# Adjusting for Underfunded Pension and Postretirement Liabilities

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*Fewer and fewer companies have pension liabilities recorded on their balance sheets. This is because most employer companies continue to shift retirement programs to defined contribution plans such as 401(k) plans instead of traditional defined benefit pension plans. However, a significant number of companies still provide pension plans for their employees. Since many employer pension plans and other postretirement benefits plans are underfunded, to some degree, the funding status of a company's pension and postretirement benefits should be considered as part of the business valuation process.*

## Background

The number of companies with active pension plans has steadily decreased over the last several decades. In order to reduce or eliminate pension liabilities, companies will either freeze existing postretirement benefit plans or terminate such plans in favor of defined contribution plans.

The reason for this benefit plan change is to shift the primary responsibility for funding retirement from the employer corporation to the employees.

This change in employee postretirement benefit plans is documented in statistics provided by the Employee Benefit Research Institute (EBRI).

According to the EBRI, between 1979 and 2011, among all workers with access to employer-based retirement plans, the percentage of workers solely participating in defined benefit pension plans declined from 62 percent in 1979, to 7 percent in 2011.

Over the same period, the percentage of workers solely participating in defined contribution plans such as 401(k) plans increased from 16 percent in 1979, to 69 percent in 2011.

And, as a result of companies changing benefit plans, the percentage of workers participating in both defined benefit plans and defined contribution plans increased from 22 percent in 1979 to 24 percent in 2011.[1]

In a Towers Watson study of retirement benefits for Fortune 500 companies, only 34 Fortune 500 companies (7 percent of all Fortune 500 companies) offered a traditional defined benefit pension plan to newly hired salaried employees as of year-end 2013.

This is a substantial decrease from 251 Fortune 500 companies (just over 50 percent) in 1998, which offered traditional defined benefit pension plans.

Over the same period, the number of Fortune 500 companies offering only defined contribution plans to new hires increased from 195 (39 percent) in 1998 to 382 companies (over 76 percent) in 2013.

Between January and September 2014, three of the 34 Fortune 500 companies that had offered traditional defined benefit pension plans closed their plans to new hires and now offer only defined contribution plans.[2]

As the data from EBRI and Towers Watson reflect, defined benefit retirement plans are being supplanted by defined contribution plans.

Although the number of workers participating in corporate pension plans has continued to decrease over the last several decades, a significant number of public and private corporations still have defined benefit pension plans for employees.

These plans include active defined benefit pension plans, and frozen defined benefit pension plans for existing workers that are not available to newly hired employees.

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Many of these plans are underfunded, to some degree, resulting in the need to address underfunded pension liabilities in the valuation process. Many companies also have underfunded (or completely unfunded) postretirement health care obligations to former employees, which also should be considered in the business valuation process.

## The Funded Status of a Pension Plan

For many pension plans, the fair value of pension plan assets is less than the projected benefit obligation, resulting in an underfunded pension plan.

According to New York University professor Aswath Damodaran, the underfunded amount is an unfunded liability of the company, and should be deducted from a company's market value of invested capital in the determination of the market value of a company's equity.[3]

The deduction of unfunded pension liabilities from a company's market value of invested capital should be made on an after-tax basis.[4]

In order to determine pension funding levels, deferred pension and other postretirement benefit amounts are typically estimated by management. These estimates depend on management assumptions that may vary widely between companies.

Employer corporations or pension plan administrators often make general assumptions which may include the following:

1. The length of time employees will work for the company
2. The wages employees will earn while working for the company
3. The life spans of employees in retirement
4. The investment gains and earnings on plan assets set aside to pay pension benefits

Based on these assumptions, corporations estimate the present value of expected future benefits payable to employees. Pension obligations, or projected benefit obligations, are offset by pension plan assets. Pension expense in any given year accounts for the amount of benefits earned by employees in excess of the earnings from pension plan assets.[5]

Many of the assumptions and calculations made to determine the present value of expected future benefits are done by actuaries working with company management. Based on the actuarial assumptions regarding life spans of pension plan participants and the growth of pension plan assets, a company's financial statements reflect the projected benefit obligation, and also the fair value of plan assets.

