

# **Changes in Accounting Practices Will Drive Pension Paradigm Shift**

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## **Pension Research Council**

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### Abstract

Recent events have prompted a growing awareness of the need for internationally comparable pension accounting standards. This chapter examines recent and anticipated changes in worldwide accounting practices, and our focus is on the issue of whether pension accounting standards are consistent with the economics of pension finance. We examine trends toward convergence and place particular emphasis on the movement to fair value accounting standards. We also analyze potential impacts of likely accounting changes and transition rules on pension funding in the US and other countries.

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The long bull market for equities in the 1990s permitted many firms with defined benefit (DB) pension funds to dramatically scale back, and in many cases even eliminate, required annual contributions to these plans. This occurred because equity allocations in the pension trusts grew so significantly, as to more than keep pace with growth in plan liabilities. In short, the stock market did all of their heavy lifting for them. Some firms, in fact, were able to turn their pension plans into profit centers that contributed in a non-trivial way to the firms' quarterly income growth. As we shall show below, especially in the United States but to some extent in Europe as well, the accounting rules for pension plan asset allocation featured an odd disconnect insofar as risk and return were concerned, which permitted heavy equity allocations to pension plans.

This phase in pension profitability came to an abrupt end with the bursting of the stock market bubble and the onset of the bear market in March 2000. Making matters worse, interest rates then fell sharply, thus boosting the present value of DB pension liabilities. Erosion in DB plan funding status was sharp and dramatic. For firms in the S&P 500, approximately 70 percent of which offered DB plans, these plans were, in aggregate, roughly \$300 billion overfunded in 1999, the last full year of the bull market (Morgan Stanley, 2003). By mid-2003, analysts estimated that DB plans in the S&P 500 were underfunded by \$340 billion. Furthermore, many of the S&P 500 firms have a relatively older workforce, as well as large numbers of annuitants, and they are rapidly approaching the day when they will begin paying out large pension cash

flows on a sustained basis. This abrupt shift in DB plan funding status raises the question of whether pension accounting rules are consistent with the principles of pension finance.

This chapter examines proposed changes in U.S. and international pension accounting standards and the rationales for such changes. One finding is that convergence is on the way, and this is probably a good thing in terms of fundamental principles of finance though the journey could be a bumpy one. Another finding is that convergence will probably change the way pension investments are managed. Plan sponsors must become more aware of these changes in the accounting arena and the impact they will have on pension as well as corporate finance.

### **Setting the Rules for Pension Accounting**

In the US, the Financial Accounting Standards Board (FASB) is the designated organization in the private sector that determines standards of financial accounting and reporting. The standards set by FASB are officially recognized as authoritative by the Securities and Exchange Commission (SEC) for all firms listed on US exchanges. Officially, the SEC has the authority to override FASB and establish standards, but it has been SEC practice to rely on the private sector for standard setting. One of the missions of FASB is to keep standards current to reflect changes in the economic environment, and at any given time a dozen or more projects may be underway to improve and update standards, of which several may be on convergence-related topics. For example, the recently-released SFAS 132, *Employers' Disclosures about Pensions and Other Postretirement Benefits*, was motivated partly with convergence in mind, partly by an awareness that the existing pension accounting framework was antiquated, and

partly in response to concerns expressed by users of financial statements about the need for more and clearer information.

The parallel private-sector standard-setting body in the UK is the Accounting Standards Board (ASB). At present, it is leading a movement to fair value accounting standards, with the intention of serving as a global model. In FRS 17 *Retirement Benefits*, the ASB (2000:6) summed up key objectives in this area:

- Financial statements should reflect at fair value the assets and liabilities arising from an employer's retirement benefit obligations and any related funding;
- The operating costs of providing retirement benefits to employees should be recognized in the accounting period(s) in which the benefits are earned by the employees, and the related finance costs and any other changes in value of the assets and liabilities are recognized in the accounting periods in which they arise; and
- The financial statements should contain adequate disclosure of the cost of providing retirement benefits and the related gains, losses, assets and liabilities.

