The Retirement Shares Plan: A Breakthrough in Retirement Plan Design

Donald E. Fuerst[1]
Paul Strella[2]
Tom Cliffel[3]

Presented at Society of Actuaries Symposium
Re-Envisioning Retirement in the 21st Century

May 4, 2006

Copyright 2006 by the Society of Actuaries.
All rights reserved by the Society of Actuaries. Permission is granted to make brief excerpts for a published review. Permission is also granted to make limited numbers of copies of items in this monograph for personal, internal, classroom or other instructional use, on condition that the foregoing copyright notice is used so as to give reasonable notice of the Society's copyright. This consent for free limited copying without prior consent of the Society does not extend to making copies for general distribution, for advertising or promotional purposes, for inclusion in new collective works or for resale.

[1] Don Fuerst, FSA, is a worldwide partner and retirement consultant in Mercer's Denver office. Don has more than 30 years' experience as a benefits consultant with Mercer, specializing in the design and financing of retirement programs, both broad-based qualified plans and nonqualified supplemental plans.

[2] Paul Strella is a worldwide partner and lawyer in Mercer's Washington Resource Group, where he specializes in retirement issues. Paul has more than 20 years of experience in retirement design issues.

[3] Tom Cliffel, FSA, is a principal in Mercer's Cleveland office. Tom focuses on helping clients identify and deal with financing risk inherent in their retirement programs. He is an expert in the field of variable benefit retirement plans.

1. Defined Benefit Security Combined with Defined Contribution Features

The actuary just called. The recent decline in interest rates will trigger another big jump in pension expense next year. Plan investments have done well so far this year, but liabilities have grown even more. The unfunded liability has increased, and there may be a special charge to other comprehensive income.

The CFO wants updated estimates of the five-year budget plan. He needs certainty about the expense and cash flow projections to reassure the bankers issuing the new credit line.

In the meantime, a board member has called. His company froze its pension plan and went to an all-defined-contribution (DC) approach. He thinks that would also work here and plans to urge this approach at the next board meeting.

The VP of human resources wants to discuss the benefit comparisons for a proposed DC plan to replace the defined benefit (DB) plan. The proposed plan shows sizeable decreases in projected retirement benefits for the long-service employees despite a significant increase in the company contribution, and more high-paid employees would be affected by IRS limits.

Is there any alternative? Can you provide meaningful retirement benefits to long-service employees and have stable costs without unfunded liabilities?

2. The Retirement Shares Plan Solution

The Retirement Shares Plan (RSP) is a new concept in pension benefit design. An RSP provides:

- predictable and stable cost to the plan sponsor with little chance of unfunded liabilities;
- lifetime income, guaranteeing that retirees will never outlive their benefits;
- a benefit accrual pattern comparable to traditional pension plans that preserves value for older, long service employees; and
- potential inflation protection for retirees.

An RSP transfers the investment risk and reward to plan participants while retaining and pooling the longevity risk. This produces predictable, stable cost for the plan sponsor, even if a significant portion of plan assets are invested in equities. The plan sponsor funds the pension plan assuming investments always earn the Share Interest Rate (SIR), an integral part of the plan design described later. Participants can select among investment classes, and actual investment returns above or below the SIR are passed on to the plan participants. Assets and liabilities remain matched, and participants experience the gains or losses of the investment portfolio, but without the risk of ever outliving their retirement income.

2.1 How it Works

An RSP is a career accumulation pension plan with a twist.

In a traditional career average or career accumulation plan, an employee earns a fixed-dollar pension benefit each year based on that year's pay. For example, if the plan's benefit formula is 1 percent of pay, an employee paid $50,000 in a year would earn a pension benefit equal to $500 (1 percent of $50,000). Under a comparable 1 percent RSP, the same employee would earn retirement shares entitling the participant to a $500 pension benefit. If shares are valued at $10 each, the participant accrues 50 retirement shares and expected retirement income of $500.

