Selected Issues Related to Governmental Defined Benefit & Defined Contribution Pension Plans

A report to the General Assembly
of the Commonwealth of Pennsylvania
in Response to House Resolution No. 266
Adopted in the Session of 2001-2002

Commonwealth of Pennsylvania
Public Employee Retirement Commission

Selected Issues related to Governmental Defined Benefit & Defined Contribution Pension Plans

Commonwealth of Pennsylvania
Public Employee Retirement Commission
Harrisburg, Pennsylvania

December 2002

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December 2002

To: Members of the Pennsylvania General Assembly

The attached report was prepared by the Commission in response to House Resolution Number 266, which was adopted in the House of Representatives on June 21, 2001. The resolution directed the Commission to undertake a study of issues related to the potential provision of a defined contribution plan option, within the context of Pennsylvania's defined benefit pension plans for State and public school employees, and to report its findings to the General Assembly no later than December 31, 2002.

The report presents, as background, a discussion of the nature of defined benefit pension plans and defined contribution pension plans and a brief description of the Commonwealth's current state-wide defined benefit pension plans. The report also provides responses to the seven specific study issues identified in House Resolution Number 266.

On behalf of the Commission, I hereby submit the report for your review and consideration. The Commission is hopeful that you will find this report to be informative and useful in your deliberations on this aspect of public pension policy.

Sincerely,

Paul D. Halliwell
Chairman

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INTRODUCTION

On June 21, 2001, the Pennsylvania House of Representatives passed House Resolution Number 266, which directed the Public Employee Retirement Commission to provide the General Assembly with information on certain issues associated with defined contribution retirement plans. This report is intended to provide the requested information in a concise, non-technical manner, and it should not be construed as a comprehensive report on the myriad issues that would be involved in a full evaluation of the two alternative approaches for providing employee retirement benefits — defined benefit and defined contribution. The report does endeavor to provide a conceptual framework for the requested information by providing a descriptive summary of these two approaches in Part I of the report. Part II of the report is comprised of responses to the individual study objectives specified in House Resolution Number 266.

The Commission wishes to express its sincere appreciation to the staffs of the public employee retirement systems, institutes, and associations that contributed to the production of this report. Particular recognition is due to the legal staffs of the State Employees' Retirement System and the Public School Employees' Retirement System that cooperated by preparing the Commission's responses on the issues of liability and fiduciary responsibility presented in Part II of the report.

PART I

BACKGROUND DISCUSSION

BACKGROUND DISCUSSION

Description of Defined Benefit and Defined Contribution Approaches

There are two predominate approaches to pension plan design employed in the public and private sectors to provide employee retirement benefits. As evidenced by the nomenclature, the approaches fundamentally differ in regard to the aspect of the pension plan that is defined, or fixed, in the plan's governing document. In a "defined benefit" (DB) pension plan, the pension benefit to be provided at retirement is defined, while the contributions to be made over the period of employment are variable based on the experience of the pension fund. In a "defined contribution" (DC) pension plan, the contributions to be made over the period of employment are defined, while the pension benefit to be provided at retirement is variable based on the experience of the pension fund. This distinction between the DB and DC approaches is most significant in the placement of the risk associated with investment earnings over the period of employment. The fixed benefit in a DB pension plan means that the investment experience impacts the contribution requirements, increasing them when earnings are lower and decreasing them when earnings are higher. The fixed contributions in a DC pension plan mean that the investment experience impacts on the benefit amount, increasing it when earnings are higher and reducing it when earnings are lower. Therefore, the employer, as the residual contributor, bears the investment risk in a DB pension plan, and the employee bears the investment risk in a DC pension plan.

The other differences between the DB and DC approaches to pension plan design have been examined at great length over the last two decades. As a means to provide a concise summary of the major differences between the DB and DC approaches and thereby facilitate an understanding of each approach, Chart I was compiled to contrast the general characteristics of the DB and DC approaches. However, due to the wide variation in the design and administrative formats adopted for pension plans, the information in Chart I should not be construed as fully applicable to individual DB or DC pension plans.

Chart I

Comparison of Defined Benefit and Defined Contribution Approaches

Topic	Defined Benefit	Defined Contribution
Form of Benefit	Benefit is determined by a formula that usually produces a percentage of salary to be provided in the form of a life-time annuity. Other equivalent benefit forms, other than lump-sum payments, may be available.	Benefit is determined by the balance in the employee's individual account and provided as a lump-sum payment. Other equivalent forms of payment may be available.
Benefit Portability	Limited portability of benefits; may be service purchase authorizations or reciprocity between systems, such as the systems for State and school employees in PA. May impede recruitment of younger, mobile employees.	Benefit is fully portable. May increase labor costs due to increased employee turnover. Recruitment of younger, mobile employees may be facilitated.
Benefit Risk	Benefit is fixed by a formula and guaranteed by the employer. Predictable amount of benefit makes retirement planning easier.	Benefit is variable and is impacted by: economic environment before and at retirement, the frequency of cash-out elections made by employee upon change of employers, and the quality of employee investment choices. Variable benefit makes retirement planning more difficult.
Investment Risk	Employer makes investment decisions and assumes all investment risk. Favorable earnings decrease the employer contribution requirements, while unfavorable earnings increase the employer contribution requirements.	Employee makes investment decisions and assumes all investment risk. Favorable earnings increase the benefit amount, while unfavorable earnings decrease the benefit amount.
Funding Risk	Employer assumes future funding risk and is responsible for funding any unfunded liability that may occur. The unfunded liability may be transferred to future taxpayers if deferred funding is elected. Unfunded liabilities may raise employee concerns about benefit security.	Employer assumes no future funding risk. Funding obligation fully satisfied concurrently with payroll, precluding the occurrence of unfunded liabilities and the associated employee concerns about benefit security.
Design Flexibility	Preretirement disability and death benefits may be included. Cost-of-living adjustments may be provided to retired employees. Purchases of service may be authorized.	Preretirement benefits limited to monies accumulated in employee's individual account. No potential for cost-of-living adjustments or service purchase authorizations.
Personnel Management	Early retirement incentives easily implemented to reduce personnel complement. Retains (and is more beneficial to) experienced, long-term employees.	Complement reduction through early retirement incentives is not feasible. Attracts (and is more beneficial to) younger, mobile employees.

Topic	Defined Benefit	Defined Contribution
Administration	Complex administration due to greater degree of regulation and actuarial calculations. Long-term budget projections difficult due to variations in funding requirements.	Simple administration, with complexity increasing as investment allocation flexibility increases. Long-term budget projections are facilitated by predictable funding requirements.
Benefit Accrual	Back-loaded. Benefit accrual rate greatest in years immediately before retirement. Favors long-term employees.	Front-loaded. Benefit accrual rate greatest in initial years of employment. Favors short-term employees.
Benefit Distribution	Benefit is only available upon retirement.	Benefits may be accessed pre-retirement under certain circumstances as loans or actual disbursements.
Employee Comprehension	Benefit formula is abstract concept and difficult for employees to understand or appreciate, particularly in early years of employment.	Account balance is easily understood and appreciated by employees throughout their careers.

Several decades ago, participation in DC pension plans was largely restricted to limited employee subgroups, such as public educators, higher education faculty and staff, unclassified public employees, or highly compensated elected or appointed officials. In recent years, however, the DC approach has seen significant growth, although the DB approach continues to predominate in public sector retirement systems. In the course of its research, the Commission identified a total of 21 state-level public employee pension plans in 16 states that are DC or have a DC component. Nearly one-quarter of these plans were implemented during the past five years, suggesting that strong investment returns of recent years provided some impetus for the recent increased use of the DC approach. Varying considerably in design and operation, the DC pension plans may utilize benefit tiers based on the date of hire, provide various participation options, or incorporate hybrid plan structures that blend both DB and DC elements in a single plan.

Description of Pennsylvania's Current Public Employee Retirement Systems

Statewide Retirement Systems

Most of Pennsylvania's state and public education employees are mandated to be members of either the State Employees' Retirement System (SERS) or the Public School Employees' Retirement System (PSERS). (Certain State employees may elect not to participate in SERS, while certain employees in public schools and higher education institutions may elect membership in an employer approved alternative retirement plan rather than PSERS membership.) As of June 30, 2001, there were 243,311 active members and 132,716 annuitant members of PSERS, and as of December 31, 2001, there were 109,716 active members and 89,217 annuitant members of SERS. Both of these large, state-wide retirement systems are well-funded and utilize the defined benefit approach to provide retirement and other benefits, including disability and death benefits, to State and public school employees.

The annual retirement benefit for most employees in both SERS and PSERS is equal to the product of 2.5 percent of the member's high three-year average salary multiplied by the member's years of service, with certain special membership classes eligible for enhanced benefits greater than the 2.5 percent accrual rate. A retired member is entitled to a retirement allowance for life. Depending on the disbursement options selected, the retiree's designated beneficiaries may be entitled to receive all or a portion of the deceased pensioner's retirement allowance for the remainder of their lives.

Under the State Employees' Retirement Code, full retirement benefits are payable when the member attains age 60 with three years of credited service or any age with 35 years of service, with members of the General Assembly and certain public safety employees eligible for full retirement at age 50. Under the Public School Employees' Retirement Code, members are eligible for full retirement benefits when the member attains age 62 with at least one year of service, age 60 with 30 or more years of service, or any age with 35 years of service. The Commonwealth has utilized temporary early retirement incentive provisions in both SERS and PSERS on numerous occasions since 1984. In most instances, these incentives provided retirement benefits unreduced because of retirement at less than the normal retirement age ("30 and out").

Active members of both systems may purchase certain types and amounts of service credit for which they receive retirement credit that may then be used by the member to qualify for regular retirement, early retirement and certain retirement-related ancillary benefits. Active members of PSERS may purchase service credit for the following types of nonschool service: approved leaves of absence without pay; intervening and nonintervening military service; service in public education in another state or with the federal government; service in public education in a community college under the Community College Act; service with a

county school board where administrative duties or the agency was transferred to some other governmental entity with PSERS coverage; service as a county nurse; service for time spent on a mandated maternity leave prior to 1978; and certain service performed while in the Cadet Nurse Corps during World War II. Active members of SERS currently are permitted to purchase service credit for the following types of service: approved leaves of absence without pay, intervening or nonintervening military service, service as a public educator in another state or with the federal government, service as a temporary federal employee assigned to a Commonwealth agency, service in a community college under the Community College Act, service in the Cadet Nurse Corps in World War II, service as a justice of the peace prior to January 1970, and service with a governmental agency other than the Commonwealth where employment was terminated because of the transfer by law of the administration or the service of the entire agency to the Commonwealth.

Retirees of SERS and PSERS have historically been provided with periodic cost-of-living adjustments authorized by the General Assembly on an ad hoc basis to offset the negative effects of inflation on retiree benefits. Beginning in 1968, these cost-of-living adjustments have been authorized every four or five years, with the amounts generally determined using a formula based on the increase in the Consumer Price Index. The most recent cost-of-living adjustment was enacted in 2002. The cost associated with the provision of the ad hoc cost-of-living adjustments is funded prospectively through amortization payments.

Both retirement systems are managed by boards of trustees comprised of State elected and appointed officials and representatives of employee and retiree interest groups. Assets of the pension trust fund may be used only for paying pension benefits and administrative expenses. As of December 31, 2001, the SERS fund had assets valued at approximately $25 billion, making it the nation's 39th largest pension plan, while the PSERS fund had assets valued at approximately $48 billion as of June 30, 2001, making it the 21st largest pension plan in the country. Funding for both systems is provided through a combination of employer contributions, which are actuarially determined annually, employee payroll deductions, which are set in statutes at 6.25% for most SERS members and 7.50% for most PSERS members, and the proceeds of fund investments. Both systems retain the services of professional actuarial consultants who utilize the entry-age normal cost method to determine the annual funding requirements. As of the most recent actuarial valuations, both SERS and PSERS were "fully funded" with the assets in excess of the accrued liabilities.

Tax Sheltered Annuity Plans (IRC 457 and IRC 403(b))

Act 81 of 1987 authorized the SERS Board of Trustees to implement and oversee an IRC 457 deferred compensation program for Commonwealth officers and employees, and a third party administrator, CitiStreet (formerly The Copeland Companies), was selected by the SERS board to handle administration of the program, including account management, record

keeping, customer service, and disbursement functions. Accordingly, in addition to membership in SERS, state employees are entitled to participate in a deferred compensation program, through which they may voluntarily defer receipt of compensation and build, on a tax deferred basis, supplemental retirement savings to augment their retirement benefits. The deferred compensation program, which is a type of defined contribution plan, allows employees to select from a menu of core investment options, which are selected by the SERS board. As of December 31, 2001, nearly 46% of eligible employees were participating in the program.

Certain public education employees and administrative personnel who are employed in one of Pennsylvania's more than 500 school districts may be eligible to participate in an IRC 403(b) plan in addition to membership in PSERS. If authorized by the school district, the 403(b) plan may be used by members to provide retirement income funded through their tax-deferred, pre-retirement contributions. Currently, the number of school districts that have authorized participation in a locally administered 403(b) plan is not known.

