−28.7
Rehabcare Group, Inc.	RHB	3.1	0.7	45.3
Res-Care, Inc.	RSCR	0.9	0.5	−14.9
Rigel Pharmaceuticals, Inc.	RIGL	40.5	0.5	−67.2
Saks, Inc.	SKS	0.7	1.3	−49.8
Skechers USA, Inc.	SKX	32.8	0.9	−26.8
Steak N Shake Co.	SNS	0.9	0.6	48.3
Stein Mart, Inc.	SMRT	3.8	7.7	146.8
Switch & Data Facilities Co.	SDXC	1.9	1.3	−17.5
Talbots, Inc.	TLB	2.0	8.6	−61.9
UAL Corp.	UAUA	1.3	7.4	−50.4
US Airways Group, Inc.	LCC	1.9	8.5	−42.1
Village Super Market–CL A	VLGEA	3.5	0.4	41.2

Source: CT Capital, LLC, August 10, 2009.

GUARANTEES

Guarantees can take many forms, and any guarantee potentially involves a cash settlement. For instance, in order to induce Hertz to buy cars from them for its fleet, General Motors made certain guarantees regarding the price it would repay Hertz on return of the cars. This represented a risk to both GM and Hertz—for GM regarding the price for which it could resell those used cars and for Hertz regarding whether GM was able to follow through on the guarantee. As indicated, the amount is substantial.

> Any default or reorganization of a manufacturer that has sold us program cars might also leave us with a substantial unpaid claim against the manufacturer with respect to program cars that were sold and returned to the car manufacturer but not paid for, or that were sold for less than their agreed repurchase price or guaranteed value. For the year ended December 31, 2008, the highest outstanding month-end receivable balance for cars sold to a single manufacturer was $249.1 million owed by General Motors. See "We face risks of increased costs of cars and of decreased profitability, including as a result of limited supplies of competitively priced cars."
>
> *Source:* Hertz 2009 10K.

The most common form of guarantee involves a financial guarantee. Specific accounting regulations may prevail depending on the transaction involved. Guarantees are covered by Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others*—an interpretation of SFAS. 5, 57, and 107 and rescission of FASB Interpretation No. 34. This statement does not apply to certain financial contracts, such as those issued by insurance companies. It also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee.

FASB summarized the reason for Interpretation No. 45:

> This Interpretation clarifies that a guarantor is required to disclose (a) the nature of the guarantee, including the approximate term of the guarantee, how the guarantee arose, and the events or circumstances that would require the guarantor to perform under the guarantee; (b) the maximum potential amount of future payments under the guarantee; (c) the carrying amount of the liability, if any, for the guarantor's obligations under the

guarantee; and (d) the nature and extent of any recourse provisions or available collateral that would enable the guarantor to recover the amounts paid under the guarantee. For product warranties, instead of disclosing the maximum potential amount of future payments under the guarantee, a guarantor is required to disclose its accounting policy and methodology used in determining its liability for product warranties as well as a tabular reconciliation of the changes in the guarantor's product warranty liability for the reporting period. Disclosures under current practice, which generally include only the nature and amount of guarantees, do not provide the same level of useful information as required by this Interpretation.

This Interpretation also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the obligations it has undertaken in issuing the guarantee, including its ongoing obligation to stand ready to perform over the term of the guarantee in the event that the specified triggering events or conditions occur. The objective of the initial measurement of that liability is the fair value of the guarantee at its inception.

Source: FASB.

It is common practice for a parent organization or holding company to guaranty the loans of its wholly owned subsidiaries. This could pose a problem for an analyst because guarantees of nonconsolidated affiliate debt may not be incorporated onto the guarantor's balance sheet. If the nonconsolidated subsidiary or affiliated company for whom the guaranty is made does not produce free cash flow, the analyst should add the amount of guaranteed debt to total debt of the company making the guaranty. The analysis also should take into account the legal distinction between the entities, especially if the subsidiary is subject to additional regulation that might require additional cash outlays or an increase in its capital. If regulations or the financial condition of the subsidiary changes, it could affect the parent or holding company, which might be required to provide additional funding, rework covenants to its debt agreements, or pay higher rates of interest on upcoming debt.

To the extent that a parent wishes to legally isolate itself from an operating division, the subsidiary may have nonrecourse debt on its books. This may occur, for example, if the parent wishes to protect the cash flows and financial integrity of another division. In the example that follows, all subsidiaries of the borrower, Red Mortgage Capital, are guaranteeing the debts of each other.