Here is the twist: the value of the retirement shares can change based on the investment performance of the plan's assets. If the share value increases, the participant will be entitled to more than $500 of retirement income; if the value declines, the participant will be entitled to less than $500 of retirement income. The mechanism for determining share value and, therefore, retirement income is explained in Section 2.2, "What is a Retirement Share?"

Each year the participant will earn additional retirement shares. At retirement, a participant's retirement income will be determined by the total number of shares accumulated and the current value of the shares. For example, a participant with 2,000 shares having a current value of $12 per share would receive an initial annual income of $24,000.

2.2 What is a Retirement Share?

A Retirement Share is a benefit that entitles the participant to:

- an annual income beginning at the normal retirement date equal to the share value each year, and
- a share of the investment gains or losses associated with the underlying assets.

When a plan first begins (or when a traditional plan is converted to an RSP), the share value is initialized at an arbitrary level, such as $10 per share. The initial level is arbitrary; it is the relative change in share value or the growth rate that affects benefit levels.

Share prices are determined annually and reflect the actual return on the underlying assets for the previous year relative to the Share Interest Rate (SIR). The SIR is the interest rate used to calculate the plan sponsor's contribution each year; it also determines the potential for growth in the share value. The SIR can be set equal to the rate attainable through high-quality, relatively risk-free investments. Typically, the SIR will be between 4 and 5 percent, although higher SIRs may be useful in certain circumstances.

The share value increases if the actual return on assets exceeds the SIR; similarly, the share value declines if the actual rate of return on assets is less than the SIR. For example, if the SIR is 5 percent and plan assets earned 8 percent in the previous year, the share value will increase by the difference, or 3 percent. Conversely, if plan assets earned only 2 percent, the share value will decline by 3 percent (5 percent minus 2 percent). If the plan assets earn the same as the SIR each year, the plan will deliver a fixed benefit amount much like a traditional pension plan would.

At retirement, the annual income is the total number of shares accumulated multiplied by the share value at retirement. Although the share value (and, thus, the amount of annual income) can change each year, the retiree does not sell or liquidate any shares. As a result, the income continues for as long as the retiree (or beneficiary) survives.

Although the RSP concept is new, the mechanism used to adjust the annual benefit described here is not. Pension practitioners will recognize the SIR as acting just like the "hurdle rate" for variable benefit plans, many of which have been in operation in the United States for decades.

2.3 Classes of Shares and Underlying Assets

A unique feature of the RSP is its ability to offer participants (including retirees) the option of equity returns to enhance the growth of benefits, in addition to more stable investments that provide a relatively constant benefit. The RSP does this by offering multiple classes of shares and allowing participants to allocate their retirement shares among the classes. Theoretically, the number is unlimited, but most objectives can be attained with two or three classes of shares. We will describe the following three classes:

- Stable shares
- Equity shares
- Diversified shares.

A plan with these three share classes would divide the trust into three sub-accounts—a stable account, an equity account and a diversified account. The assets in each sub-account would be invested in accordance with the investment policy for the specific share class. The value of each class of shares would then be based on the investment performance of the corresponding sub-account.

The **stable account** has an investment objective of providing consistent returns that attain or exceed the SIR. Investments will usually be in high-quality, short- to intermediate-term fixed income securities. Although there is no guarantee that the investment objective will be attained, if the SIR is set appropriately, the fund should be able to attain the objective in most years and the share values will be relatively stable.

The **equity account** is fully invested in equities, either in an index fund or an actively managed equity fund selected by the sponsor. The equity shares provide the potential for a much higher rate of return than the stable shares, but they are also likely to be more volatile and risky.

Participants who are comfortable selecting their own asset allocation can balance their stable shares and equity shares appropriately. But for participants who prefer not to make this decision or do not want to bother with periodic rebalancing of shares, there is the diversified account. The **diversified account** is an actively managed fund in which the plan sponsor determines the asset allocation, selects the investment managers and periodically rebalances.

The diversified shares attempt to provide a higher return than the stable shares and, thus, offer some protection from the erosive effect of inflation. Diversified shares

generally are less volatile and less risky than equity shares, but neither offers a guarantee that the investment objectives will be attained.