The International Accounting Standards Board (IASB) is an independent, privately funded standard-setter based in London, whose mission is to develop a single set of high quality, understandable, and enforceable global accounting standards. The IASB cooperates with national standard-setters such as FASB to achieve convergence around the world. As we will see, standards for retirement benefits developed by the IASB bear the influence of ASB, with certain Continental European influences as well. The standards also show the influence of the new disclosures issues by FASB.

## **Pension Accounting in the United States**

The main reason that pension accounting rules are so critically important in the DB context is that these plans have very long time horizons, both with regard to the accumulation and the payout phases. An employer sponsoring a DB plan is not only responsible for providing sufficient cash flows to meet not only this year's service and interest contributions, but also he must meet obligations at far distant points in time. Consequently, for funding purposes, actuarial projections must be made over long time horizons involving such factors as future mortality experience and assumptions regarding asset returns.

From 1986 through 2003, the prevailing US standard for pension accounting was SFAS 87. This embodied a smoothing methodology to dampen fluctuations in pension assets and liabilities from one year to the next. Under SFAS 87, liabilities were essentially treated as fixed-income instruments and discounted at a specified long-term interest rate. There were a variety of rules governing permissible actuarial assumptions when measuring a plan's accumulated liabilities. It is important to note, however, that the discount rate used to measure plan liabilities never depended on the plan's participant demographic structure. That is to say, the rules insisted that the proper discount rate was invariant to expected cash flows actually payable by DB plan sponsors. For example, in the case of an old-line industrial firm with many workers nearing retirement age, the DB plan would face the prospect of having to pay out large sums to these workers as they began to retire in large numbers. Finance experts would have recommended that these plan liabilities should be discounted with a set of interest rates that matched the timing of required cash flows. But SFAS 87 required a single interest rate unrelated to the place on the

yield curve that a plan sponsor might need to discount benefit payments using finance methodology.

SFAS 87 also required that the projected unit credit method (PUC) be used to measure plan liabilities. The PUC takes both present-day benefit accruals and their likely future values into account, in addition to benefits earned by vested terminated employees.<sup>1</sup> Given the lack of portability in DB plans, this last can constitute a significant portion of the total obligation. The accumulated benefit obligation is the present value of benefits accrued to date, by each vested employee in the plan at the start of each year. An additional minimum liability must be recognized if the accumulated benefit obligation exceeds the fair value of plan assets. The present value of benefits accrued by employees during the course of the year is referred to as the plan's service or normal cost. Service cost can be amortized over a period of several years. The present value of the liabilities of the plan at the beginning of the year multiplied by the plan's discount rate is referred to as the interest cost of the plan. The interest cost is the cost of financing the plan for a year. Future liabilities which long-term employees in the plan are expected to earn is called the projected benefit obligation (PBO); this is measured as the actuarial present value of benefits earned by an employee under the pension benefit formula to a certain date. This is computed using assumptions about future compensation levels, and it also takes into consideration the design of the pension benefit formula (i.e. final-pay, final-average-pay, or career-average-pay plans).

Under the Employee Retirement Income Security Act (ERISA) of 1974, benefits earned in corporate DB plans in the past may not be changed. Nevertheless, it is possible to change the formula for future benefits, an outcome that sometimes produces tension between employees and employers. This is particularly true with a DB plan that is back-loaded in its benefit formula.