Alternative Retirement Plans

Certain employees of Pennsylvania institutions of higher education are eligible to choose coverage under TIAA-CREF as an alternative to PSERS or SERS retirement coverage. The Teachers' Insurance and Annuity Association of America—College Retirement Equities Fund (TIAA—CREF), is the best known, oldest, and largest of defined contribution plans in the field of education. With the passage of Act 35 of 2001, the number of potential, alternate retirement programs available to higher education institution employees was expanded to include insurance companies and mutual fund companies with investment options meeting the requirements of a tax-qualified plan under the Internal Revenue Code. The additional alternative retirement plans are selected and approved by the State System of Higher Education (SSHE) through a request-for-proposal process.

PART II

ANALYSIS REQUESTED IN HOUSE RESOLUTION NO. 266

Resolution Objective No. 1 – Benefit Comparison

"Projections of comparative benefits under the current DB plans versus possible DC plans and options using various demographic and financial scenarios to show the positive and negative impact of each plan option on employers and employees." – *House Resolution Number 266*

To respond to this study objective, the Commission engaged the services of one of its consulting actuaries, David H. Killick of Conrad M. Siegel, Inc. Using various demographic and economic scenarios, the actuary determined the DC plan contribution rates that would be required to produce the same benefit as provided under the SERS DB plan. The actuary's use of a fixed-benefit approach for the analysis allows for more comprehensible data than the alternative, which result in differing benefits under various demographic and economic scenarios, and it avoids the need for the arbitrary selection of defined contribution rates that would be required for a variable-benefit approach. The consulting actuary's complete work product is attached to this report as Appendix II. The following discussion and chart summarize the actuary's work product.

In order to determine the level of contributions under a DC plan that is necessary to provide a benefit at retirement that is the same as the benefit determined under a DB plan, an assumption of the investment earnings on the contributions made to a defined contribution plan must be made. The higher the rate of assumed investment earnings, the lower the rate of contribution that will be required in order to provide a certain level of benefits at retirement. Accordingly, the DC contribution rates presented in Chart II are determined under four different assumptions of career-average annual investment earnings to reflect the variation in investment earnings that may be experienced by different employees during different periods of time. Because the length of service also impacts the DC contribution rates, Chart II presents the DC contribution rates for four different demographic scenarios.

To calculate the DC contribution rates presented in Chart II, the Commission's consulting actuary first applied the SERS benefit formula to determine the defined benefit amount for each of the four demographic scenarios. He then determined the DC plan account balance at retirement that would be necessary to finance a lifetime annuity equivalent to each of the four defined benefit amounts. He then calculated the DC contribution rates necessary to produce each DC plan account balance under the four career-average investment earnings rate assumptions, using the same compensation projections as used for the DB calculations.

Chart II

Defined Contribution Rates Required to Produce Benefit Parity with Defined Benefit Plan Under Four Demographic Scenarios and Four Investment Earnings Assumptions

	DEFINED CONTRIBUTION RATES REQUIRED FOR BENEFIT PARITY			
	ASSUMED CAREER-AVERAGE INVESTMENT EARNINGS			
DEMOGRAPHIC SCENARIOS	5.5%	6.5%	7.5%	8.5%
Retiree Age 60 with 10 years of service	30.8%	27.1%	23.9%	21.2%
Retiree Age 60 with 20 years of service	32.7%	27.4%	23.1%	19.5%
Retiree Age 60 with 30 years of service	34.7%	27.8%	22.4%	18.0%
Retiree Age 55 with 35 years of service	39.0%	30.4%	23.6%	18.4%

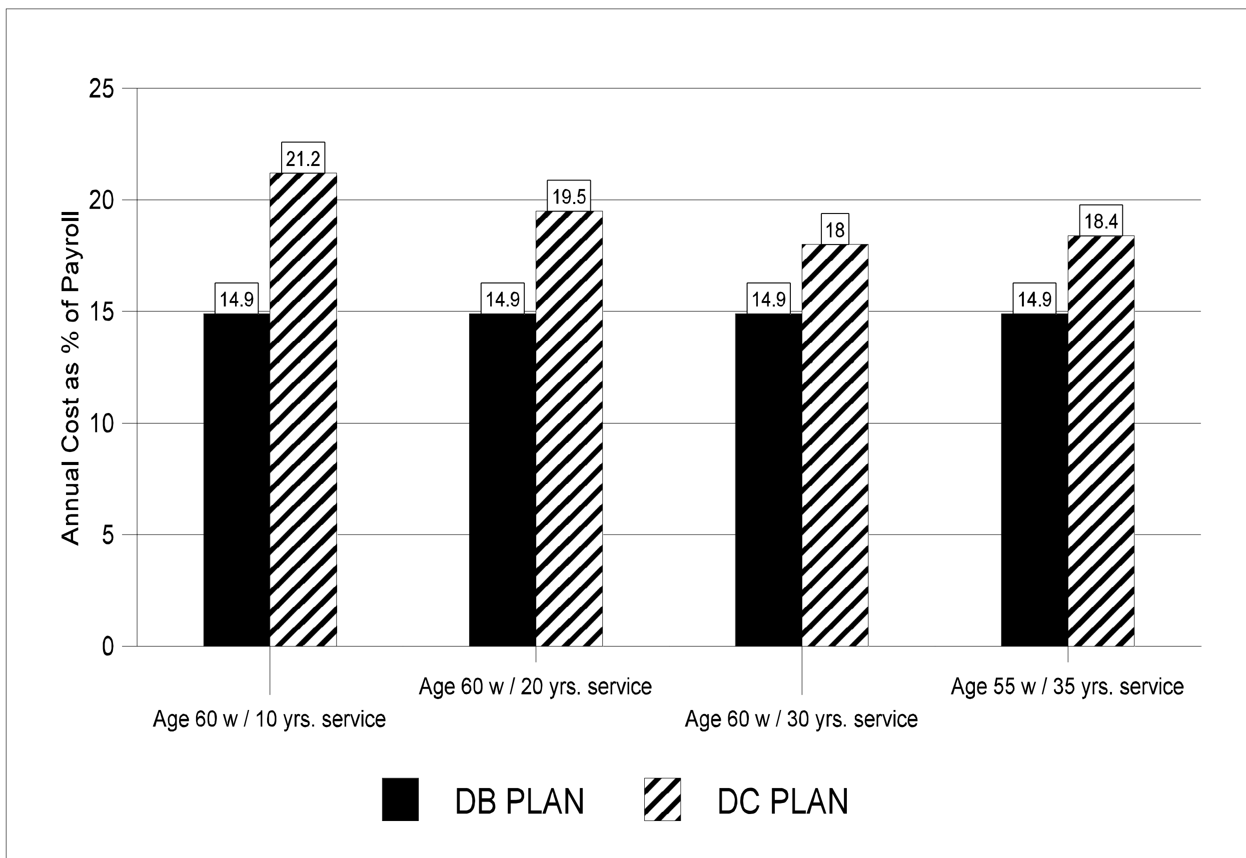
To present the information in Chart II in the context of the Commonwealth's current DB retirement systems, Graph I was developed to compare, for the selected career employee types, the cost of the current defined benefit plan of SERS and the cost of a theoretical defined contribution plan, with both plans providing the same retirement benefit for each career employee type. The current total normal cost rate for SERS (14.9%) was used as the anticipated long-term cost of the current SERS DB plan for each career employee type, and the data in the 8.5% average investment earnings column from Chart II was used as the DC plan's anticipated long-term contribution rate for each career employee type. Since the SERS normal cost rate is calculated using an 8.5% investment earnings assumption, both the DB costs and the DC costs presented in Graph I are based on the same 8.5% investment earnings assumption, which is helpful for the purpose of making comparisons. It should be noted, however, that there is a high probability that the aggregate investment earnings of the individual member accounts in the DC plan will be lower than the investment earnings of the DB plan over the working careers of the members. Accordingly, by using the DC contribution rates calculated under an 8.5% career average rate of return, Graph I compares the lowest of the long-term costs calculated for the DC plan with the long-term costs of the DB plan. Graph I shows that the costs under the theoretical defined contribution plan are consistently higher than the cost under the current defined benefit plan.

The cost differential shown in Graph I may also be examined by comparing the anticipated long-term DB contribution rate (14.9%) with each of the actual DC contribution

rates shown in Chart II. That comparison shows that the DC contribution rate exceeds the DB contribution rate by as much as 24 percent of payroll and by more than 3 percent of payroll in every instance. It is important to note that the cost differential exceeds 3 percent of payroll even when the high career-average investment earnings rate of 8.5 percent is assumed for the DC plan accounts.

Graph I

Annual Cost of DB Plan Compared to Annual Cost of DC Plan Providing the Same Benefit for Selected Career Employee Types



Resolution Objective No. 2 – Cost Considerations

"Employer cost considerations given the current fully funded status of PSERS and SERS and estimated future contribution rates pursuant to recently enacted legislation." *– House Resolution No. 266*

Estimated Future Contribution Rate of SERS and PSERS

Chart III displays the estimated basic employer contribution rate of both SERS and PSERS for the fiscal years beginning July 1, 2003, through 2012. The data shown in Chart III was provided by each retirement system and reflects the current fully funded status of each system. The estimated contribution rates also reflect the changes in pension benefits and funding requirements provided by Act 2001-9 and Act 2002-38. For SERS, the contribution rates represent the average employer contribution paid for all classes of employees, and were calculated assuming a 10% investment loss in 2002 and investment gain of 8.5% (the actuarial assumption rate) in 2003 through 2012. For PSERS, the employer contribution rates shown do not reflect the separate health care contribution. The PSERS contribution rates were calculated assuming an investment loss of 4.5% for Fiscal Year 2001/2002 and investment gains of 8.5% (the actuarial assumption rate) in subsequent fiscal years. Investment gains and losses that differ from the assumed rates of return for either system will result in variations in the projected contribution rates shown in Chart III.

Chart III
Projection of Basic Employer Contribution Rates for SERS and PSERS

Contribution Effective July 1,	SERS	PSERS
2003	2.0%	2.9%
2004	8.6	8.6
2005	15.2	13.5
2006	20.7	18.2
2007	23.6	20.4
2008	23.2	20.7
2009	22.8	20.8
2010	22.4	20.7
2011	22.0	20.4
2012	30.3	27.9

Employer Cost Considerations

The following comments on employer cost considerations are excerpted from the complete work product of the Commission's consulting actuary, David H. Killick, which is attached to this report as Appendix II.

> Under the SERS, the employer contribution requirements are determined actuarially taking into account the benefit structure as well as the current funding status of the plan. To the extent that there have been actuarial gains in prior years, the employer contribution requirement may be lower than the actual value of the benefits being earned by the current active employees. In making a comparison between the employer cost of the current defined benefit plan and the employer cost of an alternative defined contribution plan, the benefit cost, calculated without regard to the level of assets in the plan but after subtracting employee contributions to the plan, for the active employees under the SERS should be compared to the employer contribution that would be made under an alternative defined contribution plan.
>
> In order to provide comparable benefits under a defined contribution plan for employees who ultimately retire under the SERS, the employer cost of the defined contribution plan should be greater than under the defined benefit plan. One of the reasons is because under the defined benefit plan, actuarial assumptions with respect to preretirement mortality and turnover can be utilized in determining the employer cost, while under a defined contribution plan, such demographic experience does not get reflected in the employer cost until after it has occurred. Also, as previously illustrated, a defined contribution plan is more valuable to a young employee while a defined benefit plan is more valuable to an employee who is nearing retirement age. To the extent that the plan provides a vested benefit for employees who terminate after a few years of service, young, short-service employees who terminate after becoming vested under a defined contribution plan will receive a greater payout than they would receive under a defined benefit plan. In order to provide similar benefits under a defined contribution plan as are provided under a defined benefit plan to those employees who ultimately retire from the plan, a larger employer cost results [in the defined contribution plan] because of the increase in benefits provided to those employees who terminate prior to retirement.
>
> Once the employer cost under a defined contribution plan has been determined, if the investment return on plan assets is better than expected, the result will be greater benefits to the retirees, since they are bearing the investment earnings risk, instead of a decrease in employer cost, as would occur under a

defined benefit plan. On the other hand, if investment results are not as favorable as expected, the result will be reduced benefits to the retirees [in the defined contribution plan] instead of an increase in employer cost, as would occur under a defined benefit plan.

Resolution Objective No. 3 – Benefit Disbursement Experience

"National trends and studies on the degree to which employees terminating employment under DC plans liquidate their funds instead of maintaining them for retirement as well as related DB plan issues including the number of participants who enter the PSERS and the SERS, the number who earn a full benefit, who earn a reduced or partial benefit and who receive no benefit." – House Resolution No. 266

Defined Contribution Plan Experience

The Employee Benefit Research Institute (EBRI) has collected and published data on many private sector 401(k) plans over a period of years. The data distinguishes between employees that take their plan payouts as cash and those that "rollover" or retain their plan payouts in another retirement savings arrangement. Data published by EBRI indicates a 48 percent rollover rate for cash payouts in 1998, which was an increase from 40 percent in 1996 and 35 percent in 1993. While the long-term experience of private and public sector DC pension plans may not be identical, these data do provide a reasonable proxy for choices made by terminating employees covered under DC pension plans. It would appear, then, that the trend is for an increasing percentage of terminating employees to rollover their DC cash payouts into some other tax-sheltered vehicle (IRA or another tax-qualified plan).