Many variations of the RSP are possible by offering different classes of shares. A one- class diversified share plan is similar to a variable benefit plan and may appeal to sponsors who do not wish to pass on all investment decisions to employees. For sponsors who want to give employees even more investment discretion, additional classes can be added to allow participants to tailor their investments beyond just equity and fixed income. Lifecycle shares in particular may appeal to many plan sponsors and participants as a way to gradually adjust risk exposure during an individual's career. For sponsors comfortable with retaining some of the investment risk, an RSP can be combined with a traditional benefit plan to provide both fixed and varying benefits.

2.4 Selection and Exchange of Shares

Each year, active participants can choose the class of shares in which the benefit they earn should be invested. Participants can invest entirely in one class of shares or allocate their benefit among the various classes based on the amount of risk and volatility they are willing to tolerate.

Participants can periodically change their risk profile through an exchange of shares. This transaction would occur at the end of any accounting period (generally annually, but it could be more frequent). For example, a participant could exchange 100 equity shares with a value of $20 each for 200 stable shares with a value of $10 each.

Through the exchange process, participants have great flexibility to customize their retirement portfolios based on individual circumstances. An active employee might maintain a large equity exposure during most of a career but gradually transfer to more stable shares as retirement approaches. But a retiree who wants inflation protection in retirement could maintain some equity exposure and have the potential of increasing annual income rather than the assurance of constantly eroding purchasing power.

2.5 Accrual of Benefits: The RSP Difference

Traditional pension plans provide a distinctly different accrual pattern than typical DC plans or most hybrid plans, such as cash balance plans. In the traditional pension plan, the amount earned by a participant each year is defined as an annuity payable at normal retirement. The benefit accrued is more valuable for an older

participant than a younger participant simply because the annuity will be paid much sooner for the older person.

A typical DC plan bases its benefit on a specific contribution amount each year, usually expressed as a percentage of pay. Often the amount of the contribution is the same regardless of the participant's age, although some plans might provide contributions that increase with a participant's age and/or service. But even such "graded" plans typically do not approach the back-ended accrual pattern of a traditional pension plan.

Most hybrid plans, such as cash balance plans, mimic the accrual pattern of a DC plan but still leave the employer with the financial volatility associated with a traditional pension plan.

The RSP is different. It has an accrual pattern similar to that of a traditional pension plan, but with the financial stability of a DC plan. The shares a participant earns each year pay an annual income beginning at normal retirement. Because this benefit accrual is defined as annual income at retirement, it has more value to the older, long-service participant.

The accrual pattern of the RSP has two key advantages.

First, it preserves the retention features of a plan that rewards full-career employment and provides a better benefit for career employees than a DC or cash balance plan with the same cost.

Second, it is much easier to convert from a traditional pension plan to an RSP than to a DC or cash balance plan. Converting a traditional pension plan to a DC or cash balance plan often reduces the expected retirement benefit of long-service employees. These employees earned traditional pension benefits of lower value in their early years, and then, in the years they expected to accrue higher-value benefits, they are switched to the lower-value accrual of the DC or cash balance plan. This creates difficult transition issues that can increase overall cost and complicate the plan design. Converting to an RSP avoids these issues because the accrual pattern is similar to that of the pension plan.

2.6 Funded, not Unfunded, Liabilities

In a traditional plan, pension liability grows each year and is directly affected by interest rates, growing more rapidly when rates decline. Equity investments can be volatile and do not grow at the same rate as liabilities. As we have learned in recent years, investments sometimes plunge when liabilities rise sharply. The result is obvious—a mismatch of assets and liabilities that can produce large unfunded liabilities or, in the good years, a large surplus.

The RSP avoids a mismatch of assets and liabilities. Share values are directly related to asset performance, and share values determine benefits. Accordingly, there will be a direct match of assets and liabilities as long as the plan sponsor allocates assets to the trust sub-accounts in proportion to the liabilities for each class of shares and assets are rebalanced when participants exchange shares. Investment experience or a change in interest rates will not produce unfunded liabilities or surpluses.

