



Intricately Linked

Pensions and Corporate Financial Performance

Originally published by Towers Perrin

Intricately Linked: Pensions and Corporate Financial Performance

Managing defined benefit pension plans in the context of overall company financial performance is an increasingly dynamic challenge. The 2008 meltdown in global capital markets brought huge losses to the portfolios of company-sponsored pension plans, reducing their funded status to levels not seen in many years. These losses are creating significant increases in required pension plan contributions at a time when many companies are facing great difficulties in raising cash. In addition, these losses are generating large increases in pension expense and substantial reductions in shareholder equity when both corporate earnings and balance sheets are already suffering.

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Retirement Programs

Financial Implications

As this is occurring, the degree of scrutiny applied to the financial implications of retirement programs is on the rise. This increased scrutiny has led to an evolution in the funding and accounting rules for retirement plans, resulting in more market value-based approaches to measuring plan assets and liabilities, and a more direct link between a pension plan's funded status and the sponsoring company's financial statements. Meanwhile, fund managers have seen an evolution in investment thinking and products designed to help hedge against the risks of pension plans, adding to the opportunities and challenges of sound plan governance.

These changes complicate the choices companies must make in their approach to risk management. The big questions, then, for CFOs are: How do you plan to manage your organization's retirement programs in today's harsher and more demanding financial environment? What strategies can you deploy that will endure from one year to the next that will satisfy shareholders, senior management and employees while playing by the new funding and

accounting rules? Given today's extreme conditions, how do you balance short-term consequences with long-term strategies?

In answering these questions, CFOs will find that the outcomes of their benefit, funding, investment and accounting policies are far more interrelated than ever before. Having a well-thought-out approach that coordinates pension financial management with business performance has become more critical than ever.

To assist companies in navigating through these issues, Towers Perrin has developed this publication to update our 2003 guidebook, *Pensions and Corporate Financial Performance — Keeping Your Eye on the Ball*. This new edition reflects the many changes that have since occurred in the environment of pension plan management. In addition, an upcoming companion publication will delve into more detail in each of the policy areas discussed here, focusing on specific actions that can be taken in these areas to achieve policy goals.

Pension Risk in a Broader Financial Perspective

Valuations of pension liabilities are highly sensitive to short-term fluctuations in the capital markets and economic environment. This is because the measurement of plan liabilities for both funding and accounting is based on market interest rates. When market interest rates decline, liabilities increase, and when these interest rates rise, liabilities fall. Of course, plan asset values also fluctuate with market conditions, and the combination of these asset and liability movements can result in significant movements in a plan's funded status. This volatility can be challenging for corporate officers and directors who are focused on prudent balance sheet and cash-flow management as well as sustained earnings growth — as evidenced by the effect of the events of 2008. While pension plans represent long-term financial commitments, managing them must also recognize the short-term effect they have on a company's financial health.

The past two decades have seen dramatic swings in global capital markets. These swings have had significant implications for the funded status of pension plans. The 1990s were a period of high

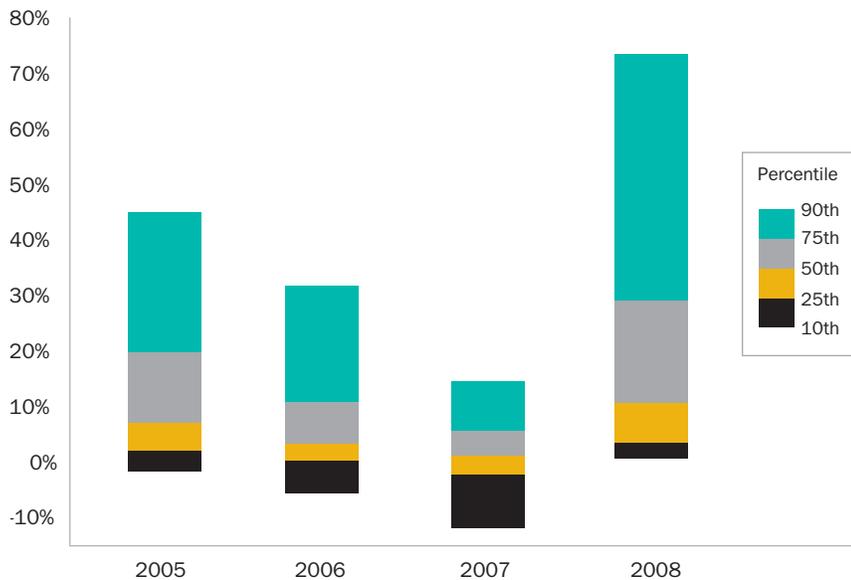
asset returns that created a surplus for many plans. The period from 2000 to 2002 saw the “perfect storm” of declines in both interest rates and equity values, resulting in a reduction or elimination of surplus. From 2003 to 2007, asset values rebounded and funded status improved somewhat, but not to the levels seen in 2000. The global economic crisis of 2008 that followed caused substantial declines in pension plan funded status, leaving most plans with the lowest funded ratios in many, many years. *Exhibit 1* illustrates the funded status pattern for a typical pension plan (invested approximately 60% in stocks and 40% in bonds) that started at a 94% funded level in 1990 and received contributions equal to the value of new benefit accruals throughout the period.