The difference between the fair value (current market value) of a pension plan's assets available to pay future benefits and the present value of its future obligations indicates the funded status of the pension plan.

Although actuarial assumptions should be reviewed, the valuation analyst typically relies on the subject company and its actuarial consultants to determine the funded status of a pension plan.

With regard to postretirement health care benefit obligations, a company's financial statements are required to reflect the fair value of assets, if any, set aside to cover such obligations. The financial statements also reflect the present value of expected future postretirement health care benefit obligations.

Postretirement health care obligations are often entirely unfunded, with no assets set aside to fund the anticipated health care liabilities of covered retirees, in which case the unfunded amount is equal to the entire present value of expected benefit obligations to cover postretirement health care benefits.

The unfunded amount of the liability should be deducted, net of tax, from a company's market value of invested capital as part of the valuation process. An illustrative example of a defined benefit pension plan funding status and a postretirement benefit liabilities status is discussed below.

## Funded Status of Pension Obligations and Postretirement Benefit Liabilities: Dean Foods Company

The Dean Foods Company ("Dean Foods") provides an example of an underfunded pension liability and a completely unfunded postretirement health care benefit liability. Dean Foods retirement plan is a defined benefit pension plan.

In its SEC Form 10-K filing for the fiscal year ended December 31, 2014, the actuarial assumptions used for determining the 2014 net periodic benefit cost of the Dean Foods pension plan included the following:

1. A weighted average discount rate of 4.9 percent to discount future benefit costs to present value
2. Expected return on plan assets of 7 percent
3. A 4 percent rate of increase for employee compensation for the year[6]

**Table 1**
**Dean Foods Company**
**Funded Status of Pension Plans and Other Postretirement Benefit Liabilities**
**As of December 31, 2014 (thousands)**

| | U.S. Pension Plans | Postretirement Benefit Liabilities |
|---|---|---|
| Fair Value of Plan Assets | $289,526 | $0 |
| Projected Benefit Obligations | $345,766 | $39,126 |
| (Under)funded Status | ($56,240) | ($39,126) |

In its SEC Form 10-K filing for the fiscal year ended December 31, 2014, Dean Foods reported the funded status of its pension plans and other postretirement benefit plans. The postretirement benefits are primarily health care benefits provided for former employees.

As has happened with many large U.S. corporations, nearly 90 percent of the Dean Foods U.S. defined benefit pension plan obligations were frozen with regard to future participation or increases in projected benefit obligations.

On the effective date of the freeze, employees were transitioned to a retirement benefit based on the frozen pension benefit and a 401(k) defined contribution plan.[7]

Dean Foods reported its funded status on the 2014 SEC Form 10-K statement, as summarized in Table 1.[8]

As shown in Table 1, the Dean Foods U.S. pension plans were underfunded, and the amount of underfunding was $56.2 million at December 31, 2014. Its postretirement benefit liabilities were completely unfunded in the amount of $39.1 million.[9]

The combined level of underfunding of pension and postretirement benefit liabilities was approximately $95.3 million at December 31, 2014.

Dean Foods faces additional pension liabilities from various multiemployer pension plans in which it participates. As of year-end 2014, three of the four largest multiemployer plans in which Dean Foods participates were at least 80 percent funded, while one plan was less than 65 percent funded.

Dean Foods would face a withdrawal liability if it attempted to withdraw from any of these plans, but since it considered withdrawal to be very unlikely, Dean Foods did not indicate a potential withdrawal liability for any of the multiemployer pension plans.

Dean Foods makes the required annual contributions to the multiemployer pension plans, and did not indicate its withdrawal liabilities from these plans.[10]

Although Dean Foods clearly has some underfunding liability associated with these plans, the 2014 SEC Form 10-K statement did not provide sufficient information to determine a valuation adjustment related to the multiemployer plans.