The sponsor funds the plan each year for the additional shares that employees earn. The service cost—the value of the shares earned by active participants—should be funded at the time the shares are credited to the participants and allocated to the share sub-accounts in accordance with participant directions. As long as the plan sponsor funds the service cost each year and rebalances the assets in proportion to share liabilities, the plan will not experience investment gains or losses.

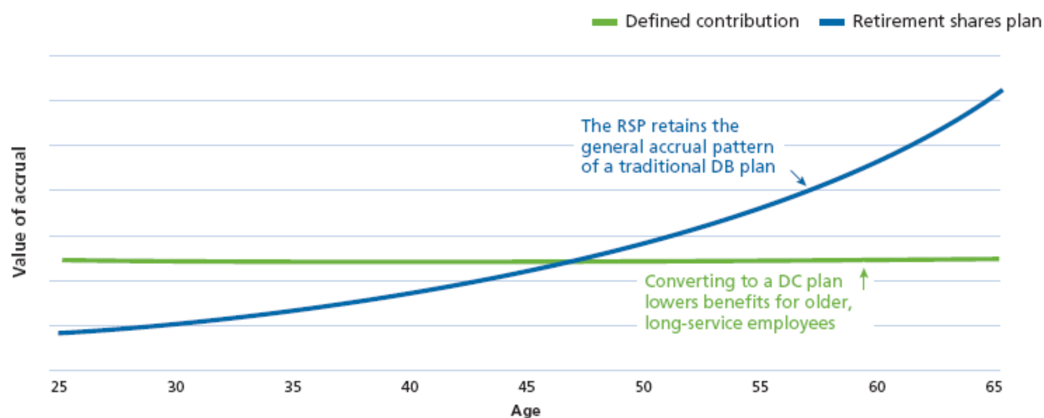
Does this mean unfunded liabilities or surpluses are impossible in an RSP? No, but they typically will be small. Actual experience regarding employee termination, pay during the year, retirement age and longevity can produce gains or losses. But the gains and losses due to demographic experience generally will be easy for the plan sponsor to manage. To keep the assets and liabilities matched, the sponsor just adjusts the funding of the service cost each year by the amount of any demographic gain or loss.

Investment gains or losses can develop, however, if the sponsor does not keep the assets and liabilities balanced. For example, the full-service cost should be funded at the time retirement shares are earned. If the sponsor waits several months after the end of the plan year to fund the service cost, volatile markets could produce gains or losses on the liability that has not yet been funded.

The elimination of large unfunded liabilities or surpluses can have many favorable effects, such as:

- stable accounting expense
- stable contribution requirements
- no "Other Comprehensive Income" charges
- no minimum liability on balance sheet
- no PBGC variable premiums or 4010 filings
- no participant notifications.

Accrual of benefits – DC versus traditional DB or RSP



Sample RSP benefit statement

	Stable	Diversified	Equity	Total
1. Your retirement share balance at beginning of year				
a. Number of shares	214.72	529.84	341.35	
b. Share value	$10.00	$11.05	$12.10	
c. Estimated income at age 65	$2,147.20	$5,854.73	$4,130.34	$12,132.27
2. Your current year accrual				
a. Your pay				$50,000.00
b. Benefit credit (1% of your pay)				$500.00
c. Your selected allocation	20%	50%	30%	100%
d. Available to buy shares	$100.00	$250.00	$150.00	$500.00
e. Year-end share value	$10.02	$11.25	$11.90	
f. Shares purchased	9.98	22.22	12.61	
3. Your retirement share balance at end of year				
a. Number of shares	224.70	552.06	353.96	
b. Share value	$10.02	$11.25	$11.90	
c. Estimated income at age 65	$2,251.49	$6,210.68	$4,212.12	$12,674.29

For a calendar-year plan, share values are determined as of December 31, and changes in the monthly payments to retirees will be made in February or March. Benefit statements like the example above can show the shares and estimate annual income assuming continued employment to normal retirement. They can also include growth in share values under various assumptions.