These capital market swings also affected contribution requirements. The robust returns of the 1990s created “contribution holidays” for many plans. These ended for some plans during the 2000-2002 downturn, but for many other plans the downturn just reduced surplus, and their contribution holidays continued for several more years. Since the 2003-2007 rebound did not, as a rule, improve funded status to the levels seen in 2000, comparatively few companies were in a

Exhibit 01. Funded Status



Exhibit 02. Unfunded Pension Liabilities at Year-End as a Percentage of Total Stockholder Equity



Source: Towers Perrin Retirement Financial Management Database

position to withstand the 2008 downturn without experiencing substantial increases in contribution requirements. In addition, the 2008 downturn occurred soon after the effective date of new market value-based funding rules — created through the Pension Protection Act (PPA) — which exacerbated the contribution increases. While Congress adopted some temporary funding relief to partially address this situation, the point remains that contribution fluctuations under the PPA can be large enough to materially affect business plans, and therefore a policy to monitor and manage these requirements is essential.

Capital planning may also be hampered because rating agencies may take into account large contributions needed to fund companies' pension plans. This could affect an organization's credit rating and make it more expensive to raise capital. In addition, increased demand for cash contributions to pension plans affects broader efforts to fund the business and pay for highly valued pay and benefit programs.

The decline in the funded status of pension plans has additional ramifications for sponsors' financial statements. At the end of 2008, the unexpected pension plan losses experienced during the year, adjusted for taxes, directly reduced shareholder equity. *Exhibit 2* illustrates the dramatic increase

in unfunded pension liabilities as a percentage of shareholder equity from the end of 2007 to the end of 2008 for 300 of the largest pension plan sponsors in the United States. In addition, pension expense will increase for years to come as the losses are gradually phased into the expense calculations.

Evolution in Pension Funding and Accounting

The PPA Created a Sea Change in Funding Rules and Policies

We'll now explore the new, more market value-based funding rules enacted by the PPA at a high level. More detail on these rules is contained in the Appendix. While the legislation was presented as a set of simplifications that would increase transparency and simultaneously bolster the funded status of plans, in practice, we are finding that it introduced new elements that make funding decisions much more complex for CFOs and others responsible for managing company-sponsored pension plans.

Broadly, the PPA's objective is to fully fund the present value of accrued benefits over seven years. This "funding target" is measured using interest rates reflecting recent market yields on high-quality corporate bonds.

Employers are required to contribute at least the cost of new benefit accruals plus a seven-year amortization of each year's unexpected change in unfunded benefit liability. These unfunded benefit liability changes can be created in many ways, including investment performance, changes in interest rates used to value the liabilities or plan changes. A plan's unfunded liability is determined by comparing its funding target with an asset value that is either the actual market value of the plan's assets or an alternate value that smooths asset returns over a period of up to 24 months.

If an employer contributes more than the minimum requirement, the excess can create a "credit balance" which, with some restrictions, can be used to offset minimum required contributions in future years.

Another important new consideration added by the PPA is benefit restrictions. The PPA requires that defined benefit pension plans that have not attained specific funded levels must make certain changes to their provisions, such as eliminating lump sum payments or ceasing benefit accruals. Sponsors can, but are not generally required to, make contributions to avoid these restrictions. Many sponsors will seek to avoid the employee relations issues associated with such changes and therefore will want to contribute to their plans to avoid these restrictions. Such a strategy would add to the already increased contribution volatility created by the PPA's funding rules, even though these contributions are not technically required. This is more than an academic issue, as the 2008 global economic crisis placed many plan sponsors in the position of choosing between making immediate large unplanned contributions to their plans or making immediate unplanned and undesirable changes to plan benefits. (More details on the benefit restriction rules are provided in the Appendix.)

While funding is one way to address benefit restrictions in both the near term and the longer term, plan sponsors will also want to consider adjusting investment and benefit policies over the longer term. Sponsors will also need to carefully consider communications around this issue because a PPA requirement for detailed annual funding notices will raise awareness about a plan's funded status and lead to many questions from participants.

The above discussion focuses on the rules in the United States; however, many countries have similar rules concerning the funding of pension promises.

FAS 158 Changed the Accounting Landscape

It's not just funding rules that have become more market value-based over time. For CFOs and others with major responsibilities for overseeing retirement programs, another big issue is the effect of FAS 158 (now ASC 715-30-35 in FASB Accounting Standards Codification) on the company's financial statements. This rule is part of a trend toward greater mark-to-market accounting. The most significant effect is that changes in a pension plan's funded status immediately affect the company's balance sheet. This is particularly noteworthy if the pension plan is large in comparison to the sponsor's other assets and liabilities. CFOs will need to consider the implications of balance sheet recognition of their plans' funded status as they set policy and monitor performance of their companies' pension plans.

“While funding is one way to address benefit restrictions in both the near term and the longer term, plan sponsors will also want to consider adjusting investment and benefit policies over the longer term.”

While the full effect of a change in funded status is immediately reflected on the company's balance sheet, seldom is all of the change immediately reflected on the company's income statement. To connect the change in funded status to a company's income statement, one must first divide this funded status change into expected and unexpected components. The expected change in a plan's funded status (excluding the change caused by sponsor contributions) is reflected immediately as pension cost. While the unexpected change is reflected in equity immediately, it is amortized into cost over time.

There are three components of the expected change in a plan's funded status. The first is service cost, which is the present value of benefits attributed to the current year of employee service. These new benefits increase the company's benefit obligation, thereby reducing the plan's funded status. The next two components taken together represent the expected change in the plan's funded status due to the passage of time. The benefit obligation grows with interest at a rate equal to the discount rate

used to value the obligation; this amount is called interest cost. The third component, which reduces pension cost, is the expected return on plan assets. The expected return on plan assets is calculated by applying an assumed rate of return on plan assets to the plan's market-related asset value — which can be market value or a smoothed value. Many companies use a smoothed value in measuring their expected return on plan assets in order to lessen the volatility of pension cost.