Back-loading means that a high percentage of the DB pension value accrues during the last few years of employment.<sup>2</sup> The fact that future benefits can be changed of course implies that the PBO is not an ironclad measure of total plan liabilities. Instead, the measure will vary from firm to firm, and it depends on such factors as union agreements, whether the plan is part of a multi-employer arrangement, the funding status of the plan, and so on.<sup>3</sup>

In the summer of 2003, the Financial Accounting Standards Board (FASB) released an Exposure Draft of Statement 132. This was part of a project with the International Accounting Standards Board, motivated by widespread dissatisfaction with US pension accounting. After receiving comments, FASB moved with unaccustomed speed to issue the final version of SFAS 132 in December 2003. During deliberations, the Board considered but rejected requiring additional disclosures that would have enabled users of financial statements obtain a better understanding of the timing of cash flows associated with the demographic structure of DB pension plans. Most importantly, such a requirement would have permitted analysts to assess whether a plan's portfolio of assets matched its liabilities in terms of duration. This information could be helpful in formulating assessments of a firm's liability structure and the magnitude of cash flows payable over time. Duration disclosures could also help those seeking to conduct sensitivity analysis and test key assumptions about the firm's asset management strategies and stress-test the firm's liability immunization strategy. Unfortunately the FASB eventually excluded these requirements from the final Statement.

Under the previous versions of SFAS 87 and 132 (in effect from 1986-2003), a single rate of return assumption was used for accounting for plan assets, and returns were smoothed over a period of years. This had the very powerful effect of making actual volatility virtually unrelated to the rate of return assumption selected by the plan sponsor. Further, during that period, plan



sponsors were not required to disclose volatility assumptions for asset returns. As a result, the accounting rules embedded a strong pro-equity bias; some argue that pension assets were managed with such a “tilt” that it appeared as if they had a beta of zero in financial terms (Gold, 2001; Ambachtsheer, this volume).

It is our contention that the accounting rules explain why the equity share in pension portfolios has remained so high for the past several decades, despite changes that should have encouraged a shift to fixed income investment to better match changes in the liability structure (particularly demographic aging). These rules produced a situation where pension returns were decoupled from pension risks. Anticipated returns could be booked on the income statement today, but the risks could be smoothed on the balance sheet over a period of several years. This led some to raise anticipated return assumptions, boost the share of the portfolio devoted to equities, and “hope for the best.” This strategy worked as long as the market continued to defy gravity during the bull market experienced in the US over the 1990s. Eventually, however, the bubble burst and analysts undertook more detailed examinations of balance sheets. At that time, the smoothing strategy was recognized as problematic and worse: indeed when the market fell for three straight years post-2000, the smoothing strategy was revealed to have a built-in negative reinforcement mechanism. DB plans that appeared comfortably overfunded in 1999 became dramatically underfunded by 2003, and now they face the prospect of many years of deficit-reduction contributions.

Several authors have recently characterized the traditional DB accounting system as one which encouraged an “opaque” model of asset allocation (Gold, 2001; Coronado and Sharpe, 2003). Another way to frame the debate is to say that during a bull market, users of financial statements tended to focus more on firm income statements and less on the footnotes. But when

times grow difficult and firms are more likely to be in distress, analysts focus more heavily on the footnotes and the balance sheet. Coronado and Sharpe (2003) confirm this hypothesis empirically, finding that users of financial statements used pension accrual data from income statements rather than information regarding the market value of the DB plan assets and liabilities reported in the footnotes. In a related study, Amir and Benartzi (1997) found that firms raised their fixed-income allocations between 1988-1994 to avoid recognizing additional minimum DB plan liabilities. In addition, they found that plans with high proportions of younger workers had higher equity weightings in their plan portfolios.

Another surprising fact is that DB plan asset allocation patterns have been relatively invariant over the last several years, despite repeated and sometimes violent market shocks. Asset allocations remained quite stable despite the market bubble in which standard measures of valuation such as price to book and price/equity ratios were seen by many as 'otherworldly'. And despite the now-extended bear market for equities and strong bull market in at least some sections of the fixed-income market, asset allocations still remained quite stable. As a result, DB plan funding deteriorated dramatically and the duration of their liabilities shortened as well.