The EBRI data also show:

- That rollover propensities increase with the size of the distribution, that is, the larger the distribution, the more likely it is that it will be rolled over into a tax-qualified vehicle. In 1998, 23 percent of distributions of less than $3,500 were rolled over, compared with 92 percent of distributions larger than $100,000.

- That the likelihood of rollover was positively correlated with the departing employee's age. In 1998, 33 percent of all distributions made to employees in their 20s were rolled over into tax-qualified vehicles while the rollover rate increased steadily to 60 percent for employees in their 50s.

- That sixty-four percent of the dollars distributed to employees in their 20s were rolled over while the percentage for those in their 50s was 89 percent.

Data on the disposition of lump-sum payments from DC pension plans was compiled by LIMRA International, a major financial services marketing and information consulting

company, and published in the January-February 2001 issue of Profit Sharing. The article, "Survey Examines Behavior of Employees Eligible for Lump-sum Payments," which was written by Lucian J. Lombardi and Anita Potter of LIMRA International, indicates that

> . . . between four and five million employees each year are eligible to receive a lump-sum payment from their retirement plans. Approximately three to four million of these employees elect to receive payments from their plans for one of the following reasons: to roll the money into an IRA, to transfer the money into their new employer plan, or to take the money in cash. Another one million employees eligible for a payment decide to leave the money in their current retirement plans.

The article discussed a recent survey conducted by LIMRA International that examined employee handling of lump-sum distributions from retirement plans in the private sector. The survey focused on employees who were 30 years of age or older and was "based on responses from 1,763 employees eligible for a lump-sum distribution from their employer's retirement plan. Of those, 1,079 had changed jobs or left the work force within the previous three years, while 684 individuals had retired during the same period."

The results of the LIMRA International survey reveal correlations very similar to those found in the EBRI reports. The LIMRA data indicates that the likelihood of a lump-sum distribution being rolled into an IRA or other qualified plan is related to the size of the distribution – the larger the distribution, the more likely the individual was to roll the distribution into another qualified plan rather than taking a cash payment. Only 3% of those individuals who changed jobs elected to take retirement plan distributions in cash when accumulated assets were more than $100,000, while 45% of employees who had accumulated less than $5,000 opted for a cash payout. The LIMRA International data was presented in several exhibits in the article, and those exhibits are aggregated in Chart IV.

Chart IV

Survey Data Regarding Disposition of Lump-Sum Retirement Distributions

DISTRIBUTION OPTIONS CHOSEN BY JOB CHANGERS BY PAYMENT SIZE			
Balance	**Cash Payment**	**Transfer to an IRA**	**Leave Funds in Employer Plan**
Less than $5,000	45%	31%	Less than 10%
More than $100,000	3%	58%	More than 33%

DISTRIBUTION OPTIONS ELECTED BY INDIVIDUALS ELIGIBLE FOR LUMP-SUM PAYMENTS		
Distribution Option Elected	**% of Job Changers**	**% of Retirees**
Transfer Assets to an IRA	38%	41%
Leave Assets in Current Pension Plan	25%	22%
Take a Cash Payment	28%	16%
Take Installment Payments	1%	21%
Transfer to New Employer's Pension Plan	8%	< than 1%

DISTRIBUTION PAYMENT AMOUNTS		
Payment Amount	**% of Job Changers**	**% of Retirees**
$250,000 or more	3%	14%
$100,000 - $249,999	3%	19%
$50,000 - $99,999	6%	20%
$25,000 - $49,999	14%	21%
$5,000 - $24,999	37%	20%
Less than $5,000	37%	6%

The LIMRA International data shows that (older) employees eligible for the distribution due to retirement tend to behave more conservatively than (younger) employees eligible for the distribution due to a change of employment. Sixteen percent of retirees elected to take cash distributions, while nearly one third of employees changing employment elected to take cash payments. Less than half of those taking cash payments saved some of the money. As discussed above, this behavioral difference between retirees and employees changing employment is related, in part, to the size of the lump-sum distributions. While only one in

eight employees in the LIMRA International survey were retirees, this group accounted for "nearly one-half of all the assets distributed; nearly 15 percent of retirees have accumulated lump-sum payments valued at $250,000 or more." Conversely, the survey showed that most employees changing jobs were eligible for lump-sum payments of less than $50,000, that half of them had accumulated less than $10,000, and that more than one third of them had accumulated less than $5,000.

In summary, there is some evidence of a trend for increased retention of cash payments from DC pension plans, although the current rate of retention is reported to be less than fifty percent. The retention rate for lump-sum distributions is impacted by the age of the recipient and the amount of the distribution. Young, mobile employees are, therefore, much less likely to retain their lump-sum distributions than older, stable employees, which is contrary to the objective of maximizing retirement benefits under the DC approach.

SERS and PSERS Experience

The consulting actuaries of both PSERS and SERS have provided the Commission with data on the history of the participants for each system in the following charts. The data requested in House Resolution Number 266 regarding the recipients of full and partial benefits is not quantifiable because of the nature of a defined benefit approach. For example, a member may work 7 years and receive a full benefit, while another member may work 27 years and receive a partial benefit. Also, a member may retire early and receive a partial benefit, while another member may retire early and receive a full benefit under an early retirement incentive program. But it is possible to provide some information on the percentage of entrants receiving and not receiving benefits.

Assuming the historical data in Chart V and Chart VI are representative of the long-term experience of the retirement systems, the combined experience of PSERS and SERS shows that approximately 40 percent of the entrants leave before vesting and receive no retirement benefit other than the return of their contributions with interest. This data would suggest that approximately 60 percent of the entrants to PSERS and SERS receive retirement benefits of some type. However, because these percentages will be impacted by the reduction in the vesting period from 10 to 5 years that was enacted with Act 9 of 2001, the projected data in Chart V and Chart VI were prepared by the actuaries of the PSERS and SERS to estimate the membership counts for future years. Although the PSERS projected data in Chart V does not evidence a change in the percentage of members terminating prior to vesting and receiving no retirement benefits, the SERS projected data in Chart VI suggests that the percentage of members terminating without receiving retirement benefits may be reduced from approximately 40 percent to approximately 25 percent.

Chart V

PSERS HISTORICAL MEMBERSHIP COUNTS FOR 1995-2001								
		Retirements				Withdrawals		
				Deferred (Vested)				
Fiscal Year	Entrants	Superan-nuation	Early	Vested Immediate Payment	Deferred to Superan-nuation	Disability	Death	Non-Vested
1995-96	15,139	4,768	298	1,007	115	387	288	7,133
1996-97	16,357	6,056	373	1,104	148	441	266	7,602
1997-98	18,940	5,166	372	1,211	141	346	229	7,938
1998-99	20,665	8,197	396	1,327	207	311	290	8,262
1999-00	25,663	3,131	466	1,215	233	313	244	9,102
2000-01	22,680	1,197	156	700	182	314	363	8,887
2001-02	21,702	6,095	2,107	2,171	196	431	313	8,323

PSERS PROJECTED MEMBERSHIP COUNTS FOR 2002-2011								
		Retirements				Withdrawals		
				Deferred (Vested)				
Fiscal Year	Entrants	Superan-nuation	Early	Vested Immediate Payment	Deferred to Superan-nuation	Disability	Death	Non-Vested
2002-03	18,060	4,042	1,435	3,332	477	434	308	8,139
2003-04	18,362	4,289	1,659	3,382	403	443	312	7,902
2004-05	18,531	4,579	1,780	3,541	406	454	315	7,469
2005-06	18,740	4,963	1,787	3,635	384	464	318	7,170
2006-07	19,447	5,211	1,793	3,397	494	457	320	7,892
2007-08	19,760	5,508	1,664	3,443	619	456	321	7,985
2008-09	20,133	5,876	1,508	3,453	586	453	322	8,137
2009-10	20,226	6,032	1,345	3,404	599	448	323	8,296
2010-11	20,190	5,986	1,228	3,398	619	443	322	8,435
2011-12	20,208	5,916	1,120	3,491	651	437	323	8,533

Explanation of Column Headings:

Entrants – New Members Enrolled During the Year
Superannuation – Members retiring from active service at superannuation age during the year; included members who retired under the "30 and Out" Window
Early – Members retiring from active service with a 3% per annum early retirement reduction
Vested Immediate Payment – Members retiring from active service with an actuarial reduction
Deferred to Superannuation – Vestees commencing payment at superannuation age
Disability – Members retiring on disability (with 5 or more years of service credit)
Death – Members dying in active service (regardless of amount of service credit)
Non-Vested – Members separating from service with less than 10 years service credit prior to 7/1/2001 and with less than 5 years service credit thereafter.

Chart VI

SERS HISTORICAL MEMBERSHIP COUNTS FOR 1996-2002								
		Retirements			Terminations			
							Withdrawals	
Year	Entrants	Superan- nuation	Early	Vestees	Disability	Death In State Service	Total .0001- 4.9999 Yrs.	Total 5.000- 9.9999 Yrs.
1996	5,513	2,194	1,378	86	426	233	1,766	460
1997	5,118	2,271	2,289	286	461	223	2,042	659
1998	6,029	2,162	1,207	93	452	208	2,296	608
1999	6,585	2,471	2,252	103	467	235	1,921	574
2000	7,455	2,079	917	131	453	200	1,960	480
2001	8,315	2,463	1,254	280	502	210	1,904	284
2002	7,052	2,389	1,631	234	550	198	1,804	0

SERS PROJECTED MEMBERSHIP COUNTS FOR 2003-2012								
		Retirements			Terminations			
							Withdrawals	
Year	Entrants	Superan- nuation	Early	Vestees	Disability	Death In State Service	Total .0001- 4.9999 Yrs.	Total 5.000- 9.9999 Yrs.
2003	6,654	2,378	1,529	234	511	198	1,804	0
2004	6,559	2,405	1,443	234	475	198	1,804	0
2005	6,725	2,586	1,440	234	463	198	1,804	0
2006	6,838	2,642	1,511	234	449	198	1,804	0
2007	7,072	2,914	1,497	234	425	198	1,804	0
2008	7,275	3,184	1,439	234	416	198	1,804	0
2009	7,397	3,356	1,399	234	407	198	1,804	0
2010	7,385	3,374	1,378	234	397	198	1,804	0
2011	7,351	3,380	1,349	234	386	198	1,804	0
2012	7,736	3,880	1,252	234	368	198	1,804	0

Explanation of Column Headings:

Entrants – New Members enrolled during the year.
Superannuation – Members who retired from active service at normal retirement age (age 50/60 or 35 years of service) during the year.
Early – Members who retired from active service prior to normal retirement age and received an early retirement reduction and members who retired under the "30 and Out" window if they had not reached normal retirement age.
Vestees – Members who deferred receipt of a retirement benefit.
Disabilities – Members who retired on disability.
Death in State Service – Members who died while actively employed (regardless of years of service).
Withdrawals – Nonvested members who withdraw their contributions and interest.

Resolution Objective No. 4 – Liability Considerations

"An analysis of the exposure to liability on the part of the Commonwealth and school employers arising out of providing employees a choice between and/or a right to convert to either a DB or DC plan, including any liability for poor investment performance in a DC plan and possible contract impairment issues." – House Resolution No. 266

The Commission requested the assistance of the legal staffs of SERS and PSERS in preparing a response to this study objective. The following discussion was contained in a memorandum dated July 3, 2002, from the Governor's Office of General Counsel to the retirement systems and is presented here verbatim. The unaltered memorandum is attached to this report as Appendix III.

Impact on Liability

The analysis regarding potential exposure of liability to the Systems and the employers must begin with an understanding of the fundamental difference between a DC plan and a DB plan.

Comparison of DB and DC Plans

Under a DB plan, such as exists at SERS and PSERS, the plan consists of a general pool of assets rather than individual dedicated accounts. The employee, upon retirement, is entitled to receive a fixed periodic payment, calculated on a pre-determined formula consisting of a percentage of final average salary times years of service. The employer bears the entire investment risk, and must cover any underfunding as a result of any shortfall that may result from the plan's investments. *See* 24 Pa.C.S. §8531 and 71 Pa.C.S. §5951 (the payment of annuities and other benefits are made an obligation of the Commonwealth).

Under a DC plan, however, the employer's contribution is fixed, and the employee receives whatever level of benefits the amount contributed will provide. An individual account for each employee is created, and benefits are based solely on the amount contributed to the employee's account. The employer's funding obligation is completed as soon as the employer makes the required contribution to the employee's account, and subsequent events have no impact on this obligation. Thus, the employee bears the entire investment risk. *See, e.g., Nachman Corp. v. PBGC,* 446 U.S. 359 (1980).

There are certainly advantages and disadvantages to each type of plan. *See, e.g.* Jonathan Barry Forman, "Public Pension: Choosing between Defined Benefit and Defined Contribution

Plans," 1999 L. Rev. M.S.U.-D.C.L. 187 (Spring 1999).[1] Even in the absence of a downturn in the market, however, an individual will usually fare worse, over time, under a DC plan than a DB plan, for two significant reasons. First, individuals tend to invest too conservatively, particularly as they approach the end of their working careers. *See* Gerald W. McEntee, "Others' Views: The Public Interest and Switch to DC Plans," Pension and Investment, June 23, 1997, at 12. Second, individuals are less likely to adequately diversify their portfolio, and less likely to recognize when to transfer funds from one type of investment to another. *See* Regina T. Jefferson, "Rethinking the Risk of Defined Contribution Plans," 4 Fla. Tax Rev. 607 (2000). *See also* John R. Neville, "Retire at Your Own Risk: ERISA's Return on Investment?," 68 St. John's L. Rev. 527, 545-46 (1994) (noting that "the majority of self-directed pension plan investors transferred funds to the stock market after it reached its high in 1987, and bailed out after the market crashed soon thereafter").