Unexpected changes in funded status are caused by gains and losses, assumption changes and plan changes that occur during the year. While some of these unexpected changes in the plan's funded status could be recognized in the income statement immediately, most companies choose to employ the accounting rules that allow a deferral of their income statement effect. When this is done, these unexpected funded status changes are reported in equity as deferred costs or income of the company until they are amortized over time to P&L as components of pension cost. (Details on the amortization process are included in the Appendix.) The amortization process affects the company's income statement, but does not affect the company's overall net worth, as the amortized amounts simply move from accumulated other comprehensive income (AOCI) to retained earnings. This process is often referred to as recycling.

Pension Plan Financial Management Basics

Now that we have reviewed the regulatory structure within which pension plans operate, let's turn to the financial management of those plans. The financial performance of your pension plan reflects management policies in four key areas: benefits, funding, investment and accounting. As noted earlier, the connections between these policy areas are tighter than ever due to the evolution in pension law and regulation.

Ideally, retirement program financial management policies will be coordinated to meet specific objectives set by management for the financial performance of the plans. Those objectives are typically expressed in terms of targeted funded levels, the level and volatility of costs and contributions, avoidance of benefit restrictions and other key financial metrics that have an effect on the company, the plan and its participants.

When setting the policies that affect the financial performance of pension plans, corporate officers and directors must balance a number of competing business needs. For example:

- Benefit policies (such as plan provisions that affect financial risks or the level of benefits provided) must take into account the role of the plan in the company's total rewards and workforce management strategies, the cost of the benefits and the financial risks associated with providing them through the plan. These policies should also consider the new legislated benefit restrictions based on the plan's funded status.

“The financial performance of your pension plan reflects management policies in four key areas: benefits, funding, investment and accounting.”

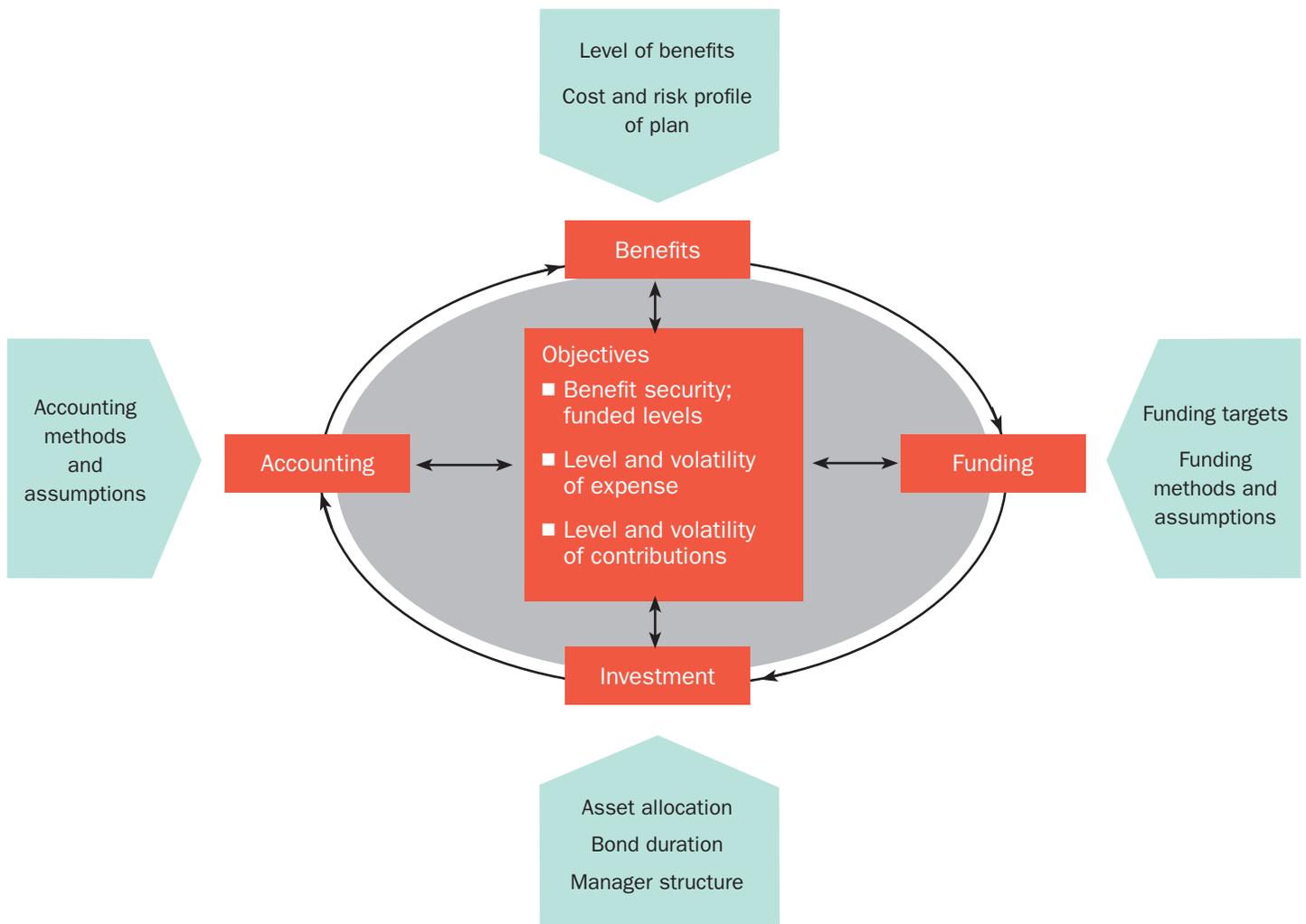
- Corporate leadership must balance the need for cash to fund benefits with the competing needs for cash for other operating and investing activities within the company when establishing targeted funding levels and setting the methods and assumptions used to determine the minimum funding requirements. When making these decisions, management should realize that, barring favorable experience, the obligations will need to be funded at some point. Decisions that result in lower current contributions can often lead to higher future contributions.
- The desired level and stability of the plan's funded status, required contributions and pension cost are the primary considerations when setting investment policies for plan assets. The allocation of funds among asset classes; the duration of assets invested in bonds; the use of leverage, swaps or other hedges; and the amount of active management and other aspects of your manager structure must all be set with these risks in mind.
- The methods and assumptions used to account for the plan make up an accounting policy that determines how plan costs are allocated over time. Companies often wish to reduce cost volatility and minimize expense — and these objectives often conflict.