One explanation for the puzzle of the stability of DB plan asset allocation may be the fact that senior plan sponsors have strong incentives to argue the case for equities. For instance, a chief financial officer who reduced his plan's equity weighing would likely have to boost plan contributions indefinitely. This CFO would have to report to the CEO and Board that not only would next quarter's earnings would be reduced, but also earnings over more reporting horizons than the length of the CFO's contract. Perhaps a CFO with great credibility could escape with his stock price intact, but most would anticipate a negative market reaction. This reality discourages the incentive to reduce equity allocations despite changing circumstances.

Instead of requiring disclosure of the expected rate of return by individual asset category, the revised SFAS 132 requires only a narrative description of the investment strategies employed by the DB plans. FASB now requires only an explanation of the basis used to determine the overall expected rate of return on assets, but it did not specify which significant factors should be included when determining the long-term rate of return on assets assumption. The Board did say, however, that the disclosure should explain the general approach taken, which historical data were used in forming the long-term rate of return assumption, and information on factors as whether adjustments were made to historical data. As a result, assumptions can still vary from one plan sponsor to the next.

### **Pension Accounting in the United Kingdom**

The UK moved to the forefront of the fair value accounting movement in 2000, when the UK Accounting Standards Board issued Financial Reporting Standard (FRS) 17. In a nutshell, fair value approach to accounting represents a conscious effort to move away from smoothing techniques, toward the use of market prices to value assets and liabilities.

The evolution of FRS 17 indicated an important shift within the UK actuarial community regarding the proper way to measure DB plan assets and liabilities. Initially, actuaries and the ASB were opposed to fair valuation of plan assets, preferring instead the more traditional actuarial valuation approach. By the end of the decade, however, it appeared clear that the actuarial approach to assets valuation would be viewed as weak both inside Europe and outside, and would probably not be adopted by other standard-setters. As a result, they moved to DB plan market valuation, and in so doing, they went a step farther than did the US with SFAS 87.

For instance, under the US approach, plan asset values can still be smoothed over a period of up to five years. In the UK, under FRS 17, gains and losses must be immediately recognized.

The ASB also indicated a strong preference for market valuation of DB plan liabilities. In some ways, this debate mirrors the discussion concerning the accounting treatment of long-dated insurance liabilities which continues to cause controversy between the IASB and life insurance firms around the world.<sup>4</sup> Acknowledging the lack of an active market in long pension liabilities, the ASB considered alternative actuarial methods for discounting plan liabilities. Ultimately, it determined that under the prospective benefit method the total cost that accrues, including interest, is spread evenly over the time of service of an employee. The ASB argued that this did not represent economic reality where the cost of providing a DB pension increased as an employee approached the retirement date.

The old Statement of Standard Accounting Practice 24 (SSAP 24) permitted plan sponsors to discount liabilities at the same rate as the expected return on DB plan assets. This produced biased incentive effects, leading firms to raise the rate of return assumptions and the discount rate at the same time. Aware of this problem, the ASB in its deliberations considered a variety of approaches for setting the discount rate for plan liabilities. One issue was whether the DB annuity payment was fixed in nominal terms, or adjusted for inflation, and the Board realized that, in many cases, inflation-adjustment of DB annuities had participating elements. In other words, annuitants sometimes shared in the investment performance of the DB plan's assets, and in other cases they shared in temporary mismatches of the plan's asset-liability mix. The Board considered whether index-linked bonds were the best instruments to discount the liabilities, index-linked government bonds having been in use in the UK for far longer than in the United States. In addition, the ASB considered whether a discount rate that reflected the returns

of a weighted portfolio consisting of both equities and fixed-income investments would be preferable for DB plans that based benefits on final salary accrual patterns. In SSAP 24, plan sponsors had considerable discretion with regard to the choice of actuarial and other assumptions, and one of the principal changes in the switch to FRS 17 was the reduction in the degree of discretion allowed.