Liability for Poor Performance

This transfer of the risk of poor performance of investments from the employer to the individual, with the inevitable result of some individuals faring far worse under the DC plan than under the DB plan, will undoubtedly increase the potential liability exposure of SERS and PSERS, and indirectly the Commonwealth and school districts. Individuals who choose (or who are forced to accept) a DC plan will compare their own result to that of similarly situated employees under the DB plan, and will be quick to blame SERS and PSERS for any deficiency.

The individuals will likely claim that: (1) the investment choices offered by the Systems under the DC plan were themselves not sufficiently diversified or appropriate; (2) the Systems were negligent in selecting and monitoring the DC plan providers; or (3) the Systems did not adequately advise the individuals about their investment choices. *See* Regina T. Jefferson, "Rethinking the Risk of Defined Contribution Plans," 4 Fla. Tax Rev. 607, 630 (2000).

PSERS and SERS will be exposed to these types of suits under the Commonwealth Tort Claims Act, 42 Pa.C.S. §8521 et seq. In *Potter v. Springfield Township,* 681 A.2d 241 (Pa. Cmwlth. 1996), *appeal denied,* 547 Pa. 760, 692 A.2d 568 (1997) (involving a suit under the virtually identical Political Subdivision Tort Claims Act), members of the Township Pension Fund sought to compel the Pension Fund Trustees to refund money stolen by the Pension Fund Administrator, who had been hired by the Trustees. The complaint asserted that the Trustees failed to make reasonable and prudent efforts to ensure that the Pension Fund was adequately and soundly managed. The Court held that the Trustees were not liable for theft of funds under the

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[1] Among the advantages of a DC plan are: (1) easier and less costly to administer; (2) easy to explain to employees; (3) provides greater portability; and (4) has more immediate vesting. Among the disadvantages of a DC plan are: (1) lump-sum distributions of entire benefit tends to dissipate the assets more quickly; (2) women have a greater likelihood of outliving their benefit; (3) lack of disability annuity benefit; (4) generally poorer investment rates of return; and (5) no provision for cost-of-living adjustments.

Tort Claims Act because the Act applied only to negligent conduct, not criminal conduct. The implicit holding of the Court, however, is that trustees of pension plans will be held liable for the negligent conduct of third parties hired to administer the plan.[2]

Because the Commonwealth guarantees the DB pension benefit, and the Systems can spread out any loss incurred by a specific fund manager across the entire fund over a significant period of time, both PSERS and SERS are far less likely to be sued under the current structure by members. Indeed, individual members cannot pursue a claim, absent a showing that any such loss has actually impaired their ability to receive a benefit. *Compare Geary v. Allegheny County Retirement Board*, 426 Pa. 254, 231 A.2d 743 (1967) (theoretical possibility that payments will not be met does not give rise to cause of action) *with Dombrowski v. City of Philadelphia*, 431 Pa. 199, 245 A.2d 238 (1968) (individual member could pursue claim where the system was actually and presently unsound as a result of failure of city to appropriate sufficient funds). Under a DC plan, however, individual members are more likely to suffer a loss of benefits as a result of the mismanagement, because their funds are more directly tied to the performance of the particular manager with whom they have invested.

Direct Employer Liability

A similar legal analysis also exposes the employers in a DC plan to potential direct liability for failure to make required employer or employee contributions. One advantage of DB plans is that there are a variety of actuarially accepted funding methods and time periods. As a result, employers have some flexibility in determining how much cash needs to be contributed to the plan each funding cycle. Additionally, if any given payment of employer contributions is delayed, the Commonwealth guarantee of SERS and PSERS benefits, and the self-adjusting mechanism of the DB actuarial process, in which unfunded liabilities are paid for through future adjustments of employer contributions, mitigates against the ability of the plan participants to successfully proceed against an employer who has failed to make timely employer contributions.

Under a DC plan, however, employer contributions are a fixed percentage of compensation. There is virtually no flexibility for sponsors or employers to adopt funding methods or time periods to accommodate the fiscal needs of the employers. Employer failure to make the established contributions on time may expose the employers or the governmental sources of funding to direct liability in actions by the participants. Additionally, because of the fiduciary status of the Retirement Boards as trustees for the DC plan members, the Retirement Boards

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[2] When trustees are sued in their official or individual capacity, the Commonwealth normally indemnifies the trustees for any judgment and expenses arising out of their negligent or unintentional conduct, if they were acting within the scope of their authority and in an official capacity. See 4 Pa. Code §39.2. It is also possible for the General Assembly to reinstitute sovereign immunity for such conduct.

may themselves be compelled as a matter of law to institute action against non-performing employers. *See e.g. Dadisman v. Moore,* 384 S.E. 2d 816 (W.Va. 1988) (failure of the Board to file suit to force the Legislature to properly fund the pension plan constituted a breach of fiduciary duties). This in turn raises practical and public policy issues under the Commonwealth Attorneys Act, Act of Oct. 15, 1980, P.L. 950, No. 102, 71 P.S. §§732-101 to 732-506.

There is also the issue of the timing of employer and employee contributions as a result of changes in employment status. In a DB plan, with a fixed rate of interest, the timing of the contributions is largely irrelevant. In a DC plan, however, employees who do not have timely contributions made may seek lost opportunity earnings as part of damages in any suit or labor action against the employer. The failure to make the required employer and employee contributions may stem from as routine a matter as disputes over dismissal, reclassification or promotion. SERS and PSERS both envision that DC covered employees, who receive back pay awards on reclassification or reemployment, would seek not only the retroactive employer contributions, but also any investment returns that would have been realized had those contributions been timely made.

Education Programs

The Systems can reduce their risk of exposure by adopting a comprehensive education program describing the options available to the members. While the Systems must provide sufficient information under such a program to enable the members to make sound investment decisions, nevertheless the Systems must at the same time be careful not to render investment advice. The Systems can be held liable as a fiduciary for rendering investment advice that later proves to be incorrect or incomplete. *See, e.g.,* Mary Rowland, "Educate or Litigate: Educating Pension Plan Participants," Institutional Investor, March 1, 1995.

While "investment advice" and "investment information" can be differentiated,[3] nevertheless many individuals, who are unsophisticated investors, may, as a practical matter, be unable to distinguish between investment advice and an investment recommendation. For example, the aggressive marketing of certain investments by the approved broker or DC plan provider may be interpreted by the individual as investment advice rather than general information. *See* Jefferson, "Rethinking the Risk of Defined Contribution Plans," *supra,* at 632. If the individual relies on the information and fares poorly, the risk of suit against the Systems is increased.

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[3] Investment advice consists of recommendations pertaining to property value; investment information consists of mere information that is general in nature. Thus, providing a list of investment vehicles and instructions about the investment selection process is likely to be considered investment information, while specific recommendations about particular investments is likely to be considered investment advice. Jefferson, supra, at 631.

The Systems can also reduce their liability exposure by adopting the substantive rules and regulations of a "safe harbor" plan under section 404(c) of ERISA, 26 U.S.C. §1104(c).[4] The 404(c) Regulations, contained at 29 C.F.R. §2550.404c-1 et seq., provide that plan fiduciaries will avoid liability for investment decisions of individuals under a DC plan if the plan offers "an opportunity to choose from a broad range of investment alternatives," defined as alternatives sufficient to provide the participant with a reasonable opportunity to:

> Materially affect the potential return;
> Choose from at least 3 investment alternatives:
> - Each of which is diversified;
> - Each of which has materially different risk and return characteristics;
> - Which in the aggregate enables the participant to achieve a portfolio with aggregate risk and return characteristics within the normal range appropriate for the participant; and
>
> Diversify the investment to minimize the risk of large losses.

See 29 C.F.R. §2550.404c-1(b)(3). Adoption of such a plan is not fool proof, however. A plan fiduciary will retain liability for exercising improper influence or concealment of material nonpublic facts known by the fiduciary, or for taking instructions from a participant that is known by the fiduciary to be legally incompetent. 29 C.F.R. §2550.404c-1(c)(2). Moreover, plan fiduciaries are still liable for failure to ensure that the investment options offered are sound and that the investment managers selected are competent. 29 C.F.R. §2550.404c-1(a)(2). *See also* "Investments: Pension Plan Participants Need Education on Investments," 21 Pens. & Ben. Rep. (BNA) 775 (Apr. 18, 1994).

We also note that, on February 4, 2002, HR 3669 was introduced in Congress, entitled the "Employee Retirement Savings Bill of Rights." Under this proposal, certain pension plans would be required to notify each individual in a plan of "generally accepted investment principles, including principles of risk management and diversification." §4980G(e)(1). Although this proposal does not generally apply to governmental plans such as PSERS and SERS, nevertheless the proposal does apply to governmental 457 plans and 403(b) plans, and the proposal might be expanded to include all governmental plans with DC components.

Any educational program, of course, will be an expensive undertaking. The significant cost involved will have an impact on the Systems' finances. As discussed in the succeeding sections,

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[4] Although governmental plans are not subject to ERISA, 29 U.S.C. §1004(b)(1), nevertheless a plan meeting these requirements would probably survive a breach of fiduciary liability challenge.

this cost cannot come from the Systems' DB plan assets, but must be separately provided for under any legislation establishing a DC plan.[5]

Potential Contract Impairment and Due Process Issues

Generally, public retirement benefits are viewed as deferred compensation for work already performed, which confers upon public employees contractual rights protected by both the United States (Article 1, section 10) and Pennsylvania (Article I section 17) Constitutions.[6] *Police Officers of Hatboro v. Borough of Hatboro,* 559 A.2d 113 (Pa. Cmwlth 1989); *McKenna v. State Employees' Retirement Board,* 495 Pa. 324, 433 A.2d 871 (1981); *Catania v. State Employees' Retirement Board,* 498 Pa. 684, 450 A.2d (1982). These contractual pension rights become fixed upon the employee's entry into the system and cannot be subsequently unilaterally diminished or adversely affected, regardless of whether (1) the member is vested; or (2) the devaluation is necessary for actuarial soundness. *Association of Pa. State College and University Faculties v. State System of Higher Education,* 505 Pa. 369, 479 A.2d 962 (1984). *See also Hughes v. Public School Employees' Retirement Board*, 662 A.2d 701 (Pa. Cmwlth. 1995), *alloc. denied,* 542 Pa. 678, 668 A.2d 1139 (1995) (member has property interest in pension benefit).

Related to this concept is the Fourteenth Amendment of the United States Constitution, which prevents states from depriving a person of life, liberty, or property without due process of law. This procedural protection of property is a safeguard of the security of interests that a person has already acquired in specific benefits. *Board of Regents v. Roth,* 408 U.S. 564 (1977).

Any legislation establishing a DC plan that allows existing members to transfer assets (including employer contributions, employee contributions and investment returns on such contributions) contained in the DB plan to the newly created DC plan might have an impact on the actuarial soundness of the plan. This impact might also have an effect on the contractual and due process rights of the remaining members.

This claim, in fact, was made successfully by the Milwaukee County Pension Board in *Association of State Prosecutors v. Milwaukee County, et al.,* 199 Wis. 2d 549, 544 N.W. 2d 888 (1996), a case involving the Wisconsin Retirement System (State Plan). The Legislature, wanting to create a uniform statewide pension for all county prosecutors, enacted legislation

[5] See, e.g., 19 Montana Statutes §19-3-112(c). Montana, which has a DB retirement system for its public employees, recently enacted legislation to allow members to opt into a newly created DC plan. As part of this legislation, the Legislature established a separate contribution rate of 0.04% to pay for an education program for the DC plan alternative.

[6] The U. S. Constitution provides: "No state shall … pass any … Law impairing the Obligation of Contracts … ." The Pa. Constitution provides: "No ex post facto law, nor any law impairing the obligations of contract, … shall be passed."

requiring all prosecutors to become state employees (rather than county employees). The legislation also allowed existing prosecutors the option to remain in the county pension system (County Plan) or to transfer to the State Plan. Those who were not yet vested in the County Plan could transfer to the State Plan all employer contributions made on their behalf, along with accrued interest, from the County Plan.

The County Plan refused to transfer the funds, arguing that such a transfer would misappropriate funds held in trust exclusively for the benefit of vested employees, thereby impairing their right to receive a benefit. The Court agreed with the County Plan and declared the legislation unconstitutional. The Court's reasoning is instructive:

> Any pension plan's ability to meet its obligations can be jeopardized when funds are taken from it, since every dime is arguably part of a management strategy dependent upon spreading the fund's monies as broadly as possible. …
>
> The Association contends that, since the contributions to be transferred make up less than one-third of one percent of the County Plan's net assets, the transfer will not diminish or "take" the benefits of County Plan employees and retirees. We disagree. Governmental takings do not become exempt from due process requirements simply because they may be actuarially insignificant. …
>
> While the specific transfer of trust funds … may not immediately threaten the benefits of vested County Plan beneficiaries, the precedent set by such a transfer certainly could. … If the legislature orders contributions made "on behalf of" employees to be transferred to such new employers, the actuarial soundness of the plan could eventually suffer. …
>
> [W]e hold that vested employees and retirees have protectable property interests in their retirement trust funds which the legislature cannot simply confiscate under the circumstances of this case.