It's critical to coordinate these policies so that the total financial performance of your pension plans can be managed to achieve the specific objectives set by management, such as those indicated in the figure below. Of course, once you have developed and implemented these policies, it's important to monitor your pension plan financial results to ensure you are achieving your objectives. Changing economic conditions, business needs, and laws and regulations may cause you to refine your objectives or make changes to your policies. In addition, you will typically want to look beyond the current reporting period to evaluate your plans' likely financial results under different future economic conditions — both under your current policies and various policy alternatives. That way, you will be better prepared to anticipate

issues that can arise under different economic conditions and to take appropriate actions. The value of modeling the effects of alternative policies under multiple economic futures, monitoring policy performance, and adapting current or implementing new approaches when appropriate has certainly been highlighted by the events of recent years.

Today more than ever, your investors expect more detailed information to help them evaluate your company's financial performance. Corporate financial officers should be prepared to provide that information and tell the company's "pension story" from a perspective that your key stakeholders can readily understand.

Pension Plan Financial Management Framework



Confronting the Tough Issues Head On

Ultimately, what happens to a company-sponsored pension plan affects not only the financial statements of the organization but also employees and other stakeholders. Sponsors should take account of this and decide how they are going to balance the relevant concerns. Cost, while important, has to be weighed against the ability to attract and retain employees, the interests of plan participants, their ability to save for retirement and how they perceive the value of the “deal” they have with the organization.

For example, Towers Perrin surveys reveal that employee engagement levels are linked to perceptions of a company’s leadership and, more specifically, the extent to which members of the workforce believe senior management is committed to their well-being. Leading organizations understand that retirement programs and, more specifically, benefit security, can play a role in favorably influencing employee perceptions of senior management and the overall organization. This is especially the case with older workers who often contribute skills critical to the organization’s success. Given these considerations, companies usually exercise great care in making changes to retirement programs.

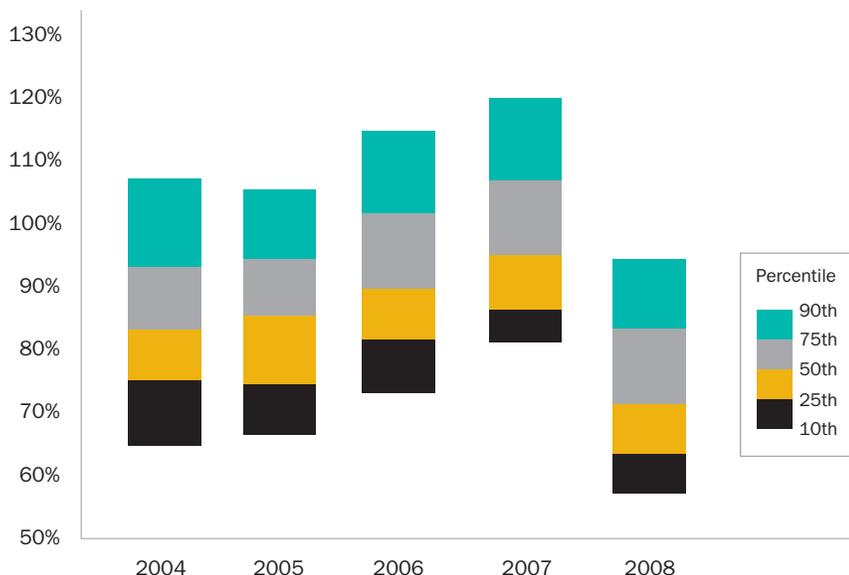
Here’s a checklist of relevant issues that come into play in terms of human capital and financial considerations.

Benefit restrictions. The PPA seeks to prevent the erosion of benefit security in employer-sponsored pension plans by triggering benefit restrictions when the funded status drops below specific levels. Thus, companies must be careful to avoid unintended consequences to the workforce when managing their pension plans and making decisions that affect funding levels.

Benefit security. Many large organizations continue to sponsor defined benefit pension plans that play an important role in their total rewards offerings. For their part, employees continue to highly value retirement benefits. In fact, benefit security has become even more important to employees in the wake of the 2008 meltdown in financial markets and the losses many experienced in their 401(k) plans.