All this discussion took place against the backdrop of research in pension finance, which was focused on the question of what instrument might offer the best long-term match against wage growth. Final salary plans, in particular, link benefits to pay levels, so many plan sponsors have felt that equity investment was a decent hedge against the benefit promise in such formulas. Plans which continue payments for the length of retirees' lives (as opposed to contracting out the annuities to an insurer) also must be aware that the time horizon for choosing a security or securities to match liabilities is not the worker's retirement date but rather the retirees' life expectancy.<sup>5</sup> Looked at in this way, the question of portfolio choice for expected cash flows soon proves to be far more complicated than commonly thought. Nevertheless, the ASB ultimately decided to simply adopt a single discount rate, the rate on AA corporate bonds, for discounting plan liabilities. In coming to this conclusion, it explicitly noted that part of the rationale for this decision was to bring about convergence in standards.

One criticism of fair value accounting for pensions is that it introduces excessive volatility into financial statements for little or no apparent benefit. Another is that it makes accounting regulations drive economic and financial decision-making. In rebuttal, the Board argued that recognizing year-to-year fluctuations in asset values in the financial statements was similar to recognizing revaluation gains and losses on fixed assets. It stated (ASB, 2000: 71):

The Board regards actuarial gains and losses as similar in nature to revaluation gains and losses on fixed assets. In relation to the assets in the pension scheme,

they are held with a view to producing a relatively secure long-term return that will assist in financing the pension cost. The length of the term, coupled with the options available to the employer to restrict the liability in extreme circumstances, mean that much of the fluctuations in market values does not affect the relatively stable cash flows between the employer and its pension scheme. Market fluctuations are incidental to the main purpose of the pension scheme just as the revaluation gains and losses on a fixed asset are incidental to its main operating role. They are therefore best reported within the statement of total recognized gains and losses.

It is interesting that many felt that the move to full fair value accounting had profound implications for financial statements for UK firms with DB plans. The fact that sponsors could no longer smooth returns meant that they (and their parent firms) now had to recognize the stochastic nature of asset returns. Plan sponsors could no longer act as if returns and risks were unrelated, or to put it another way, plan sponsors could no longer assume that equities had a financial beta value of zero.

This result did not necessarily mean that the Board took a stance with regard to pension portfolio choice. In other words, the fact that plan sponsors had to acknowledge the existence of volatility was not evidence that the Board's sought to shift asset allocation patterns away from equities and toward fixed-income securities. Nevertheless, critics of FRS 17 argued that this regulation was responsible for causing (or at the very least providing incentives for) many firms to terminate their DB plans. They contended that terminating the DB plans removed the volatility which had to be reported by FRS 17. Empirical evidence on this point is, as yet, still mixed. Klumpes *et al.* (2003) followed 90 UK firms of which 37 terminated their DB plans after switching from SSAP 24 to FRS 17; they found no support for the view that the change in the discount rate mandated by the switch to FRS 17 was a statistically significant predictor of plan termination. They did, however, find that firms which terminated their DB plans were more

likely to be highly leveraged. This tends to suggest that firms which terminated their DB plans did so in part due to the adverse impact of FRS 17 on their of the balance sheets.

The importance of the leverage issue may be a cautionary tale for standard-setters and policymakers in other countries, inasmuch as it indicates the issues in accounting reform when weak industries are involved. For example, in the US, an immediate shift to a complete fair market value accounting regime could be problematic under today's financial market conditions. Firms with underfunded plans and/or highly leveraged capital structures might quickly terminate their DB plans if forced to undertake a rapid transition to a fair market value accounting; companies might also fall in violation of their debt covenants. The problem, then, is that in view of the poor funding status of many US plans, adoption of a FRS 17- style rule is probably not feasible in the near term. Over the longer term, however, it is probably inevitable.

Implementation of FRS 17 in the UK and Ireland was delayed, in part, by the desire of various stakeholders to make the change from old UK accounting standards to the new international rules in 2005. As of 2001, UK firms have had to disclose FRS 17 numbers in the notes to their financial statements. While the Board urged all firms to switch to FRS 17, it realized that firms would have to adopt IASB standards in 2005; consequently the full implementation of FRS 17 was delayed to 2005. The IASB Board's project on pension accounting is in most respects convergent with FRS 17.