Example:

Notwithstanding anything contained in this Agreement or the other Loan Documents to the contrary (but subject to the provisions of Section 14.01, the last sentence of this Section 14.04 and the provisions of Section 14.11), each Borrower shall have joint and several liability for all Obligations. Notwithstanding the intent of all of the parties to this Agreement that all Obligations of each Borrower under this Agreement and the other Loan Documents shall be joint and several Obligations of each Borrower but subject to the provisions of Section 14.01, each Borrower, on a joint and several basis, hereby irrevocably guarantees on a non-recourse basis, subject to the exceptions to nonrecourse provisions of Section 14.01 to Lender and its successors and assigns, the full and prompt payment (whether at stated maturity, by acceleration or otherwise) and performance of, all Obligations owed or hereafter owing to Lender by each other Borrower. Each Borrower agrees that its non-recourse guaranty obligation hereunder is an unconditional guaranty of payment and performance and not merely a guaranty of collection.

Source: Master Credit Facility Agreement, Red Mortgage Capital 8K.

Often the risk regarding a financial guaranty may not be well known. The guarantee to support borrowing of an unconsolidated affiliate or third party is not recorded on the guarantor's balance sheet unless it meets certain tests regarding probability of payment or control. The guarantor also can choose to record the lowest amount in a wide range of outcomes, such that if it has a 70 percent chance of paying nothing and a 30 percent chance of having to pay $100 million, the company obligation in its footnotes could be just $30 million. It is thus up to the analyst to determine what a $100 million payment would mean to the entity's financial health and if it has the financial flexibility if funds need to be raised to pay that sum.

Example:

Pursuant to provisions included in the company's 2005 acquisition of Precision, the company guaranteed the value of 304,878 shares at $3.28 per share of the company's common stock used as consideration in that acquisition as of the second anniversary, which occurred on July 28, 2007. Based on the July 28, 2007 stock price, that guarantee requires the company to issue $963,000 of cash or an equivalent number of its shares (7,825,000) to the prior owners of Precision. The company has tried to issue the shares; however, the prior owners have initiated legal proceedings to compel issuance of cash instead. In addition, pursuant to provisions included in the company's 2005 acquisition of Long Term Rx, the company guaranteed the value of 182,183 shares at $3.28 per share of the company's common stock used as consideration in that acquisition as of the second anniversary, which occurred on July 28, 2007. Based on the July 28, 2007 stock price, that guarantee requires the company to issue $465,000 of cash or an equivalent number of its shares (3,880,000) to the prior owner of Long Term Rx.

Source: Standard Management 2009 10K.

Another guarantee is a performance guarantee. Normally, the cash outlays to satisfy such a guarantee are small, but not always. To the injured party, an inability to perform is normally covered by a surety bond. If this is not the case, economic damage would result. For the company issuing the guarantee, failure to perform could result in lost cash flows and lawsuits. Performance guarantees are common in the construction trade.

Example:

The Shaw Group is a provider of technology and engineering to utilities, oil companies, power producers, and governments. Many of its contracts provide for specific performance guarantees, for many of which the liabilities are difficult to quantify. The following is from the company's 2009 10K:

> Our approach to estimating liability provisions related to contractual performance guarantees on sales of our technology paid-up license agreements requires that we make estimates on the performance of technology on our projects. Our historical experience with performance guarantees on these types of agreements supports estimated liability provisions that vary based on our experience with the different types of technologies for which we license and provide engineering (for example, ethylbenzene, styrene, cumene, Bisphenol A). Our liability provisions range from nominal amounts up to 100% of the contractual performance guarantee. If our actual obligations under performance guarantees differ from our estimated liability provisions at the completion of these projects, we will record an increase or decrease in revenues (or an increase in costs where we are required to incur costs to remediate a performance deficiency) for the difference. Our total estimated performance liability remaining at August 31, 2009 and 2008 was $13.0 million and $16.1 million, respectively. The estimated liability provisions generally are more significant as a percentage of the total contract value for these contracts when compared to contracts where we have full EPC responsibility, and, as a result, these differences could be material.

If there is a dispute on performance and the amount sought by the injured party is substantial, the analyst may choose to add the guaranteed amount to debt. The new financial structure must be evaluated in light of the entity's ability to satisfy the guarantee and any additional costs, such as legal expenses and insurance.

CONVERTIBLE BONDS

Convertible bonds have the characteristic of a straight-debt bond plus an additional option to purchase a specified number of shares of the common stock at a fixed price. Thus the holder of a convertible bond enjoys a fixed interest payment until the bond reaches maturity (or is converted to equity) and, at the same time, enjoys the option of partaking in the capital appreciation of the stock if the stock

were to rise above the conversion price. If the price of the stock increases in value to a point above the price implicit in the convertible bond, then the bondholder is likely to exercise its option and convert the bond to common stock. In such cases, the convertible bonds could be viewed as equity, and the analyst would adjust the entity's debt ratios accordingly, as well as any changes in free cash flow saved from the difference (tax-adjusted) of interest and dividend payments. This would be true for all convertible securities, including those which are required to be converted (mandatory convertibles). Where conversion is mandatory, the security always would be treated as equity, even prior to conversion. Also to be considered in the cash-flow projection are any common stock dividend payments resulting from the additional shares.