Possible cash calls. As shown in *Exhibit 3*, the funded status of pension plans has declined markedly in 2008. This reduction in funded status raises a number of key financial questions for virtually any employer. Should contributions of more than the required amounts be considered? Will there be any effect on credit ratings or borrowing costs? To what extent will the company’s ability to finance the business be affected? These are also questions that shareholders and the board of directors are likely to ask.

Exhibit 03. Year-End Pension Funded Status



Source: Towers Perrin Retirement Financial Management Database

Balance sheet strength. As we have discussed, any change in a pension plan's funded status immediately affects the company's balance sheet, including its equity. CFOs will want to consider ways to manage balance sheet fluctuations through their benefit and investment policies, keeping in mind that decisions in one year can have repercussions in subsequent years.

Income statement implications. Companies often have competing objectives of minimizing pension cost and reducing variability in that cost. Because of recent events, most companies will find their ability to achieve either of these pension cost objectives severely tested in the coming years.

Surplus emergence. Hard as it may be to envision in the wake of 2008, sponsors who study the downstream financial effect of the new funding rules will often find that their plans have significant chances of developing surplus in the future. This surplus will be caused by investment strategies designed to achieve returns in excess of the interest rates used to value the plan obligations, since the PPA rules are designed to fully fund the plan liabilities measured on these rates. The potential development of this surplus and the difficulties in tapping it for other purposes will likely become an increasing factor in both funding and investment strategies.

Risk and reward: the fundamental choice. The financial crisis that struck in 2008 has delivered many harsh lessons about taking risk — both for companies and individuals. For organizations with retirement programs, there is clearly a renewed awareness of the difficult challenges associated with trying to strike an appropriate balance between risk and reward.

Corporations are increasingly measuring pension risk in terms of the level and volatility of funded status, as this links directly to company financial statements. Most are finding that the risks associated with low funded status are asymmetrical to the rewards associated with high funded status.

Low funded status brings with it sudden and large contribution requirements, benefit restrictions that are potentially disruptive to the workforce, high costs and sudden reductions to shareholder equity. High funded status can often lead to surplus assets, with limited ability to use them on a tax-effective

“For organizations with retirement programs, there is clearly a renewed awareness of the difficult challenges associated with trying to strike an appropriate balance between risk and reward.”

basis, as well as balance sheet and income statement improvements that may be devalued by some users of the financial statements.

The current financial environment and the asymmetrical relationship between pension risk and reward make risk management particularly challenging. The need for comprehensive and thorough risk management strategy has never been greater.

This reference guide has presented a high-level overview of the key issues, recent trends and essential financial management framework for effectively managing the financial performance of your company's pension plans. The information in the Appendix provides a more detailed explanation of the rules that govern pension funding and accounting. We hope this guide offers you added insights in assessing the effect of your pension plans on the financial performance of your company — and helps you better meet the information needs and expectations of your key stakeholders. An upcoming companion piece will delve into more detail in each of the policy areas discussed here, focusing on specific actions that can be taken in these areas to achieve policy goals.

Appendix

The Nuts and Bolts of Pension Funding and Accounting

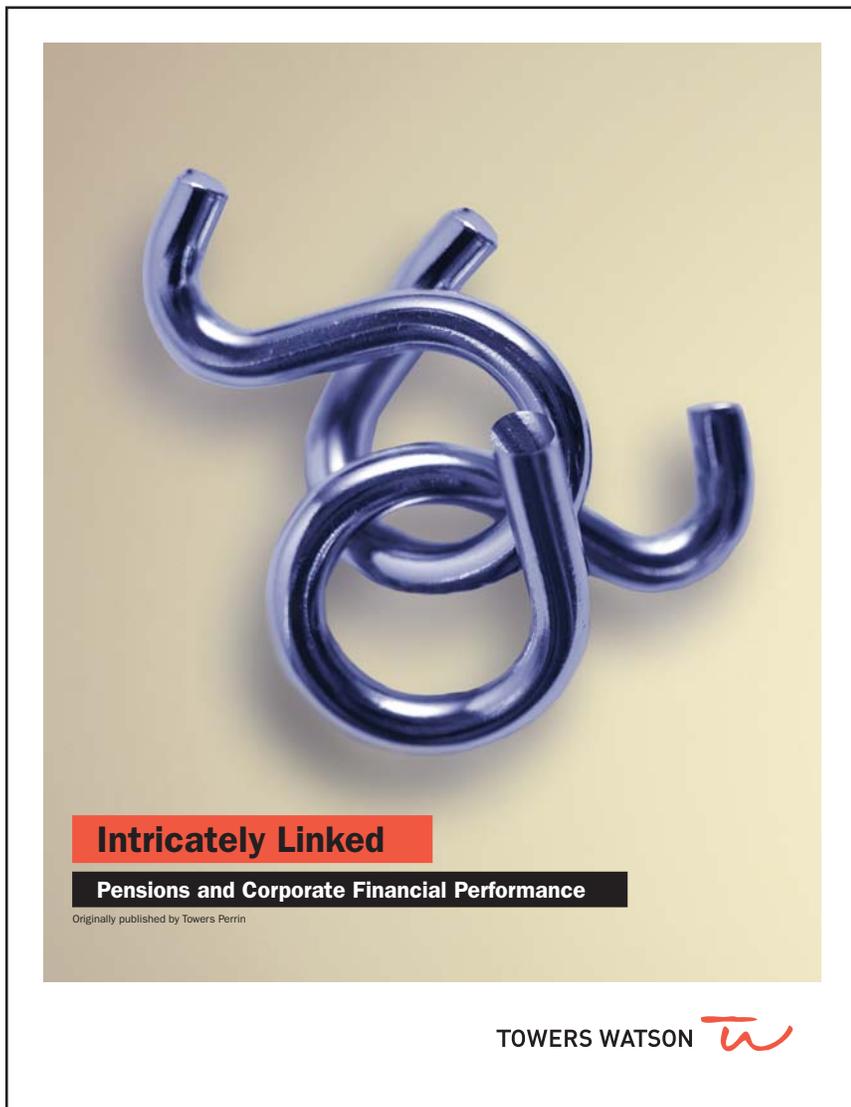


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Financial statements are intended to provide investors, creditors, analysts and others with information about a company's financial position (balance sheet), operating results (income statement), changes in equity and changes in cash position (cash flows). A pension plan's financial performance affects all four.