Financial analysts in the City of London welcomed the change to FRS 17, even if implementation was partial at the outset. In a research study on UK pension underfunding, Morgan Stanley (2002) noted that its analysis could not have been done using SSAP 24 disclosures. Its analysis of a group of 57 UK firms revealed that the disclosures were strong predictors of cash flow; that is, there was a positive relationship between the pension plans'

service cost and contributions paid. Also it reported that contributions were higher if a plan's funding status was weaker. Overall, DB underfunding for sample firms reduced shareholder equity by approximately five percent, with a wide dispersion. The variability was considerable from year to year due to the very high equity allocations in UK plans. Average equity allocations in UK plans were between 60 and 70 percent, with some even higher. There is one famous exception worth noting, however: after the new rule, the Boots pharmacy firm cut its DB pension equity exposure to zero and shifted entirely into bonds. Interestingly, that study found no relation between funding status and equity allocation, or between equity allocation and the maturity status of the plan.

The high average equity allocations in UK plans caused a dramatic reversal of fortune in terms of aggregate funding status, when the equity market began to fall sharply as of 2000. By the end of 2002, DB plan underfunding was reported in the range of 160 – 300 billion pounds (CBI, 2003). Fund managers and plan sponsors complained that they were prohibited from building up a “rainy day” reserve during the bull market of the 1990's by the regulation that funds in excess of 105 percent were subject to taxation at a rate of 35 percent (Blake, 2003). This regulation was in force during the era of SSAP 24, however, when the actuarial rules were sufficiently loose that plan sponsors who wanted to save for a rainy day could have done so if they were worried that the market was building into a bubble and that things would eventually end badly. Instead, many plan sponsors maintained high equity allocations and took extended contribution holidays during the 1990's. It is true, however, that an additional tax regulation working to the detriment of full funding was the end to the right to reclaim imputed taxes on dividend income. This exacerbated the funding problem at the same time that the present value



of liabilities was being forced dramatically up by the switch from SSAP 24 treatment to FRS 17 treatment, with further pressure on present values coming from the fall in the yield curve.

The dramatic deterioration in UK pension funding levels, at the time that more stringent FRS 17 standards came into effect (at least in the notes to the statements), meant that DB plan sponsors faced immediate and in many cases prolonged calls for additional plan contributions. Some blamed this for the fact that, by year-end 2002, approximately half of all UK DB plans had closed to new entrants (remaining active members continued to accrue benefits; Blake, 2003). This does not mean that new employees were denied pension coverage, since old plan closures in many cases resulted in a substitution of new DC plans. Of course, the shift to DC plans offers the advantage of portability and probably signals that the UK will experience the same shift as has the US for the last 30 years.

### **Convergence in International Pension Accounting**

All these changes also have implications for financial reporting by foreign multinational firms, though the picture is still complex. For example, that firm might need to adopt several different methods in accounting for its pension obligations and when filing statements: it would have to use national standards for its domestic reports, IAS standards for international reports (e.g. on the London Stock Exchange), and FASB standards for US listings. If the firm was a multinational insurer listing in the US, it would also have to meet SAP standards for statutory reporting in 50 states and the District of Columbia. The problem is that multiple reporting can introduce inadvertent mistakes and increase costs, and also perhaps confuse analysts.

To bring convergence to reality, the International Accounting Standards Board (IASB) and the FASB have recently signed a memorandum on convergence committing them to

convergence in global accounting standards in as many areas as their respective boards have judged feasible. One area in need of improvement is clearly pension accounting, and the IASB Board added a project on convergence on accounting for retirement benefits to its active agenda in June 2002. It has made substantial progress since then, influenced heavily by FRS 17 but also by the recent issuance of SFAS 132. It has incorporated certain of its disclosure rules into the forthcoming exposure draft of the revised IAS 19, and it appears that the revised IAS 19 will be a very large step in terms of convergence (IAS, 2004).