Id. at 892-896 (citations omitted). *See also Resolution Trust Corp. v. Financial Institutions Retirement Fund*, 71 F.3d 1553 (10th Cir. 1995) (employer withdrawing from a multi-employer pension plan was not permitted to withdraw its portion of a future employer contribution offset because such withdrawal would diminish the pension fund assets, a risk not tolerable under the exclusive benefit rule). The reasoning of these cases may be equally applicable to Pennsylvania, because, as noted above, Pennsylvania has also held that employees have a property interest in their retirement benefits. The existence of the Commonwealth guarantee, however, will mitigate against this type of claim.

We should note that the current version of SB 486, P.N. 513, amending the SERS Retirement Code, and SB 487, P.N. 514, amending the PSERS Retirement Code, limits the DC plan option

to new employees only. Although such limitation will avoid the argument raised in Wisconsin, nevertheless such legislation will still impair the actuarial soundness of the Systems, because future employees, who would otherwise have been mandatory members of, and contributing to, the Systems, will be excluded, thereby reducing the ability of the Systems to fund benefits.

This issue has been addressed by Montana, which recently added a DC plan alternative to their DB plan System. Montana has created a separate "plan choice rate" in the amount of 2.37% of compensation, to be added to the employer contribution rate. This plan choice rate, which will be adjusted from year to year, is designed to make up for the loss of contributions resulting from: (1) losses caused by current members transferring to the DC plan; and (2) losses caused by new members joining the DC plan that would have been required to join the DB plan. *See* 19 Montana Statutes, §19-3-2121. Through this provision, Montana can avoid the impairment issue, because the state, by paying the loss caused by members opting into the DC plan, has expressly kept the DB system from suffering any loss.

Conclusion

We have analyzed the exposure to liability on the part of the Commonwealth and school employers, as well as the Retirement Systems, arising out of legislation providing employees the choice of joining a DC plan. We have concluded that establishment of a DC plan, either as a supplement, or as an alternative, to the existing DB plans, will increase the potential liability of the Systems, the Commonwealth and the public school districts. Potential claims include the lack of diversity in the choice of approved plans, negligence in selecting and monitoring plan providers, and inadequate advice about the various investment choices.

Resolution Objective No. 5 – Fiduciary Responsibility Considerations

"An analysis of any changes in the fiduciary responsibilities and duties of the Commonwealth and school employers that may result from instituting a DC plan." – *House Resolution No. 266*

As with the preceding study objective concerning liability considerations, the Commission requested the assistance of the legal staffs of SERS and PSERS in preparing a response to this study objective. The following discussion was contained in a memorandum dated July 3, 2002, from the Governor's Office of General Counsel to the retirement systems and is presented here verbatim. The unaltered memorandum is attached to this report as Appendix III.

Impact on Fiduciary Responsibility

In determining the impact of a DC plan alternative on the Systems' fiduciary responsibilities, one must first understand the nature and extent of that duty as it exists today.

Fiduciary Standards

The Retirement Codes impose a fiduciary relationship on the Boards and its officers and employees with respect to the members of the system.[7] Under common law, fiduciaries owe two basic duties to the members of the System: (1) the duty of loyalty; and (2) the duty of prudence.

Duty of Loyalty

The duty of loyalty has been described as follows:

> [T]he most fundamental duty owed by the trustee to the beneficiaries of the trust is the duty of loyalty. This duty is imposed upon the trustee not because of any provision in the terms of the trust but because of the relationship which arises from the creation of the trust.

A. Scott, Law of Trusts § 170 at 1297 (3d Ed. 1967). This duty of loyalty means that "the trustee owes a duty to the beneficiaries to administer the affairs of the trust in the interest of the

[7] See PSERS Retirement Code, 24 Pa. C.S. §8521(e) and SERS Retirement Code, 71 Pa. C.S. §5931(e) ("The members of the board, employees of the board, and agents thereof shall stand in a fiduciary relationship to the members of the system regarding the investments and disbursements of any of the moneys of the fund …).

beneficiaries alone, and to exclude from consideration his own advantages and the welfare of third persons. G. Bogert & G. T. Bogert, Handbook on the Law of Trusts, § 95 at 343 (5th Ed. 1973). Thus, fiduciaries must seek out the course of conduct that will best serve the interests of the beneficiary.

The Internal Revenue Code also imposes a similar duty, known as the "exclusive benefit rule," upon the Systems' trustees. In fact, the exclusive benefit rule must be followed if the Systems want to retain their tax-qualified status. This rule is reproduced below:

401. Qualified pension, profit-sharing, and stock bonus plans.

(a) Requirements for qualification.--A trust created or organized in the United States and forming part of a stock bonus, pension, or profit-sharing plan of an employer for the exclusive benefit of his employees or their beneficiaries shall constitute a qualified trust under this section--

* * *

> (2) if under the trust instrument it is impossible, at any time prior to the satisfaction of all liabilities with respect to employees and their beneficiaries under the trust, for any part of the corpus or income to be (within the taxable year or thereafter) used for, or diverted to, purposes other than for the exclusive benefit of his employees or their beneficiaries . . .

26 U.S.C. § 401(a)(2).

Duty of Prudence

The standard of care to which the Systems' Boards are subject is commonly known as the "prudent person rule." This Rule was first announced in a decision by the Supreme Judicial Court of Massachusetts in *Harvard College v. Amory*, 26 Mass. (9 Pick.) 446 (1831), in which the Court explained:

> All that can be required of a trustee to invest is that he shall conduct himself faithfully and exercise a sound discretion. He is to observe how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested. Thus, courts focus on the conduct of trustees of selecting investments rather than the investment performance results.

This Rule has been adopted in Pennsylvania. *Estate of Stetson,* 463 Pa. 64, 345 A.2d 679 (1975). The Rule has also been expressly incorporated into the Retirement Codes, 24 Pa.C.S. §8521(a); 71 Pa.C.S. §5931(a), as well as the Probate, Estates and Fiduciaries Code. 20 Pa.C.S. §7302(a).

Impact on Fiduciary Responsibility

Establishment of a DC plan, either as a supplement to the existing DB plan or as an alternative to the existing DB plan, would not, in and of itself, alter the level or degree of fiduciary responsibility imposed upon the Boards. Creation of such a plan would, however, expand the range of the Boards' fiduciary responsibilities. The real question, then, is whether the expanded scope of responsibility adversely impacts the Boards' ability to manage the existing DB plan.

In this regard, the Boards must insure that the DC plan, upon adoption, will not affect the operation or the finances of the DB plan. As discussed above, any outflow of funds caused by members selecting or opting into the DC plan must be made up by the Legislature. Otherwise, the funds' actuarial soundness, and the Boards' entire investment strategy, will be impaired.

To the extent that the Systems must use funds allocated to the DB plan to operate the DC plan, the Systems may be in danger of violating the exclusive benefit rule. *See, e.g. Resolution Trust Corporation v. Financial Institutions Retirement Fund*, 71 F.3d 1553 (10th Cir. 1995) (the exclusive benefit rule is violated where plan assets are used for the benefit of anyone other than the plan participants). This argument will apply more directly if the DC plan is an alternative to the DB plan, rather than a supplement to the DB plan. If the DC plan is an exclusive alternative, then arguably the plan participants in the DB plan are not the same as the participants in the DC plan. *See e.g.,* PSERS Retirement Code §§8902(a) and 9101(d) (health insurance program funds must be maintained separately from all other retirement funds).

Conclusion

We have analyzed the impact of the establishment of a DC plan on fiduciary duties of the Commonwealth, school employers and the Retirement Systems. We have concluded that there are contract impairment and due process issues in connection with the establishment of a DC plan, especially if no provisions are made for the loss of contributions caused by members electing into the DC plan, and for the additional educational expense that will be incurred by the Systems to explain the DC plan choices.

Resolution Objective No. 6 – Nationwide Implementation Review

"A national review of DC plan implementation in the public sector from a structural standpoint including hybrid structure solutions." – House Resolution No. 266

The Commission made a national review of statewide public employee plans that covered most or all public school teachers and other public school employees and most or all state employees. Plans that covered only certain types of public school nonteaching staff, certain types of state employees (for example, judicial or public safety), only county, municipal, and other similar local government employees, or certain restricted types of state employees (for example, Georgia's Defined Contribution Plan for temporary, seasonal, and part-time employees and North Dakota's Defined Contribution Plan for unclassified state employees) were excluded from the study. Deferred compensation and similar plans which are common voluntary components of traditional defined benefit plans were not included in the review. The Commission's review identified a total of 21 DC plans in 16 states that may be categorized as follows:

Pure Defined Contribution Plans. The Commission identified nine public employee retirement systems with pure defined contribution plans. Of these, four required members to participate in the defined contribution plan and five made participation optional.

Hybrid Defined Contribution Plans. The Commission also identified twelve systems with hybrid defined contribution plans. Of these, seven were combined defined benefit—defined contribution plans, one was a money purchase option plan, and four used some other hybrid plan design.

Combined Defined Benefit—Defined Contribution Plans. A combined defined benefit—defined contribution plan can be thought of as "two plans." The employer's contribution funds a DB plan benefit and the employee's contribution funds a DC benefit. Depending upon the plan, the employee may or may not have some rights to direct how the DC portion is invested. An example of a combined defined benefit—defined contribution plan without employee right of direction that will be familiar to members of the General Assembly is the County Pension Law, which covers all counties except Allegheny and Philadelphia.

Money Purchase Option Plans. Under a money purchase option plan, a retiring member's pension is the greater of a DB pension or a DC pension based on the member's age at retirement and the member's account value at retirement. Since the employer matches the employee contributions, the employer pays for at least one-half of the member's pension. Such a plan can be advantageous to a member who terminates service before retirement age and does not withdraw the amount of the member's account.

Other Hybrid Plans. In addition to the systems' existing DB plans, two systems offer additional DC options, one system offers a variable annuity program, and one system offers both a money purchase option and an additional DC option. The California Public Employees' Retirement System offers a "Supplemental Contribution Program" that is a defined contribution program for state employees, under which contributions are made after tax and earnings are tax deferred and both are invested with the program fund. The Public Employee Retirement System of Idaho offers a "Choice Plan" that provides an account which contains the member's gain sharing distributions, any voluntary contributions the member makes, and the earnings on these. The Oregon Public Employees' Retirement System offers a "Variable Annuity Program" that permits a member to choose to place up to 75 percent of the member's contributions in a stock investment program, which results in a kind of optional, combined defined benefit—defined contribution program. The Wisconsin Retirement System offers a money purchase option plus an option permitting a member to make additional contributions to the member's account (a combined DB and DC plan option).

Chart VII

Results of National Survey of Statewide Defined Contribution Plans for Public Employees

				PLAN TYPE				MEMBERSHIP PROVISIONS			
STATE	SYSTEM	PLAN	EFFECTIVE DATE	PRIMARY (P) or SUPPLEMENTAL (S)	PURE DC	HYBRID	OTHER	MANDATORY FOR MOST EMPLOYEES	MANDATORY FOR NEW HIRES ONLY	OPTIONAL PARTICIPATION	REMARKS
Alaska	Division of Retirement and Benefits	Alaska Supplemental Annuity Plan		S	X						Plan participation is optional for certain state employees and mandatory for employees employed by a subset of 15 employers. All other state employees participate in one of Alaska's four defined benefit plans
California	California Public Employees' Retirement System	Supplemental Contributions Program Fund		S		X				X	
Colorado	Public Employees' Retirement Association of Colorado	Public Employees' Retirement Association of Colorado		P		X	X	X			Members may choose between the higher of a formula based defined benefit or money purchase benefit based upon life expectancy and total employee contributions.
Florida	Florida Retirement System	FRS Investment Plan	6/1/2002	S	X					X	Employees choose between traditional DB and new DC plan
Idaho	Public Employee Retirement System of Idaho	Choice Plan	7/1/2001	S		X				X	Funded through additional, voluntary employee contributions
Indiana	Public Employees' Retirement Fund	Public Employees' Retirement Fund	1945	P		X		X			Employer financed DB component and a member's annuity DC component funded through contributions made by the employee or by the employer on behalf of the employee
Indiana	Indiana State Teachers' Retirement Fund	Indiana State Teachers' Retirement Fund		P		X		X			Employer financed DB component and a member's annuity DC component funded through contributions made by the employee

Results of National Survey of Statewide Defined Contribution Plans for Public Employees