Defined benefit pension accounting is governed by FASB ASC 715-30-35. Defined benefit pension plan funding, on the other hand, is governed by tax and labor laws, most prominently the PPA.

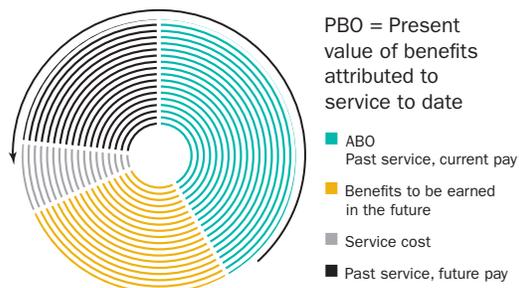
The Underpinnings of Pension Accounting

Simply put, pension benefits are a form of deferred compensation. In accounting for deferred compensation, the plan sponsor is to:

- estimate the amounts to be paid out in the future (future benefit payments)
- discount those future payments to reflect the time value of money, typically using interest rates based on yields available on corporate bonds of Aa or better quality as of the company's financial statement date
- allocate the resulting amount — the cost of the deferred compensation — over the periods of service required of the employees in exchange for the promise of those future payments.

In applying accrual accounting to pensions, the cost of the future pension benefits is recognized as the employees render service to the company. And, at least notionally, the company's benefit obligation for an employee is fully accrued when that employee retires.

Appendix Exhibit 01. Present Value of Projected Future Benefits



Pension Benefit Obligations

U.S. GAAP requires companies to use two measures for pension accounting: the projected benefit obligation (PBO) and the accumulated benefit obligation (ABO). The PBO is measured as the actuarial present value of benefits attributed to service to date, taking into account expected future pay levels (when the pension benefit is based on future compensation amounts, as with a final-average-pay plan). The ABO is measured in the same fashion, but is based on current pay levels rather than projected pay levels.

The PBO is used to determine the plan's funded status (that is, the PBO as compared with the market value of plan assets) that appears on the company's balance sheet and the pension cost that flows through its income statement. The ABO played a more prominent role prior to FAS 158 but is now a measure that is only disclosed in the notes to the financial statements. It does not affect the company's balance sheet or the company's income statement.

Determining Annual Pension Cost

Five components make up the annual cost — referred to as the net periodic pension cost — of a defined benefit pension plan. The components are:

- service cost
- interest cost
- expected return on plan assets
- amortization of prior service cost
- amortization of unrecognized net gain or loss.

The first three of these components measure the expected growth in the PBO and plan assets from the beginning of the year to the end of the year. Taken together, they represent the expected change in funded status that will occur during the year, disregarding contributions. The last two measure the phasing in of the effects of past events that have not yet been recognized in the income statement.

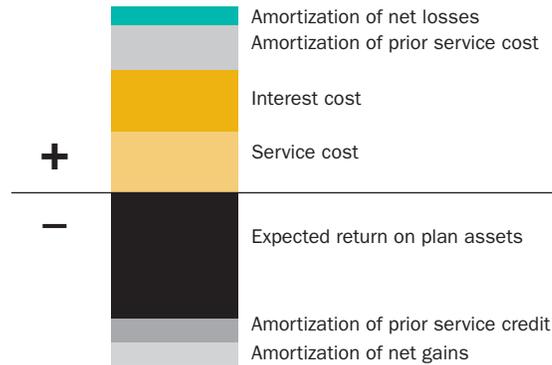
Service cost is the increase in the PBO due to employee service in the current year — the present value of benefits attributed to service in the current year.

Interest cost measures the increase in the PBO during the year due to the time value of money.

The expected return on plan assets (EROA) is intended to measure the expected increase in plan assets during the year due to investment returns. This would seem to be a fairly straightforward estimate — simply multiply the value of plan assets at the beginning of the year by an assumed rate of return. However, this is one of the areas where pension accounting gets a bit confusing, in two respects.

- First, the EROA is calculated by applying an expected rate of return to the market-related value of assets, even though the expected rate of return is based on the market value of assets. The market-related value of assets may be either market value or a calculated value that recognizes changes in the market value of plan assets over a period of not more than five years. In a period of investment losses, the calculated asset value will be greater than the market value of the assets, while the opposite is true in a period of significant asset gains.

Appendix Exhibit 02. Net Periodic Pension Cost



- Second, net periodic cost is reduced by the expected — rather than the actual — return on plan assets for the period. As a result, the EROA is always a pension income item even in periods when the plan experiences asset losses. The difference between the actual return on plan assets and the EROA is included in the plan's unrecognized net gain or loss. This gain or loss is immediately recognized on the balance sheet but is typically deferred for income statement purposes, as discussed below.