IAS 19 is proposing to be based on a fair value accounting framework. Assets in the plan will be valued using market prices wherever possible. Pension plan liabilities will be discounted using high-grade corporate bonds. The rules do not specify the exact grade or type of security, as in FRS 17, but the intent of the standard is clearly convergence with both FRS 17 and SFAS 87. Pension plan liabilities must be valued using the projected unit credit method. In addition to the formal terms of the plan, indexation agreements and future salary increases must be taken into account when valuing liabilities. In addition, “constructive” obligations must be taken into account. An example of a constructive obligation is a regular practice such as regular annual wage and salary increases at a certain rate. This shows the influence on IASB thinking of FRS 17 and also of other actors (such as social partners in Europe) regarding the valuation of long-dated liabilities.

Under this framework, actuarial gains and losses must be recognized immediately, outside the income statement, in a statement of total recognized income and expenses, and they also must be included immediately in retained earnings. Previously, the old standard had a 10 percent corridor around the full funding level, and changes in surplus of that amount (in absolute value) did not have to be reflected on the plan sponsor’s balance sheet. In addition, actuarial

gains and losses above or below this level could be amortized over the working lives of employees, a view reflective of the SFAS 87 approach. The new standard eliminates this corridor entirely as well as the spreading and amortization approach to valuing actuarial gains and losses, and it adopts the FRS 17 approach of recognizing them immediately.

In terms of disclosures, convergence has also been achieved by requiring disclosures adopted from SFAS 132, principally those concerned with how plan sponsors and fund managers determine the expected return on DB plan assets. Assets held by the plan must be disclosed according to their major asset classes and as a percentage of the total fair value of the plan's assets. Of particular importance, the disclosure must include a description of the assumptions and logic used to determine the overall expected rate of return on assets as well as the previously agreed disclosure of the expected rate of return for each major asset class. Some elements of convergence did not cross the Atlantic, however. In SFAS 132, the disclosure requirements include a description of investment policies and strategies. As of this writing, the IASB has only flagged this as a question for the exposure draft, but no resolution is yet known.

In terms of contributions and benefits, the required disclosure is an estimate of contributions, if any; the plan sponsor expects to pay into the plan in the next fiscal year after the balance sheet date. In SFAS 132, the disclosure requirements for benefits the plan sponsor expects to pay must be listed by line item for the next five fiscal years, and in aggregate, for the five fiscal years following. The IASB will resolve this difference in its final ruling.

### **Consistency with the Economics of Pension Finance**

Pension accounting rules in the past can be, and have been, justly criticized for divorcing real world assumptions about asset returns from their distributions. This built-in a bias, in terms

of asset allocation, so for this reason, accounting rules can be said to have had a systematic impact on economic decision-making. The bias may, in fact, have been large enough to have contributed to the US stock market bubble in a significant way (Coronado and Sharpe, 2003). Further, when the bubble burst, DB pension plan overexposure to equities exacerbated the shock sustained by plan portfolios. If plan portfolios had been properly immunized at the onset of the market decline, the damage sustained and the subsequent degree of underfunding would have been much less.

The new accounting rules are an attempt to rectify perceived problems caused by past smoothing, and they are part of a larger international movement toward fair value accounting standards. Proponents of the new standards believe that moving to the more transparent world of fair value accounting, and away from actuarial smoothing of gains and losses, will prevent periodic funding crises by highlighting small problems before they can grow into large problems. Opponents of the new standards argue, conversely, that introducing fair value accounting into a system of long-dated commitments introduces excessive volatility for too little benefit. They point to the large-scale closure of DB plans to new entrants in the UK as vindication of their position. They further argue that this is a case where accounting rules not only drive decision-making but also affect the lives of active employees.