				PLAN TYPE				MEMBERSHIP PROVISIONS			
STATE	SYSTEM	PLAN	EFFECTIVE DATE	PRIMARY (P) or SUPPLEMENTAL (S)	PURE DC	HYBRID	OTHER	MANDATORY FOR MOST EMPLOYEES	MANDATORY FOR NEW HIRES ONLY	OPTIONAL PARTICIPATION	REMARKS
Michigan	State Employees' Retirement System	State Employees' Retirement System	4/1/1997	P	X				X		Mandatory membership for employees hired since 4/1/97; optional for all others
Montana	Montana Public Employees' Retirement System	Defined Contribution Retirement Plan	7/1/2002	S	X					X	
Nebraska	Nebraska Public Employees' Retirement System	State Employees' Retirement System	1/1/1964	P	X			X			
New Hampshire	New Hampshire Retirement System	New Hampshire Retirement System		S		X					Permits employees to make additional employee contributions to a DC component as supplement to DB plan benefits
Ohio	Public Employees' Retirement System	Defined Contribution Plan	7/1/01	P	X					X	Open to new employees and current non-vested members (less than 5 years service).
Ohio	Public Employees' Retirement System	Combined Defined Benefit/Defined Contribution Plan	7/1/03	P		X				X	Open to new hires and current non-vested members; combines DB participation with DC component
Ohio	State Teachers' Retirement System of Ohio	STRS Ohio Defined Contribution Plan	7/1/01	P	X					X	Open to new employees and current non-vested members (less than 5 years service).
Ohio	State Teachers' Retirement System	STRS Ohio Combined Plan	1/1/03	P		X				X	Open to new hires and current non-vested members; combines DB participation with DC component
Oregon	Oregon Public Employees' Retirement System	Variable Annuity Program		S		X				X	Members may elect to have up to 75% of employee contributions committed to a DC component of the DB plan

Results of National Survey of Statewide Defined Contribution Plans for Public Employees

				PLAN TYPE				MEMBERSHIP PROVISIONS			
STATE	SYSTEM	PLAN	EFFECTIVE DATE	PRIMARY (P) or SUPPLEMENTAL (S)	PURE DC	HYBRID	OTHER	MANDATORY FOR MOST EMPLOYEES	MANDATORY FOR NEW HIRES ONLY	OPTIONAL PARTICIPATION	REMARKS
South Carolina	South Carolina Retirement System	South Carolina State Optional Retirement Plan	7/1/2001	S	X					X	Eligible participants include: All full-time public school employees hired after 6/30/01; all other state and higher education employees hired after 6/30/02
Washington	Department of Retirement Systems	Public Employees' Retirement System Plan 3	3/1/2002	P		X	X		X		Washington state and teacher retirement systems employ multi-tiered benefit structures based upon dates of hire and employee type. Plan 3 is a hybrid plan composed of a DC component funded by employee contributions and a DB component funded by employer contributions.
Washington	Department of Retirement Systems	Teachers' Retirement System Plan 3	3/1/2002	P		X	X		X		Washington state and teacher retirement systems employ multi-tiered benefit structures based upon dates of hire and employee type. Plan 3 is a hybrid plan composed of a DC component funded by employee contributions and a DB component funded by employer contributions.
West Virginia	Consolidated Public Retirement Board	Teacher's Defined Contribution Plan	7/1/1991	P	X				X		Optional participation for employees hired prior to 7/1/91.
Wisconsin	Wisconsin Department of Employee Trust Funds	Wisconsin Retirement System		P		X	X	X			Employees are entitled to the higher of a formula based benefit or money purchase benefit; employees may also make additional employee contributions to a DC component of the DB plan

Resolution Objective No. 7 – Implementation Issues

"Implementation considerations and other issues pertinent to the General Assembly's consideration, such as recruitment benefits of DC plans and the State's future employment needs." – House Resolution No. 266

There are three basic scenarios or approaches applicable to the implementation of a governmental defined contribution plan, and each scenario has unique implementation issues.

Mandatory Conversion to DC Plan – With mandatory conversion to a DC plan, the existing defined benefit public pension structure would be converted to a defined contribution plan. All employees affected would be converted to the new DC plan, which would most likely involve the actuarial calculation and transfer of all or a portion of the present value of each member's retirement benefits to individual accounts within the new DC plan. The now defunct defined benefit plan would be closed to new entrants. By law, current retirees would continue to receive benefits, and any unfunded actuarial accrued liabilities associated with the payment of current retiree benefits (possibly due to plan funded status or the provision of postretirement adjustments such as cost-of-living adjustments) would continue to be funded by the Commonwealth until those liabilities are fully amortized or until all of the plan's retirees die. This scenario is regarded as the most radical and is also the least likely to be successfully implemented, particularly in Pennsylvania, where state law, legal precedents established by numerous court cases, and related contract impairment issues would likely prevent its successful implementation or result in it being struck down by the courts if it were to be implemented. As of the date of this report, the Commission is aware of no statewide retirement system that has attempted this type of mandatory conversion to a DC plan.

Mandatory Membership in DC Plan for New Entrants – Mandating DC plan membership for new employees would create a second tier of employee retirement benefits. All employees hired after a specified date would be members of the new defined contribution plan, and membership in the DC plan may or may not be offered as an option for current members. The DB plan is closed to new entrants, and it is slowly phased out over time as members retire. Retirees are unaffected by the change, as are current active members who continue to accrue benefits in the DB plan. Over time, DC plan membership steadily increases while the DB plan is gradually terminated as its members leave service. Although this scenario avoids the legal obstacles of scenario 1, it is potentially costly, since, in addition to whatever employer contributions (depending on plan design) are required of employers to fund the DC plan, any liabilities associated with the DB plan must continue to be amortized, employers will continue to be required to make contributions on behalf of the remaining DB plan active members over the course of those members' remaining careers, a period which may

span 10, 20 or 30 years, until all active DB plan members finally leave service. Furthermore, the contributions required to be paid by employers on behalf of the remaining DB plan participants will tend to rise as the pool of DB plan members declines over time. Several state pension systems have adopted a tiered approach that provides DC, reduced DB, or some combination of DB and DC benefits to employees based upon the date of hire. Two state retirement systems, the Michigan State Employees' Retirement System, and the West Virginia Teachers' Retirement System, have implemented this approach, requiring DC plan membership only to employees hired after a specified date. The Washington State Retirement System is one of the more complex tiered systems, involving several tiers with both DB and DC components, membership in which is governed by dates of employment.

Elective Membership in DC Plan for all Employees – With elective membership in the DC plan, all employees may choose between either the established DB plan or the newly created DC plan, and it appears that this currently is the most common approach adopted by state legislatures interested in providing a DC plan component as an alternative to or supplement for the existing DB plans. Several states (Florida, Montana, Ohio, and South Carolina) have recently adopted a DC component. Plan structures, membership requirements, operational components, and other provisions vary considerably among these and other plans. For example, in the state of Montana, employers make additional contributions to the Montana Public Employee Retirement System's defined benefit plan to offset that plan's unfunded actuarial accrued liability, and employees are required to make a one-time, final and binding membership election in either the DB or DC plan. In Florida, however, employer contributions to the DC plan are intended to match the normal cost of the DB plan. Employers are required to make additional contributions to fund the DC plan's disability benefits, retiree health plan, and administrative costs, but no additional contributions are required to offset the DB plan's unfunded liabilities. Employees are permitted to change membership between the DB and DC plans. Other state plans display hybrid elements, combining certain attributes of both DB and DC plans.

Policy Rationale for Implementation

In establishing a DC plan, policymakers should clearly identify and articulate the justification for, and specific objectives related to, the change in the benefit structure. The impact on various stakeholders should be given adequate consideration, including the interests of taxpayers, as the ultimate payers of costs and recipients of services provided by public employees, interests of the employees and labor organizations, interests of the employer both as representatives of all other interests and as labor manager, and the interests of potential DC account providers or managers.

Policy justifications for DC plan implementation have included the following:

Cost Containment – Implementation of a DC plan is promoted as a tool for mitigating long term retirement benefit costs attributable to the current DB structure. Employers will benefit by shifting investment risk to the employee. Because a DC plan, by definition, is always fully funded and employees are only entitled to the balance of their accounts at retirement, employers effectively emancipate themselves from the obligation to pay benefits for the retired lifetimes of plan participants, as is currently required by law under the DB structure.

Recruitment Benefits – The DC plan is promoted as a tool for recruiting certain types of employees into state service who would otherwise find the current defined benefit structure to be unappealing.

Benefit Enhancement – The DC plan is promoted as a benefit enhancement for employees, by providing shorter vesting periods, greater benefit portability, flexibility through the ability to borrow on or otherwise access funds prior to retirement, the opportunity for employees to more fully benefit from the market through self-directed investments, and the ability of short-tenure employees to accumulate substantial sums over shorter time-frames than would be the case under the DB structure.

DC Implementation Issues

The Commission has identified the following workforce management, design, IRS qualification, plan administration and other issues pertinent to the General Assembly's consideration of initiating a DC plan. The list of issues was compiled from numerous sources, including a review of the available literature, consultations with Milliman USA, one of the Commission's consulting actuaries, discussions with pension plan actuaries, and through telephone interviews with staff members representing various state-level pension plans. The issues identified may apply to one or all of the aforementioned implementation scenarios.

Workforce Management Issues

Implementation of a DC plan should be accomplished in the context of the comprehensive compensation and benefit objectives of the employer, employees, and taxpayers. Some specific issues include:

Labor Market – The total compensation package, which includes the DC plan, should reflect appropriate competitive comparisons with alternative opportunities for employment, including governmental positions in the federal government, other states, or with local governments, nonpublic or nonprofit institutions, and private employers. The potential effect on recruitment and retention of employees will depend on the comparative value of the DC plan.

Workforce Management – Numerous workforce management policies and techniques have traditionally been handled efficiently through the DB plans. Examples include early retirement incentive programs, phased retirement programs, special plan design features intended to reflect promotion and retention objectives, and bargaining positions of labor unions. The design and operational features of a DC plan would require the development of new methods for handling these issues.

Compensation Package – A new DC plan should be designed to effectively integrate all other existing and future compensation package elements, including other retirement income programs (including both qualified arrangements, such as IRC 457 or 403(b) plans, and non-qualified excess benefit plans), other retirement benefits such as disability benefits, death benefit, retiree health benefits, and other compensation and benefit components tied to pension plan membership.

Employee Demographics – All issues should take into account any significantly different employment factors (e.g., job mobility, health risk factors) relevant to certain groups of employees, such as age (DC plans are generally more favorable than DB plans for younger workers), job mobility (DC plans are generally more favorable for shorter-service employees), job classification (e.g., management v. non-management, classified service v. non-classified service employees), and other demographic distinctions (e.g., marital status, since DB plans are generally more suitable for providing benefits that can be adjusted to reflect marital status).

Benefit Adequacy and Retirement Security – A DC plan provides an employee with retirement income that is less predictable and potentially more volatile than a traditional DB plan, depending on numerous economic and demographic factors both before and after retirement. Retirement planning based on projected DC accounts tends to be less predictable and involve greater individual attention to risk management. Retirees who find that their DC account balances are proving insufficient to provide for their retirement needs are likely to petition state government for relief.

Implications of Cost-Sharing and Risk-Shifting – The potential policy and practical implications of sharing costs and risks through a DC plan on future potential compensation and benefits design should be anticipated. For example, if investment markets go through a protracted period of weakness, there could be significant pressure to have the employer make additional contributions or add new benefits to offset long-term periods of investment losses or low returns experienced by DC plan participants.

Design Issues

Participation in a new governmental DC plan should be coordinated with coverage under existing arrangements, and should anticipate the following major concerns:

Level of Contributions – The level of contributions by the employer and employees will need to be determined.

Coordination with Existing DB Plan – Will the employer's DC contributions be intended to replace some or all future DB accruals? Should a floor-offset approach or some other formal coordination method be considered?

Plan-to-Plan Transfers Between DB and DC Plans – Depending upon the DC plan implementation strategy that is ultimately adopted, DB plan members will either be required or permitted to transfer benefits earned to the DC plan. Certain plan designs may permit two-way transfers between the DC and DB plans one or more times over the course of an employee's career. The benefit valuation methods utilized for these transfers will need to be addressed as part of plan design. The impact of such transfers on other rights associated with the pre-transfer benefits, such as rights to alternative benefit disbursement options, will need to be addressed.

Mandatory or Elective Membership – Policymakers will need to determine whether participation in the DC plan will be mandatory or elective. In either case, the effects on employer costs, annual budgets, and long term pension plan funding will need to be anticipated.

New Hires and Current Participant Membership – Plan design, employer cost and employee benefit levels, administration, and many other practical issues will be affected by decisions on whether a new DC plan will be offered solely to newly hired employees, extended to all participants, or made available to only certain subsets of current or future employees.

Return to Service Issues – The treatment and membership status of employees who terminate state or school service under the current DB plan structure and later return to service following implementation of a DC plan will need to be addressed as part of the plan design.

Special Membership Classes – Enhanced benefit levels, options, or rights currently provided to certain employee subsets under the DB plan structure (e. g., members of the Judiciary, General Assembly, State Police and other public safety employees, etc.) would require special plan design attention.

Vesting – The most common vesting period for DC plans is from 3 to 5 years, but some governmental DC plans permit immediate vesting, while others require more than 5 years of participation before a member becomes vested. The vesting issue will need to be addressed as part of the plan design.

Other Retirement Programs – Coordination of the DC plan with employee eligibility for, and participation in, other retirement programs (e.g., 457 or 403(b) plans, TIAA-CREF and other alternative retirement plans) will need to be considered.

Non-Covered Employees – Under the current DB plan structure, certain employee groups, including part-time and contract employees, and employees who return to state or school service under certain emergency return-to-service provisions, are excluded from active membership. Consideration should be given to whether employee groups that are not currently covered by the DB plan will be permitted to participate in the new DC plan.

Outside Transfers Permitted – Consideration should be given to what types transfers will be permitted into the DC plan from other retirement systems (e.g., qualified plans maintained by other states governments or nongovernmental entities).