Prior service cost (or credit) is the increase or decrease in the PBO arising from a retroactive plan amendment. It is generally amortized over employees' average future years of service. Gains and losses arise from experience, including asset returns, different from what had been assumed, and from changes in assumptions. U.S. GAAP allows a choice between recognizing gains and losses immediately or on a delayed basis. In fact, employers may choose to amortize only the accumulated unrecognized net gain or loss (net of the difference, if any, between the market-related value of assets and the actual market value of plan assets) falling outside a corridor that can be as large as plus or minus 10% of the greater of the PBO or the market-related value of plan assets. Amounts falling outside the corridor are generally amortized over employees' average future years of service. (Most U.S. employers have chosen some form of delayed recognition of gains and losses.)

Beyond the rules discussed above, there are also special rules that apply when certain events occur — such as the settlement of plan obligations, reductions in force, plan curtailments, one-time termination benefits, and acquisitions and divestitures. Generally, these rules cause accelerated recognition of costs previously deferred and require immediate recognition of one-time termination benefits. Details of the accounting for these events are beyond the scope of this paper.

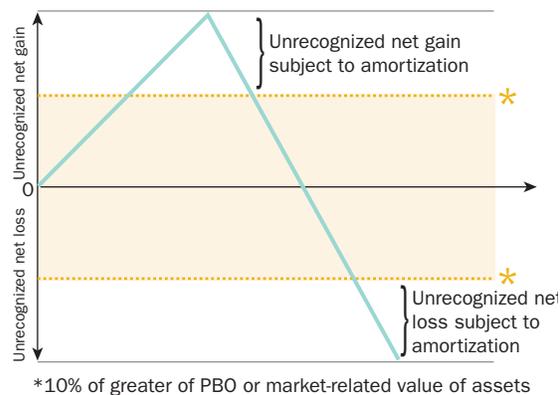
The Balance Sheet and Recycling

A company recognizes an asset or liability on the balance sheet equal to the funded status of the plan. However, as discussed above, the effect of gains and losses, assumption changes and plan changes that contribute to this funded status are almost never immediately recognized on the income statement. Such amounts are typically recognized on the balance sheet through other comprehensive income (OCI) as deferred cost or income. Over time, these deferred amounts are amortized to P&L as described above. While the amortization of these amounts affects the income statement, the amortization does not affect the company's net worth, as the amortized amounts simply move from accumulated other comprehensive income (AOCI) to retained earnings. This process is often referred to as recycling.

Let's look at a hypothetical example to see the connections between the plan's financial statements and the company's financial statements. In our example, the company sponsors a plan with an initial funded position of a \$500 deficit (\$9,000 in benefit obligations less plan assets at market value of \$8,500). During the year, the plan's funded position declined by \$2,000, so that the year-end deficit was \$2,500. The sources of this change and their effect on the company's financial statements are as follows:

- **Expected reduction of funded status of \$150, equal to service cost + interest cost – expected return on assets.** This amount is part of the company's pension cost for the year and is recognized as an increase in the company's liabilities and a reduction in P&L, thereby reducing retained earnings (after tax adjustments).

Appendix Exhibit 03. "Corridor" For Gain/Loss Recognition



- **A loss of \$2,050 due to unfavorable experience and changes in assumptions.** This amount is immediately recognized as an increase in the company's liabilities and a reduction in OCI, resulting in a decrease in AOCI (after tax adjustments). While this amount does not immediately flow through the income statement, it will increase pension cost as it is amortized.
- **A plan improvement of \$100 at the end of the year.** This amount is also recognized on the company's balance sheet as an increase in liabilities and a reduction in OCI, resulting in a decrease in AOCI (after tax adjustments). As prior service cost, this increase in plan obligations will be amortized beginning in the subsequent year, increasing pension cost (with a corresponding increase in OCI and AOCI).
- **The sponsor contributed \$300 to the plan.** This amount increases the plan's assets and thereby reduces its deficit. However, the contribution does not impact the company's equity, as cash was reduced in order to make the contribution. Because the contributions increased plan assets, they will increase the subsequent year's EROA, thereby reducing pension cost. However, the sponsor may incur a cost of capital or forgone investments as a result of having made the contribution, and this will have an offsetting effect on the sponsor's income statement.

FYE Company Balance Sheet			
Assets		Liabilities and Equity	
Pension surplus	N/A	Pension deficit	2,500
Other assets	12,000	Other liabilities	8,000
Total assets	12,000	Total liabilities	10,500
		Other	1,000
		Retained earnings	2,500
		Accumulated other comprehensive income	(2,000)
		Net worth	1,500

Plan Income Statement	
Income (cost) attributable to expected funded status change:	
Expected return on assets	650
Interest cost	(550)
Service cost	(250)
Total	(150)
Income (cost) for amortization of unexpected funded status changes	50
Total pension income (cost)	(100)

Change in Plan Funded Status During Year			
Assets		Liabilities	
Market value – BOY	8,500	PBO – BOY	9,000
Change	(1,500)	Change	500
Market value – EOY	7,000	PBO – EOY	9,500
		Funded status	
		Funded status – EOY	(2,500)

Impact on Company Financial Statements			
	Income Statement	Net Worth	Cash-Flow Statement
Expected funded status change	(150)	(150)	–
Other items affecting earnings	50	0	–
Subtotal	(100)	(150)	–
Gain/(loss)	–	(2,050)	–
Employer contributions	–	–	(300)
Prior service cost	–	(100)	–
Total	(100)	(2,300)	(300)

Note: Amounts do not reflect tax adjustments.