2.7 Taking Advantage of Volatility

Equity investments aren't necessarily bad for pension plans. In fact, equity investments may lead to a higher return that decreases cost or increases benefits. It is the consequences of short-term volatility that lead to problems. For instance, for traditional pension plan sponsors, volatile investment returns and interest rates lead to volatile contribution and expense requirements. In a properly managed RSP, assets and liabilities are matched, thereby eliminating volatility in contributions and expense.

For active employees, investment volatility might actually offer some advantages. During a participant's working career, the share price volatility has no immediate effect on the participant. In fact, changes in the share value offer participants the ability to dollar-cost average as they earn more shares. When share prices decline, the participant buys more shares. Over a career, a participant may acquire more shares at a lower average price if shares are moderately volatile than if they grow at a steady pace.

During retirement, volatility presents different challenges and opportunities. Stable shares will provide the retiree with a steady annual income with minimum fluctuation but expose the retiree to the risk of declining purchasing power caused by inflation. Retirees with equity or diversified shares may experience growth that helps preserve purchasing power, but they also risk a decline in share price, which would reduce the retiree's annual income. With an RSP, the retiree always retains the same number of shares – they are not sold or liquidated in retirement even if share values decline. Retirees can balance their shares to reflect their risk tolerance, their other assets and their expectations for the future. But whichever shares they choose, they are assured that the annual income will last their entire lifetime.

2.8 Does the RSP Approach Pass Legal Muster?

Does the RSP satisfy the requirements of the Internal Revenue Code, ERISA and age discrimination rules?

Two points in particular might concern some plan sponsors:

- Can a pension plan offer a benefit that varies with investment performance?
- Does this design suffer the same age discrimination concerns as cash balance plans?

The first point was addressed many years ago and again recently. In a 1953 Revenue Ruling, the IRS concluded that a pension plan in which the amount paid to a participant varied based on the value of "shares" or "units" was permissible. More recently, in regulations released during 2004 concerning minimum distributions, the IRS ruled that a benefit that varies based on the investment return of the plan assets would not violate the regulations, provided the interest rate threshold for sharing gains and losses (the SIR) is at least 3 percent.

The second point focuses on one court ruling that found that cash balance plans violate age discrimination rules because they provide more years of interest credits to younger employees than to older employees (although other courts have disagreed with this analysis). Some sponsors might be concerned that an RSP could fall victim to a similar analysis if the plan provides more years of share growth to younger workers than to older workers. But there is a fundamental difference between the two plans: cash balance plans guarantee a positive return every year on the account balance, thus assuring that a young employee receives more years of interest growth than a similarly situated older employee. The RSP makes no such guarantee. Provided the SIR is set at or above a reasonable risk-free rate of return, there is no assurance or likelihood that share values will increase. Any potential increase in share value is balanced by the volatility and potential for a decline in value.

2.9 The RSP and Accounting Changes

Many plan sponsors are concerned that anticipated changes to the accounting rules for DB plans will force them to invest entirely in fixed income securities to lessen volatility. Such a change would likely increase the long-term cost of these plans without enhancing benefits. RSPs are not forced into such changes. Since assets and liabilities are never mismatched, there is no volatility that will affect the balance sheet. And the income statement effect of an RSP—the service cost—is evaluated at a constant interest rate, the SIR. With no volatile effect on either the income statement or the balance sheet, RSPs are free to pursue investment policies in the best interests of plan participants.

2.10 Converting to an RSP

Thus far, we have discussed the RSP as a new plan, rather than one that has been converted from an existing plan. Perhaps some employers will see the benefits of the RSP and implement it as an entirely new DB pension plan. But practically speaking, we think it is more likely that employers with traditional DB plans or hybrid DB plans will choose to convert to the RSP concept.

The RSP is especially attractive to the sponsor considering freezing an existing pension plan and adopting an all-DC approach for the future. It provides the same financial benefits of stable cost and no unfunded liabilities but does not significantly reduce the benefit expectations of older employees, which could have serious implications for the retention of legacy talent.

A prospective-only change is simple and straightforward—it is sometimes referred to as an "A + B" or "old plus new" approach. For a pay-related plan, there are at least two versions of the prospective-only approach.