## Valuation Adjustments for Underfunded Pension and Postretirement Liabilities

Once the funded status of pension and postretirement liabilities is known, the valuation analyst can determine the pension liability for valuation purposes.

Employer contributions to defined benefit pension plans are tax deductible, and investment earnings accumulated in pension plans are tax exempt.[11]

Due to the tax benefits to employers of contributions to pension plans for the benefit of their employees, the actual amount subtracted from a company's market value of invested capital in determining its equity value for valuation purposes is the underfunded pension liability net of tax, reflecting the tax savings to the company on lower pretax income after deducting pension contributions expense.

The tax rate utilized in the calculation should be the company's marginal income tax rate. Contributions to postretirement health care plans are also tax deductible for employers, and the postretirement benefit liability subtracted from a company's market value of invested capital should also be net of tax.

Multiplication of the amount of underfunding for pension plan and postretirement benefit obligations by one minus the marginal income tax rate results in the liability amount to be subtracted from a company's market value of invested capital.

Based on the Dean Foods underfunded pension and postretirement liability of $95.3 million, and assuming a marginal income tax rate of 35 percent, this would result in a $61.9 million pension and postretirement benefit liability, net of tax [$95.3 million × (1 – 0.35)].

The historical income statement of the subject company may be adjusted by removing the reported pension expense from the income statement, and substituting in its place the service cost and amortization of prior service cost, which are reported in the notes to the financial statements of the subject company.

The service cost and amortization of prior service cost represent the current value of future payments to retirees. The service cost represents the present value of retirement promises in a particular year, and prior service cost represents additional retroactive benefits to retirees due to amendments to a company's pension plan.

Other items of pension expense (interest cost, expected return on plan assets, and amortization of losses) concern the performance of plan assets as opposed to business operations, and may be adjusted out of a company's expenses.[12]

## Adjustments to Guideline Public Companies

In situations where a market approach is applied to a subject company with underfunded pension and postretirement liabilities, specifically the guideline publicly traded company method, appropriate adjustments for underfunded pension and postretirement liabilities of the guideline public companies should be made for earnings consistency across companies.

In this situation, the amount of underfunding, net of income tax at the marginal tax rate, should be treated like debt and added to the market value of equity, preferred stock, and interest-bearing debt in the development of each guideline company's market value of invested capital.

In this way, the invested capital multiples of the guideline companies are adjusted to account for underfunded pension liabilities in order to provide a consistent analysis.

Income statement adjustments, as described above, may also be made to the guideline public companies. These adjustments will affect a company's earnings-based pricing multiples, such as, earnings before interest, taxes, depreciation and amortization (EBITDA), EBIT, and other earnings measures.

## What about Overfunded Pension Plans?

Thus far we have discussed underfunded pension plans and their associated liabilities. What about overfunded pension plans? In spite of all the talk about pension deficits, there are some overfunded plans out there.

If we are subtracting the underfunded amount of pension plans as a liability, net of tax, in determining the market value of equity of a company, should we add back the amount of overfunding of pension plans, net of tax, to determine the market value of equity of a company with excess pension plan assets?

Although not often a factor in valuation engagements, valuation analysts may encounter situations where the value of pension plan assets exceeds the company's projected benefit obligation. In such cases, the value of excess pension plan assets may be added, net of tax, to determine a company's market value of equity.

Although excess pension plan assets generally belong to a company's shareholders, and not its pension plan beneficiaries, the potential to reclaim excess pension plan assets poses various issues for corporations.

Most importantly, (1) U.S. companies are subject to a 50 percent tax on excess assets withdrawn from pension funds, so the amount of overfunding which could potentially be added to equity value could be immediately reduced by 50 percent, and (2) companies would likely consider the negative repercussions of withdrawing funds from its pension plan as a strong disincentive to employees.