The company also had income of \$50 related to the amortization of deferred amounts from prior years. In addition to the above effects, the illustration shows that these amortizations do not affect net worth, as they increase retained earnings and reduce AOCI by identical amounts.

Contribution Requirements

Clearly, qualified pension plans enjoy some significant tax advantages:

- Employer contributions are tax-deductible.
- The trust's investment earnings are not taxed.
- Employee benefits are not taxed until paid.

In exchange for these tax advantages, the amount that companies may — and must — contribute to defined benefit pension plans is heavily regulated.

Contribution requirements are governed primarily by the PPA, which promulgates both a minimum required contribution and a maximum deductible contribution. The PPA substantially increased maximum deductible contributions to a point where, considering recent declines in asset values, most companies can deduct any contribution amount they would realistically consider making.

The minimum required contribution consists of two elements — normal cost and an amortization of the excess of the plan's liability over its assets (the unfunded liability). As explained below, the contribution calculation has many similarities to the cost calculation, although they clearly produce different results.

The benefit liability is called the funding target and is equal to the present value of benefits accrued under the plan formula based on service and pay to date. This measurement is similar to the ABO measurement described in the accounting section. The normal cost is equal to the present value of the benefits to be earned in the current year.

The liability definition has some differences from the ABO (for example, certain ancillary benefits are treated differently). More importantly, the interest rate used to measure the liability for funding calculations is quite different from that used for the ABO. First, the reference point for establishing the funding interest rate includes yields available on A-, Aa- and Aaa-rated corporate bonds, while the ABO calculation generally cannot reflect A-rated corporate bonds. Second, while the ABO is based on a rate reflecting yields on the sponsor's fiscal year-end



date, the funding liability is based on an interest rate reflecting an average of yields over one of two alternate periods (as chosen by the sponsor):

- the most recent month ending before the beginning of the plan year
- the 24 months ending with any of the most recent five months prior to the beginning of the plan year.

Similar to accounting, the asset value used in determining the unfunded liability can either be market value or a calculated value that recognizes changes in the market value of plan assets over a period of not more than three years. However, the calculated value can not differ from market value by more than 10%.

Each year's new layer of unfunded liability, if any, is amortized over a seven-year period. In rare instances where a company has obtained waivers of required contributions in the past, there is a third element to the minimum required contribution, which is the amortization of such waivers.

If a plan's assets exceed the funding target, the plan is in surplus. In this case, the minimum required contribution would be the normal cost reduced by any surplus.

If a company contributes more than the minimum required amount in a year, it can elect to establish the excess amount as a "credit balance." This amount will be adjusted annually by the rate of investment return on the plan assets and can be used to satisfy contribution requirements in future

years. However, a credit balance can not be used in this manner if the plan is less than 80% funded. In addition, as a general rule, the credit balance is subtracted from the asset value used in calculating the plan's unfunded liabilities that are subject to amortization.

The PPA introduced many complexities in the form of exceptions, transition arrangements and phase-ins — in part to ease the effect of moving to the new rules. These complexities have been ignored in the description above for the purpose of simplicity and because they will become less relevant over time.

Benefit Restrictions

The PPA also introduced restrictions on benefits for defined benefit pension plans that are funded below certain levels. These restrictions are intended to increase the likelihood that promised benefits will be paid by preventing the further erosion of funded status once a plan falls below these funded levels. The restrictions are as follows:

- Plans less than 60% funded must cease benefit accruals, are prohibited from paying lump sums and cannot provide shutdown benefits beyond those already being paid (shutdown benefits are plan provisions that are triggered by certain events, such as a shutdown of a plant). Sponsors of such plans are generally prohibited from amending the plan to increase benefits.

- Plans that are between 60% and 80% funded are limited in the amount of lump sums they are permitted to pay. Sponsors of such plans are generally prohibited from amending the plan to increase benefits.

The onset of these restrictions, or even the possibility of their onset, could be very disruptive to employees and to plan administration. Moreover, some companies will want to develop a strategy for addressing such potential restrictions, including what to say to employees and when to say it. As an example, employee speculation regarding potential elimination of lump sum payments could encourage employees who would otherwise remain employed to retire, triggering unplanned cash payouts that could amount to millions of dollars for large organizations and creating the need to replace departed talent. Companies will have to use good judgment in communicating, as competing interests often exist — keeping participants informed, avoiding participant speculation, achieving workforce management plans and fulfilling fiduciary obligations.

We have found that many companies are considering a funding policy of contributing the amount necessary to avoid benefit restrictions, even if this amount exceeds the minimum funding requirement,

subject to availability of the cash required to do so. Because of the tight time frames required by the PPA, this often means funding to a level 10% higher than the thresholds described above (e.g., to 70% or 90% rather than to 60% or 80%). However, the global economic crisis of 2008 may severely test the ability of plan sponsors to follow through on this intention, as the contributions required to achieve this goal must be made quickly, and the amounts can be very large.

Consider, by way of an example, a company that has seen its plan's funded level drop to 64%, making it subject to restrictions on lump sum distributions and other PPA limits. Under minimum funding rules, this company would normally amortize unfunded liabilities over seven years, contributing about 6% of total plan liabilities plus normal cost, to gradually rebuild plan funding levels. However, if it wished to avoid benefit restrictions, the company would have to contribute an amount equal to 16% of the benefit liability immediately to reach an 80% funding level. In such circumstances, extreme volatility in contribution amounts can wreak havoc on a company's cash planning process, perhaps at an inopportune time.

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