If, however, the price of the equity is well below the conversion price, the holder is unlikely to convert, and the bond should be considered as debt. *If the price of the common stock is somewhat above the conversion price, unless the conversion is forced, the analyst should not assume that conversion will take place.*

As with all bonds, holders must be aware of any provision or covenants that could affect the value of the bonds. For example, many issues are callable at par, even though, if interest rates fell, the bond would trade higher. On the other hand, holders may have the option to require the company to redeem the bonds as of a certain date. If the entity does not have the financial flexibility to retire these obligations, equity holders could see the value of their investment diluted, sometimes significantly.

Example:

The following is from Genesco Corporation's 2009 10K:

> On June 24, 2003 and June 26, 2003, the company issued a total of $86.3 million of $4^1/_8$% Convertible Subordinated Debentures (the "Debentures") due June 15, 2023. The Debentures are convertible at the option of the holders into shares of the company's common stock, par value $1.00 per share: (1) in any quarter in which the price of its common stock issuable upon conversion of a Debenture reached 120% or more of the conversion price ($24.07 or more) for 10 of the last 30 trading days of the immediately preceding fiscal quarter, (2) if specified corporate transactions occur or (3) if the trading price for the Debentures falls below certain thresholds. The company's common stock did not close at or above $24.07 for at least 10 of the last 30 trading days of the fourth quarter of Fiscal 2009. Therefore, the contingency was not satisfied. Upon conversion, the company will have the right to deliver, in lieu of its common stock, cash or a combination of cash and shares of its common stock. Subject to the above conditions, each $1,000 principal amount of Debentures is convertible into 49.8462 shares (equivalent to a conversion price of $20.06 per share of common stock) subject to adjustment. There were $30,000 of debentures converted to 1,356 shares of common stock during Fiscal 2008.

Since, as of this writing, the shares of Genesco were trading at $23 per share, the convertible securities were trading as equity, their price being above the $20.06 conversion price. In leverage ratios, the convertible could be considered equity because it can be reasonably expected, but not certain, that it will be converted. However, since the common stock is sufficiently close to the conversion price, both the current and pro forma financial structures should be included in the analysis. If the stock were to fall and the bonds were put to the company, Genesco would currently need to sell debt or stock to cover the liability, although the cost might be considerable to equity holders. Another option would be to pay bondholders with a payment in kind (PIK), where, instead of cash, they would receive additional bonds or shares of common stock.

Because convertible bonds offer less collateral protection than nonsubordinated bonds, they normally carry lower credit ratings. This would be true in the case of Genesco, which is a moderate credit and has not been a consistent generator of free cash flow. Thus it would appear that the company would be pleased to see the bonds converted to equity and, with it, enhance its credit status.

Sometimes convertible bonds are issued in conjunction with an upcoming equity offering. The issuer does this to gain needed cash while the offering is being prepared. Unlike a typical convertible bond or preferred, where the conversion price is above the current market price, under this offering, it is granted at a discount.

Example:

In anticipation of an upcoming IPO of its Macau subsidiary, Las Vegas Sands sold $600 million in convertible bonds that were to be converted, at the company's option, to equity in the subsidiary at a 10 percent discount to the offering price. If the company did not convert the debt to equity, because the company had the right to redeem the bonds, holders would be entitled to warrants to purchase stock for the number of shares to which they otherwise would have been entitled under the proposed offering.

FASB Staff Position APB 14–1

The advantages of convertible securities have become important to many firms needing to provide investors with an added incentive to purchase their debt securities. For convertible instruments that may be settled partially or wholly in cash, the FASB, in May 2008, approved, through a technical release, APB 114–1.[33]

Under the rules, an issuer must separately account for the liability and equity components of a convertible debt security. The issuer must value the liability component by measuring the fair value of a similar straight (nonconvertible) debt security. If the convertible debt security contains additional "substantive" embedded features,

[33] The staff position may be read at www.fasb.org/pdf/fsp_apb14–1.pdf.

such as put and call options, the issuer must take these into account in assessing fair value. The issuer may disregard a nonsubstantive feature or one the exercise of which is improbable.

An issuer must compute the carrying amount of the equity component of the convertible instrument by deducting the value of the liability component from the initial proceeds received at issuance. The equity component should be recorded as additional paid-in capital on the issuer's balance sheet. The issuer then must allocate transaction costs proportionately between the liability and equity components. This new bifurcated approach may result in the liability component having a temporary basis difference for income tax purposes. The FSP requires that this difference be recorded as an adjustment to additional paid-in capital.