Retirement and Distribution Options – The basis for annuitization of benefits upon retirement should reflect rights and options available under the DB plan. DC plan contribution amounts and distribution options should also reflect inflation protection of benefits provided under the DB plan. Design should reflect whether the availability of distributions will be different for the DC plan, such as by allowing in-service withdrawals and plan loans based on account balances.

Other Retirement-Type Subsidies – Reflection of a DB plan's subsidized early retirement benefit levels is difficult if not impossible under a DC arrangement. Similarly, other retirement-type subsidies, such as DROP arrangements, may require special design attention.

Ancillary Benefits – Whether and how the DC plan will reflect death and disability benefits payable under the DB plan will be a major consideration. If the benefits under the DC plan are to be limited to the account balances, the absence of these ancillary benefits will need to be reflected and communicated. If postretirement health benefits are funded in part through 401(h) accounts, that arrangement cannot be used under a DC plan.

Domestic Relations Orders – Handling of domestic relations orders dividing the value of accounts generally involves different procedures for a DC plan than for a DB plan.

Pension Forfeitures – Under a DC plan, as contrasted with a DB plan, forfeitures of non-vested account balances could be used to increase the accounts of other employees.

Pick-Up Contributions – Technically, the rules for pick-up contributions do not apply to a DC plan, although careful design of a DC plan might reflect the effect of having an employer pick-up under the DB plan.

Voluntary Contributions – In addition to required member contributions, some DC plan designs permit participants to make additional, voluntary contributions. Contribution limits and procedures will need to be devised and implemented to address this issue.

Investment Alternatives – The DC plan design will need to address the degree to which employees will be permitted to self-direct investments. The number and types of permissible investment alternatives will need to be addressed in any plan design.

Service Purchase Credits – Under the DB plan structure, employees may purchase and receive service credit for certain types of prior service. Incorporation of service purchases in a DC plan would require special attention to additional design, administration, and communication issues.

Future DB Plan Amendments – Consideration should be given to the treatment of DC plan participants if the DB plan is subsequently amended, such as to provide an ad hoc cost-of-living adjustment, to increase or reduce benefit levels, or to modify any other benefit, right, or feature.

Comparisons with Other Defined Benefit Alternatives – In addition to comparing a DC plan with the existing DB plan, comparisons should be made with other potential DB designs, notably with hybrid DB designs that might reflect DC design and operation (e.g., cash balance plan design).

IRS Qualification Issues

A new DC plan should be designed to satisfy the governmental plan requirements for favorable tax qualification under IRC 401. These requirements include:

Designation of Plan Type – A DC plan must make a designation of its type under the Internal Revenue Code.

Contribution Limitations – Employer-provided amounts will be limited on the basis of contributions rather than benefits. Effects on highly compensated or long-service employees will differ depending on factors such as age, plan design, and actuarial assumptions.

Minimum Required Distributions – Rules for making required distributions upon retirement differ significantly for a DC plan as compared with a DB plan.

Potential Penalties for Loss of Tax-Qualified Treatment – If a governmental plan is disqualified, vested members would be taxed on contributions or accruals, depending on the plan type. Although actions to prevent this contingency are anticipated, potential exposure should be recognized.

Plan Administration Issues

The administration issues associated with implementation of a DC plan include:

Administrative Responsibility – Consideration should be given to assignment of oversight and administrative responsibility for the new DC plan. Selection of investment advisors and potential outsourcing of administrative functions will also need to be considered.

Coordination with DB Plan Administration – Administration of plan participation, plan elections, distributions, and other functions will need to be coordinated with administration of the DB plan.

Elections and Transactions – Existing election forms (e.g., participation forms, beneficiary election forms, distribution authorization forms) for the DB plan will need to be reviewed and altered as appropriate. Maintaining complete and accurate records of all DC elections, transactions and other information involves data and procedures that are different from those used in the DB plan.

Financial Administration – Withholding any voluntary employee contributions, transfer of all employer and employee amounts to appropriate fund managers, transfers between different investment funds based on employee elections, determination of investment gains and losses within funds, payment of distributions to employees and beneficiaries, and payment of any administrative fees are among the financial administration functions and transactions that must be handled.

Tax Administration – Different procedures will need to be developed for the DC plan relating to tax-related transactions, such as upon distribution of amounts from the DC plan.

Other Issues

Other implementation issues include the following:

Transition Communications – Description of the new plan, education about transfer options and other elections, and other information relating to the establishment of the DC plan must be communicated to employees.

Investment Education – Both at transition and on an on-going basis, the introduction and operation of a DC plan will necessitate programs to provide employee education about DC account investment decisions.

Legal Documents – A written plan must be established for the DC plan. Trust documents and other legal documents must also be drafted and adopted.

Budgeting – Potential differences between the DB plan and a DC plan on internal budget principles and procedures should be addressed.

Accounting – Under GASB standards, the cost for a DC plan is essentially the amount of employer contributions to the plan, as contrasted with an actuarial cost determined for the DB plan. Other accounting rules, including required disclosures, are also different between the two plan types.

Plan Amendment Considerations – Future amendment or termination of a DC plan involves conceptual and practical issues that differ from those relevant to a DB plan.

PART III

APPENDICES

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June 28, 2002

Mr. Anthony W. Salomone
Executive Director
Public Employee Retirement Commission
P.O.Box 1429
Harrisburg, PA 17105-1429

Re: House Resolution No. 266

Dear Tony:

Pursuant to engagement, I have prepared calculations to illustrate benefit comparisons between defined benefit plans and defined contribution plans to assist the Commission in preparing a report pursuant to House Resolution No. 266. In preparing the benefit comparisons between a defined benefit plan and a defined contribution plan, I have utilized the benefit formula under the State Employees' Retirement System (SERS) that is currently in effect, namely, a benefit of 2.5% of the average of the highest three years of compensation, multiplied by the number of years of service completed by the member.

Under a defined benefit plan, the pension benefit that is to be provided to a member is defined by the benefit formula included in the plan. The benefit is generally payable for the lifetime of the retired member so that he is guaranteed a certain level of income so long as he continues to live. The SERS is a defined benefit plan such that the benefit payable to a member upon retirement is defined by the benefit formula and is payable throughout the retiree's lifetime.

A defined benefit plan is funded by the plan sponsor, sometimes after taking into account employee contributions, based upon actuarial calculations that include assumptions of future demographic and economic experience. The contributions accumulate with investment earnings to provide the pool of funds that will be used to pay the benefits promised to the members of the plan. In determining the annual contributions needed to properly fund the plan, an assumption as to the amount of earnings on plan assets is made. To the extent that the actual investment earnings are greater than the assumed investment earnings, future contributions can be decreased; however, if the actual investment earnings are less than the assumed investment earnings, future contributions must be increased to cover the shortfall of investment earnings. Thus, the plan sponsor bears the investment earnings risk since the benefit that is paid to the member is defined by formula and is not affected by the investment earnings on plan assets.

Under a defined contribution plan, the contribution that is made to the plan each year is fixed and the benefit that is paid to the member upon retirement is dependent upon the contributions and investment earnings on those contributions during the period of membership in the plan. The employee bears the investment earnings risk since his benefit is dependent upon the investment earnings on plan assets. The longer the period of membership, the greater the amount of benefit that can be accumulated due to the longer period of time during which contributions made during the initial years of membership are invested.

Under a defined contribution plan, actuarial assumptions are not required since the contribution is fixed and the benefit is variable based upon the level of contributions and the investment earnings on such contributions. However, in order to determine the level of contributions that are required under a defined contribution plan in order to provide a benefit at retirement that is similar to a benefit determined under a defined benefit plan, an assumption of the investment earnings on the contributions made to a defined contribution plan must be made. The higher the rate of assumed investment earnings, the lower the rate of contribution that will be required in order to provide a certain level of benefits at retirement.

The illustrations that follow have been prepared utilizing four assumptions of annual investment earnings on plan assets. These assumptions are 5.5%, 6.5%, 7.5%, and 8.5%. Based upon these assumptions, the illustrations indicate the expected benefit that can be provided under a defined contribution plan for a certain level of annual contribution; however, when reviewing the illustrations, it should be remembered that the actual benefit to be provided will only be equal to the illustrated benefit based upon the stated level of contribution if the actual investment earnings of the plan are equal to the assumed investment earnings.

Schedule I shows the benefits comparison under a defined contribution plan versus a defined benefit plan for an employee who is hired at age 50 with annual compensation of $30,000 and who retires at age 60 after completion of 10 years of service. Such employee's annual compensation is assumed to increase by 6.8% per year during his period of employment. Under the SERS benefit formula, such employee would be entitled to an annual pension for life beginning at age 60 equal to $12,713. This benefit is calculated as 2.5% of the average of his highest three years of compensation multiplied by his ten years of service.

In determining the annual contribution that would be required under a defined contribution plan to provide a similar benefit, I have assumed that the annual contributions would be made at the end of each year of service and the contributions would accumulate with the assumed investment earnings to provide a lump sum upon retirement that would be

converted to an annual benefit payable for life based upon assumed mortality in accordance with the GA 1983 Table.

Based upon assumed annual investment earnings of 5.5%, if an annual contribution equal to 30.815% of compensation is made to a defined contribution plan for this employee, he would accumulate $158,255 over his ten years of service as of age 60. The single premium annuity factor to convert the lump sum into an annual benefit payable for the lifetime of the employee beginning at age 60 is 12.4484. This results in an annual benefit beginning at age 60 of $12,713, similar to the benefit the employee would have earned under the SERS benefit formula.

Schedule I illustrates that as the assumed investment earnings, both preretirement and postretirement, are increased, the annual defined contribution percentage can be decreased with the defined contribution plan accumulating sufficient funds to provide an annual benefit of $12,713 to the employee beginning at age 60. The annual defined contribution percentage can be decreased because of the increase in the investment earnings on the contributions made to the plan. If it is assumed that the annual investment earnings will be 8.5%, the annual defined contribution percentage that is required to accumulate sufficient funds to provide the similar benefit drops to 21.205%.

Schedule II shows the benefits comparison for an employee who is hired at age 40 with annual compensation of $30,000 and who retires at age 60 after completion of 20 years of service. Again, such employee's annual compensation is assumed to increase by 6.8% per year during his period of employment. Under the SERS benefit formula, such employee would be entitled to an annual pension for life beginning at age 60 equal to $49,091.

Based upon assumed annual investment earnings of 5.5%, if an annual contribution equal to 32.701% of compensation is made to a defined contribution plan for this employee, he would accumulate $611,111 over his 20 years of service as of age 60. This would be sufficient to provide him with an annual benefit beginning at age 60 of $49,092, which is approximately similar to the benefit the employee would have earned under the SERS benefit formula.

Schedule III shows the benefits comparison for an employee who is hired at age 30 with annual compensation of $30,000 and who retires at age 60 after completion of 30 years of service. Again, such employee's annual compensation is assumed to increase by 6.8% per year during his period of employment. Under the SERS benefit formula, such employee would be entitled to an annual pension for life beginning at age 60 equal to $142,169.

Based upon assumed annual investment earnings of 5.5%, if an annual contribution equal to 34.658% of compensation is made to a defined contribution plan for this employee, he would accumulate $1,769,812 over his 30 years of service as of age 60. This would be

sufficient to provide him with an annual benefit beginning at age 60 of $142,172, which is approximately similar to the benefit the employee would have earned under the SERS benefit formula.

When comparing the defined contribution illustrations shown on Schedules I, II, and III, it should be noted that the defined contribution percentage that is needed to provide similar benefits decreases as the assumed investment earnings increase.

Schedule IV shows the benefits comparison for an employee who is hired at age 20 with annual compensation of $30,000 and who retires at age 55 after completion of 35 years of service. Again, such employee's annual compensation is assumed to increase by 6.8% per year during his period of employment. Under the SERS benefit formula, such employee would be entitled to an annual pension for life beginning at age 55 equal to $230,466.

Based upon assumed annual investment earnings of 5.5%, if an annual contribution equal to 39.046% of compensation is made to a defined contribution plan for this employee, he would accumulate $3,141,130 over his 35 years of service as of age 55. The single premium annuity factor to convert the lump sum into an annual benefit payable for the lifetime of the employee beginning at age 55 is 13.6294. This results in an annual benefit beginning at age 55 of $230,467, which is approximately similar to the benefit the employee would have earned under the SERS benefit formula.

Under a defined benefit plan, postretirement cost-of-living adjustments are sometimes granted to retired members to reflect the decrease in purchasing power of the retirees' pensions due to inflation. If such cost-of-living adjustments are granted on an ad hoc basis, the adjustments are funded by the plan sponsor after they have been granted. If the cost-of-living adjustments are automatic, the plan sponsor funds the cost of such adjustments over the working lifetimes of the employees who will be receiving the cost-of-living adjustments after retirement.

Under SERS, ad hoc postretirement cost-of-living adjustments have been granted generally equal to 50% of the increase in the Consumer Price Index. Since postretirement cost-of-living adjustments are part of the value of the benefits provided under the SERS, a comparison of similar benefits provided by a defined contribution plan needs to take into account the value of such postretirement cost-of-living adjustments. Inclusion of the value of postretirement cost-of-living adjustments under a defined contribution plan requires an increase in the annual defined contribution percentage since this value must be accumulated while the employee is receiving contributions to the plan during his period of employment.