- Accrued benefits can be frozen based on current pay and service, or
- Accrued benefits can be frozen based on current service but continue to grow with future pay increases (sometimes referred to as a "soft" or "dynamic" freeze).

A prospective-only conversion affects only active employees. It has no effect on the benefits of terminated, vested or retired participants.

Under current law, we see no legal issues with the prospective-only transition. This method is similar to freezing the plan and adopting a DC plan prospectively.

A prospective-only change affects only future benefit accruals for active employees. Can accrued benefits in a traditional pension plan or a cash balance plan be converted to retirement shares? Perhaps, and in some cases there may be significant advantages to such a conversion for the plan sponsor and the participant. But the issues are more complex than we can address here. Those interested in such an alternative should consult with a Mercer expert.

2.11 Early Retirement and Optional Payment Forms

We have examined the RSP approach in the context of a full retirement benefit at the normal retirement date as defined by the plan. Now let's see how it works at an early retirement date. Retirement shares always pay the full-share value as the retirement benefit regardless of retirement age, but early retirement will reduce the share balance to reflect the early start of the benefit. The reduction in shares can be a full actuarial reduction or a lesser charge to encourage or subsidize early retirement. Common reduction factors used in traditional plans, such as 5 percent for each year by which early retirement precedes normal retirement, can also be used in an RSP.

The annual income paid by the plan will normally be a life annuity, perhaps with a number of payments guaranteed. Other forms, such as the required Qualified Joint and Survivor Annuity (QJSA) benefit, are handled by an adjustment in the number of shares. For example, a QJSA benefit would result in a reduction in the number of shares based on an actuarial table that considers the age of the participant and spouse.

Although lump-sum distributions are possible in the RSP, we believe the best practice is not to offer them. Lump-sum distributions dilute the effectiveness of the longevity pooling risk and can increase the plan cost for the sponsor. A major objective of participants wanting lump-sum distributions—to grow the assets better on their own—is already met through the availability of equity or diversified shares. And payment as an annuity assures the participants that they will have an annual income for life.

In fact, the RSP can be the recipient of cash inflows. Participants may elect to transfer funds from their 401(k) plan to the RSP to increase their lifetime annual income. The RSP offers these retirees the ability to maintain equity exposure and guarantee the annual income for life, with a potential for an income that keeps pace with inflation.

2.12 A Defined Benefit without the Downside

If the volatile costs and unfunded liabilities of a defined benefit are undesirable to a sponsor, why not simply switch to a DC plan? The trends in retirement planning certainly point in this direction, but the RSP offers an attractive alternative to this switch.

DB plans offer many advantages to both the participant and the plan sponsor, and the RSP maintains these traditional advantages. DB plans pool longevity risk and provide a lifetime income to the retiree without the risk of outliving one's assets. The accrual pattern of the DB plan rewards older, long-service workers and allows the employer to influence retirement patterns through subsidized early retirement or special programs such as "window" benefits. Because all employees generally participate in DB plans, coverage is independent of an employee's ability to save. Most or all of the benefits provide retirement income; there is little or no leakage from early distributions. As we have shown, RSPs can also provide these benefits.

And compared to DC plans, the RSP's pooling of assets and professional asset allocation through the diversified share class can generate even better long-term returns than a DC plan, thus providing more retirement income at a lower cost. Finally, in an

all-DC platform, the IRS contribution limits will often curtail contributions for many high-paid employees.

Much of the virtue of any employer-sponsored retirement plan comes from its long-term sustainability. The longer the plan is around, the more reliably employees can use it to build retirement assets. A traditional pension plan, funded largely with equity investments, may provide a good benefit at a low cost—but this virtue is lost if such a plan is likely to rear up every few decades and threaten its sponsor's survival. The RSP retains the efficiencies of the defined benefit promise while shielding plan sponsors from the financial volatility they have learned to fear. And the RSP offers plan participants the ability to decide how much equity risk they are willing to incur. By finding this previously unachievable balance, the RSP opens up a new world of possibilities for our employer-sponsored retirement system.