Micron Technology, an early adopter, reported the following in its December 2009 earnings announcement: "The rule has no effect on cash flow, but could on leverage ratios, depending on the bifurcation ratio of debt to equity." To the credit and cash flow analyst, there should be no change in the analysis because the new rule has no credit impact over what previously existed. You will see from my credit model that available liquidly is compared with the amount of fixed obligations coming due.

Example:

In the first quarter of fiscal year 2010, the company adopted the FASB's new accounting standard for convertible debt instruments that may be settled in cash on conversion, including partial cash settlement. The new standard was applicable for the company's $1.3 billion 1.875 percent convertible senior notes issued in May 2007 and requires the liability and equity components of such instrument be accounted for separately in a manner such that interest cost will be recognized at a nonconvertible-debt borrowing rate in periods subsequent to issuance of the instrument. Amounts prior to fiscal year 2010 have been recast for this adoption in connection therewith. As of the issuance date of the $1.3 billion convertible debt, there was a decrease in the carrying value of the debt of $402 million, an increase in the carrying value of additional capital of $394 million, and a decrease in the carrying value of deferred debt issuance costs (included in other noncurrent assets) of $8 million. In addition, through fiscal year 2009, there was a decrease in retained earnings of $94 million and accretion of the carrying value of long-term debt of $107 million as a result of the new standard.

PREFERRED STOCK

Preferred stock has greater claim to the assets of an entity than common stock shareholders in the event of liquidation and so for years was referred to as *preference stock*. However, unlike common stock, because preferred dividends are fixed, like bonds, and not normally entitled to the free cash flow, the price of preferreds does not fluctuate as greatly. An exception would be a preferred that has a participating

feature that entitles owners to receive the common dividend. A preferred stock carries no voting rights.

Holding preferred stock is riskier than owning fixed debt. Preferred dividends are paid at the discretion of the issuer, and the preferred represents a deeply subordinated claim in the event of bankruptcy.

From the issuer's point of view, preferred dividends, like common dividends, are paid from earnings and are not a deductible expense either for shareholder reporting or on the tax return. It is a charge against capital. Firms, however, may prefer to sell preferred stock because it avoids earnings dilution.

There are many types of preferred stock, and depending on their characteristics, they could be treated either as equity or debt or even perhaps as a hybrid. If the preferred stock has a maturity, it will be viewed as debt unless the security has a convertible feature and the common stock is trading above the conversion price.

When it is likely that the preferred will be recast as debt, it should be treated as such in the capital structure, as should a preferred that is exchangeable for debt at the company's option. When treated as debt, preferred dividend payments also should be considered in the fixed-charge coverage ratios. When it is likely that a preferred will be converted into common stock, it should be treated as equity and fixed-charge coverage calculated accordingly.

Because preferred dividends are not tax deductible, an entity might choose to redeem a preferred, whenever possible, to replace with debt. An issuer may chose to redeem a preferred security if there are any restrictive covenants associated with their issue that may be interfering with a capital spending program. Such was the case with SCANA Corp., a utility company that needed to redeem preferred stock to sell debt that had a lower cost of capital, aside from the resulting lower cash outlays. Entities often redeem their convertible preferred shares if the equity sells above the conversion price, saving the entity cash payments on the preferred dividends while adding to equity. If the common shares do not pay a common dividend, the savings can be significant, as was the case with NRG, a wholesale power company, when it forced a conversion.

An auction of preferred stock is one in which the dividend payments are reset each period based on the results of an auction, normally held every seven weeks. These instruments should be considered (short term) debt in the capital structure and also go by the name of *floating-rate preferreds*.

If an issuer has, by virtue of poor operating cash flows, preferred stock dividends "in arrears," that amount must be added to total debt in the computation of its capital structure. If the issuer redeems the preferred or it is apparent that it will do so, the new financial structure will depend on the means of financing. If replaced with another preferred issue, the interest-charge coverage may be affected. When a firm replaces bonds with preferred stock, shareholder reported profits will increase because the interest on the bonds is both tax deductible and appears on the income

statement. Cash flow will change by the difference in after-tax cost of debt and the dividend payment. If preferreds replace bonds, net income and EBITDA will rise, pointing out yet another shortfall of using EBITDA and not free cash flow.

The analyst must determine the characteristics, issuer intent, and prospective redemption possibilities in determining how preferred securities fit into the capital structure and the determination of appropriate leverage ratios. A forced redemption on the part of the creditor must be considered as part of short-term debt with an analysis of funding outlets. Any special features, such as preference or auction preferred, will cause the capital structure to change more frequently and may affect the cost of capital if interest rates experience a dramatic shift.

When calculating free cash flow per share, all dilutive securities must be considered, including convertible preferred, convertible stock, stock options, and warrants.