In the US, with many underfunded plans and financial distress in several sectors of the economy, an immediate move to fair value accounting standards would have serious consequences. Among them would probably be violations of debt covenants, immediate plan terminations, closures of plans to new entrants, and removal or sharp reductions in retiree health insurance coverage. Yet a case can be made that a true reading of the financial situation of troubled firms would indicate that they are already in violation of their debt covenants; many

probably plan to terminate their plans in the near future anyway. Congress and the Administration are attempting to craft legislative transition rules to buy time until plan sponsors can restore full funding levels. It is unclear whether they this will be more successful with this strategy than similar efforts were with regard to the savings and loan industry in the 1980s.

Our discussion also raises questions about proper investment strategies for DB plans. Most DB accrual plans have some form of final salary formula as the arrangement of choice. In addition, annuitants generally can be assumed to be married at the time of retirement, with joint and survivor annuities the default, so that the receipt of income will be statistically longer than for a single life annuity. This means that plan sponsors and asset managers must design an immunization strategy matched against nominal wage growth and employee demographics during employees' active years, and against the terms of the two-life annuities during the payout years. In addition, the immunization strategy must account for the pension rights of those who have separated from employment but are vested and will eventually receive annuities.

Concerning the first part of the immunization problem, no sovereign or high-grade private entity currently issues securities with coupons and maturities that match expected wage trajectories of employees in a corporate or public sector DB plan. This is especially true for younger employees, who are most likely to leave the plan. Inflation-indexed government bonds are the asset class that comes the closest, but if this asset were to constitute the entire portfolio it would in turn imply high contribution rates and lower earnings for the plan sponsor.

This is an important point that reformers should take seriously. Calling for sharply increased contributions by the plan sponsor could backfire on the very people the reform is intended to benefit. If plan sponsors or Boards of Directors decide that the cost of fully funding

and immunizing a DB plan with inflation-linked bonds is too high, they could decide to terminate the plan altogether.

## **Conclusions**

This chapter focuses on the trend toward international convergence in pension accounting. We devote special emphasis to recent changes in UK accounting standards since that country's rule-setting Board is acting as the model for global changes. In addition, we ask whether some of the recent accounting changes may result in changes in DB plan design and asset management.

We show that standard-setters are moving toward international convergence, and it seems clear that this trend will continue. On the whole, we argue that the new accounting paradigm is an improvement over the old accounting paradigm, with its emphasis on smoothing and its decoupling of risks from returns. Opponents of fair value standards have argued that switching to these will import excessive volatility to financial statements for little or no benefit to users and issuers of statements. These arguments continue, yet the standards are set for adoption in Europe from 2005.

In the United States, the DB funding situation is far from positive: even with a reasonably good economy, it will be some time before the system as a whole is restored to full solvency. Immediate application of a fair value framework would run the risk of massive DB plan terminations, yet improved disclosure rules will aid users of financial statements, and they in turn will make their voices heard concerning the quality of information disclosed.

Convergence will probably change the way DB plan investments are managed. Fixed-income investment strategies will probably pay more attention to immunization and duration

than was the case previously. In the US where so many DB plans have relatively old demographic structures, plan sponsors and investment managers may concentrate more on investment strategies attuned to the timing of retirement benefit cash flows. An argument can be made that the old accounting conventions encouraged DB plan sponsors and fund managers to invest too much in equity. But similarly, some will claim that the new standards will encourage too much fixed income in pension fund portfolios. Ultimately, accounting rules work best when they are neutral with respect to economic decision-making, when they acknowledge that returns are coupled with risks of a long-term nature.

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**Endnotes**

<sup>1</sup> For a discussion of pension funding terminology see McGill et al. (2004).

<sup>2</sup> The fact that some DB formulas were backloaded explains some of the controversy over some firms' switch from a traditional DB to a cash balance or hybrid plan (Schieber, 2003).

<sup>3</sup> We note that public sector plan practice often differs; cf Anderson and Brainard (this volume).

<sup>4</sup> Whether the switch to fair value accounting may change corporate economic decision making has been raised recently in the context of accounting for life insurance (Fore, 2003).

<sup>5</sup> Of course, if the promise is a joint and survivor annuity, as is typically the case, then this adds several more years to the payment promise.