Since the 50 percent tax rate is really a penalty rate for reclaiming pension assets, it would generally only be applied in determining the value of an excess pension asset when valuing a company in liquidation or a company in the process of terminating its pension plan.

For going concerns, the tax rate applied to excess pension assets should be the subject company's marginal tax rate, since excess pension assets allow companies to lower the level of pension contributions in future years. Therefore, the dollar amount of excess pension assets added to a company's market value of equity for going concern businesses would be calculated as: [excess pension assets × (1 – marginal tax rate)].[14]

Although adverse tax consequences and potential reputational damage for reclaiming overfunded pension plan assets are likely to dissuade companies from reclaiming such assets, excess pension plan

assets should be considered in the business valuation process.

## Conclusion

Some may point out that a company's underfunded pension liability can, without further pension contributions by the company, be significantly reduced or even eliminated solely due to financial market gains over time and the resulting increase in value of the company's pension assets.

The next step in this line of thinking is to ignore pension liabilities in the business valuation process. This position is based on the assumption that a pension plan is quasi-perpetual and over time market gains may reduce or eliminate the amount of underfunding in a pension plan.

However, business valuation is a date-specific process. And, the magnitude of a company's underfunded (or overfunded) pension status can be directly considered as of the valuation date.

Additionally, a prolonged period of decline in the stock and bond markets could substantially increase the underfunded status of a pension plan. Due to the uncertainty regarding the future performance of stock and bond markets, it may be best not to assume as part of a valuation that the underfunded status of a company's pension obligations will somehow self-correct over time and can therefore be ignored.

Adjusting a company's market value of equity for underfunded pension and postretirement liabilities is typically done by determining the amount of underfunding, adjusting for tax benefits on pension contributions available to the corporation, and subtracting the underfunded pension liability, net of tax, in determining the market value of equity.

When applying a market approach to a subject company with underfunded pension and postretirement liabilities, guideline public company multiples should be adjusted to account for underfunded pension and postretirement liabilities.

Although pension plans are slowly fading away as companies continue to freeze pension plan obligations or terminate pension plans each year, the need to consider pension assets and liabilities as part of the business valuation process will continue for the foreseeable future.

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Notes:


1. "Frequently Asked Questions About Benefits—Retirement Question 14: What Are the Trends in U.S. Retirement Plans?," Employee Benefit Research Institute (www.ebri.org/publications/benfaq/index.cfm?fa=retfaq14).
2. Brendan McFarland, "Retirement in Transition for the Fortune 500: 1998 to 2013," *Towers Watson Insider* (September 2014): 1.
3. Aswath Damodaran, *Investment Valuation—Tools and Techniques for Determining the Value of Any Asset* (New York: John Wiley & Sons, 2012), 441.
4. Tim Koller, Marc Goedhart, and David Wessels, *Valuation—Measuring and Managing the Value of Companies*, 5th ed. (New York: John Wiley & Sons, 2010), 571.
5. Robert W. Ingram, *Financial Accounting: Information for Decisions*, 2nd ed. (Cincinnati: South-Western College Publishing, 1996), 386, 448.
6. Dean Foods Company Form 10-K for the fiscal year ended December 31, 2014, filed with the Securities and Exchange Commission on February 15, 2015, F-40.
7. Ibid.
8. Ibid., F-39.
9. Ibid., F-46.
10. Ibid., F-43, F-44.
11. Xuanjuan Chen, Tong Yu, and Ting Zhang, "What Drives Corporate Pension Plan Contributions: Moral Hazard or Tax Benefits?" *Financial Analysts Journal* 69, no. 4 (2013): 58.
12. Koller, Goedhart, and Wessels, *Valuation—Measuring and Managing the Value of Companies*, 571-574.
13. Aswath Damodaran, *Damodaran on Valuation*, 2d ed. (New York: John Wiley & Sons, 2006), 364.
14. Koller, Goedhart, and Wessels, *Valuation—Measuring and Managing the Value of Companies*, 573.


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