Schedules V–VIII show the same benefits comparisons as Schedules I–IV, but include the value of assumed postretirement cost-of-living adjustments of 1.75% per year granted

every five years under the SERS. This is reflected through an increased single premium annuity factor used to convert the lump sum accumulation under a defined contribution plan into an annual benefit at retirement.

When comparing the defined contribution illustrations shown on Schedule V with those shown on Schedule I, it should be noted that the defined contribution percentage based upon assumed annual investment earnings of 5.5% increases from 30.815% to 35.533%. This increase in the defined contribution percentage is solely attributable to the accumulations needed to provide the value of the assumed postretirement cost-of-living adjustments.

Employer Cost Considerations

Under the SERS, the employer contribution requirements are determined actuarially taking into account the benefit structure as well as the current funding status of the plan. To the extent that there have been actuarial gains in prior years, the employer contribution requirement may be lower than the actual value of the benefits being earned by the current active employees. In making a comparison between the employer cost of the current defined benefit plan and the employer cost of an alternative defined contribution plan, the benefit cost, calculated without regard to the level of assets in the plan but after subtracting employee contributions to the plan, for the active employees under the SERS should be compared to the employer contribution that would be made under an alternative defined contribution plan.

In order to provide comparable benefits under a defined contribution plan for employees who ultimately retire under the SERS, the employer cost of the defined contribution plan should be greater than under the defined benefit plan. One of the reasons is because under the defined benefit plan, actuarial assumptions with respect to preretirement mortality and turnover can be utilized in determining the employer cost, while under a defined contribution plan, such demographic experience does not get reflected in the employer cost until after it has occurred. Also, as previously illustrated, a defined contribution plan is more valuable to a young employee while a defined benefit plan is more valuable to an employee who is nearing retirement age. To the extent that the plan provides a vested benefit for employees who terminate after a few years of service, young, short-service employees who terminate after becoming vested under a defined contribution plan will receive a greater payout than they would receive under a defined benefit plan. In order to provide similar benefits under a defined contribution plan as are provided under a defined benefit plan to those employees who ultimately retire from the plan, a larger employer cost results because of the increase in benefits provided to those employees who terminate prior to retirement.

Once the employer cost under a defined contribution plan has been determined, if the investment return on plan assets is better than expected, the result will be greater benefits to the retirees. These greater benefits result in a higher employer cost since under a defined benefit plan, the benefits would not be increased, but rather the employer cost in future years would be decreased due to the favorable investment performance. On the other hand, if investment results are not as favorable as expected, the result will not be an increase in employer cost, as would be the case under a defined benefit plan, but rather the benefits provided to the retirees would be less.

Implementation Considerations

If the Commonwealth makes a decision to convert the existing defined benefit plan to a defined contribution plan, there are issues concerned with the implementation of the conversion that will need to be addressed. Employees who are close to retirement age will generally receive lower benefits after the conversion to a defined contribution plan. This is because the value of benefit accruals they receive under the defined benefit plan generally exceeds the annual contributions that are allocated to their accounts under a defined contribution plan. Consideration may be given to grandfather employees who have attained a specified age which is near retirement age such that they receive benefits of no less value than what they would have received had the defined benefit plan remained in effect.

Due to the investment returns of the last 20 years, many employees may view a conversion to a defined contribution plan as being favorable to them. In this instance, communication of a change to the employees may be easy. However, if investment returns generated by pension plans in the next few years are negative, employees may be more inclined to receive their retirement benefits from a defined benefit plan where such benefits are guaranteed and the employer bears the investment earnings risk. In this instance, communication of a change to a defined contribution plan could prove difficult.

If the Commonwealth desires to recruit young employees in future years, a defined contribution plan will prove to be more effective in recruiting and retaining such employees than will a defined benefit plan since a defined contribution plan provides more valuable benefits to younger employees. If the Commonwealth wishes to attract and retain older, more experienced employees in the future, conversion to a defined contribution plan will make employment with the Commonwealth less attractive to such employees.

Consideration could also be given to maintaining two retirement plans, a defined benefit plan and a defined contribution plan. Every employee would have the opportunity to elect one of the two plans in which to participate. This would require extensive communications to each employee in order to allow the employee the opportunity to make a decision that is in his best interest. Also, this approach would prove to be very expensive based upon an

assumption that each employee would choose the plan that would provide him with the more valuable benefit based upon his expectation of future employment with the Commonwealth.

With best regards,

Yours sincerely,

David H. Killick, F.S.A.
Consulting Actuary

DHK:smf
Encl.

Schedule I

Employee is hired at age 50 with annual compensation of $30,000
Employee retires at age 60 with 10 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($47,547 + $50,780 + $54,233)/3 = $50,853)
Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $50,853 x 10 = $12,713)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		30.815%		27.065%		23.898%		21.205%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
50	$30,000	$9,245	$9,245	$8,120	$8,120	$7,169	$7,169	$6,362	$6,362
51	$32,040	$9,873	$19,626	$8,672	$17,319	$7,657	$15,364	$6,794	$13,696
52	$34,219	$10,544	$31,250	$9,261	$27,706	$8,178	$24,694	$7,256	$22,117
53	$36,546	$11,262	$44,230	$9,891	$39,398	$8,734	$35,280	$7,749	$31,746
54	$39,031	$12,027	$58,690	$10,564	$52,522	$9,328	$47,253	$8,276	$42,721
55	$41,685	$12,845	$74,763	$11,282	$67,218	$9,962	$60,759	$8,839	$55,191
56	$44,519	$13,719	$92,594	$12,049	$83,637	$10,639	$75,955	$9,440	$69,323
57	$47,547	$14,652	$112,338	$12,869	$101,942	$11,363	$93,014	$10,082	$85,298
58	$50,780	$15,648	$134,165	$13,744	$122,311	$12,135	$112,126	$10,768	$103,316
59	$54,233	$16,712	$158,255	$14,678	$144,940	$12,961	$133,496	$11,500	$123,598
Single Premium Annuity Factor			12.4484		11.4012		10.5011		9.7221
Annual Benefit at Age 60			$12,713		$12,713		$12,713		$12,713

Schedule II

Employee is hired at age 40 with annual compensation of $30,000
Employee retires at age 60 with 20 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($91,798 + $98,040 + $104,707)/3 = $98,182)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $98,182 x 20 = $49,091)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		32.701%		27.447%		23.119%		19.535%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
40	$30,000	$9,810	$9,810	$8,234	$8,234	$6,936	$6,936	$5,861	$5,861
41	$32,040	$10,477	$20,827	$8,794	$17,563	$7,407	$14,863	$6,259	$12,618
42	$34,219	$11,190	$33,163	$9,392	$28,097	$7,911	$23,889	$6,685	$20,375
43	$36,546	$11,951	$46,937	$10,031	$39,954	$8,449	$34,130	$7,139	$29,246
44	$39,031	$12,763	$62,282	$10,713	$53,264	$9,024	$45,713	$7,625	$39,356
45	$41,685	$13,631	$79,339	$11,441	$68,167	$9,637	$58,778	$8,143	$50,845
46	$44,519	$14,558	$98,261	$12,219	$84,817	$10,292	$73,479	$8,697	$63,863
47	$47,547	$15,548	$119,214	$13,050	$103,380	$10,992	$89,982	$9,288	$78,580
48	$50,780	$16,606	$142,376	$13,938	$124,038	$11,740	$108,471	$9,920	$95,179
49	$54,233	$17,735	$167,941	$14,885	$146,985	$12,538	$129,144	$10,594	$113,864
50	$57,921	$18,941	$196,119	$15,897	$172,437	$13,391	$152,221	$11,315	$134,857
51	$61,859	$20,229	$227,134	$16,979	$200,624	$14,301	$177,939	$12,084	$158,404
52	$66,066	$21,604	$261,230	$18,133	$231,797	$15,274	$206,558	$12,906	$184,774
53	$70,558	$23,073	$298,671	$19,366	$266,230	$16,312	$238,362	$13,784	$214,264
54	$75,356	$24,642	$339,741	$20,683	$304,218	$17,422	$273,661	$14,721	$247,197
55	$80,480	$26,318	$384,744	$22,089	$346,082	$18,606	$312,792	$15,722	$283,931
56	$85,953	$28,108	$434,013	$23,592	$392,169	$19,871	$356,122	$16,791	$324,856
57	$91,798	$30,019	$487,902	$25,196	$442,856	$21,223	$404,054	$17,933	$370,401
58	$98,040	$32,060	$546,797	$26,909	$498,550	$22,666	$457,024	$19,152	$421,037
59	$104,707	$34,240	$611,111	$28,739	$559,695	$24,207	$515,508	$20,454	$477,280
Single Premium Annuity Factor			12.4484		11.4012		10.5011		9.7221
Annual Benefit at Age 60			$49,092		$49,091		$49,091		$49,092

Schedule III

Employee is hired at age 30 with annual compensation of $30,000
Employee retires at age 60 with 30 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($177,233 + $189,285 + $202,156)/3 = $189,558)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $189,558 x 30 = $142,169)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		34.658%		27.832%		22.357%		17.958%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
30	$30,000	$10,397	$10,397	$8,350	$8,350	$6,707	$6,707	$5,387	$5,387
31	$32,040	$11,104	$22,074	$8,917	$17,810	$7,163	$14,373	$5,754	$11,599
32	$34,219	$11,860	$35,147	$9,524	$28,491	$7,650	$23,102	$6,145	$18,730
33	$36,546	$12,666	$49,746	$10,171	$40,514	$8,170	$33,005	$6,563	$26,885
34	$39,031	$13,527	$66,010	$10,863	$54,011	$8,726	$44,206	$7,009	$36,179
35	$41,685	$14,447	$84,087	$11,602	$69,123	$9,319	$56,841	$7,486	$46,740
36	$44,519	$15,430	$104,142	$12,391	$86,007	$9,953	$71,057	$7,995	$58,708
37	$47,547	$16,479	$126,348	$13,233	$104,831	$10,630	$87,017	$8,538	$72,237
38	$50,780	$17,599	$150,897	$14,133	$125,778	$11,353	$104,896	$9,119	$87,496
39	$54,233	$18,796	$177,992	$15,094	$149,047	$12,125	$124,888	$9,739	$104,672
40	$57,921	$20,074	$207,856	$16,120	$174,856	$12,949	$147,204	$10,401	$123,970
41	$61,859	$21,439	$240,727	$17,217	$203,438	$13,830	$172,074	$11,109	$145,617
42	$66,066	$22,897	$276,864	$18,387	$235,049	$14,770	$199,750	$11,864	$169,858
43	$70,558	$24,454	$316,545	$19,638	$269,965	$15,775	$230,506	$12,671	$196,967
44	$75,356	$26,117	$360,072	$20,973	$308,486	$16,847	$264,641	$13,532	$227,242
45	$80,480	$27,893	$407,769	$22,399	$350,937	$17,993	$302,482	$14,453	$261,010
46	$85,953	$29,790	$459,986	$23,922	$397,670	$19,217	$344,385	$15,435	$298,631
47	$91,798	$31,815	$517,101	$25,549	$449,068	$20,523	$390,737	$16,485	$340,500
48	$98,040	$33,979	$579,520	$27,287	$505,544	$21,919	$441,961	$17,606	$387,048
49	$104,707	$36,289	$647,683	$29,142	$567,546	$23,409	$498,517	$18,803	$438,751
50	$111,827	$38,757	$722,062	$31,124	$635,560	$25,001	$560,907	$20,082	$496,126
51	$119,431	$41,392	$803,168	$33,240	$710,111	$26,701	$629,676	$21,447	$559,745
52	$127,552	$44,207	$891,550	$35,500	$791,769	$28,517	$705,419	$22,906	$630,229
53	$136,226	$47,213	$987,798	$37,914	$881,149	$30,456	$788,782	$24,463	$708,262
54	$145,489	$50,424	$1,092,551	$40,493	$978,916	$32,527	$880,467	$26,127	$794,591
55	$155,383	$53,853	$1,206,494	$43,246	$1,085,791	$34,739	$981,241	$27,904	$890,035
56	$165,949	$57,514	$1,330,365	$46,187	$1,202,555	$37,101	$1,091,935	$29,801	$995,489
57	$177,233	$61,425	$1,464,961	$49,328	$1,330,048	$39,624	$1,213,455	\$31,828	$1,111,933
58	$189,285	$65,602	$1,611,136	$52,682	$1,469,183	$42,318	$1,346,782	$33,992	$1,240,439
59	$202,156	$70,063	$1,769,812	$56,264	$1,620,944	$45,196	$1,492,987	$36,303	$1,382,179
Single Premium Annuity Factor			12.4484		11.4012		10.5011		9.7221
Annual Benefit at Age 60			$142,172		$142,173		$142,174		$142,169

Schedule IV

Employee is hired at age 20 with annual compensation of $30,000
Employee retires at age 55 with 35 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($246,264 + $263,010 + $280,895)/3 = $263,390)

Annual defined benefit payable at age 55 = 2.5% x FAC x years of service (.025 x $263,390 x 35 = $230,466)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		39.046%		30.389%		23.637%		18.365%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
20	$30,000	$11,714	$11,714	$9,117	$9,117	$7,091	$7,091	$5,510	$5,510
21	$32,040	$12,510	$24,868	$9,737	$19,446	$7,573	$15,196	$5,884	$11,862
22	$34,219	$13,361	$39,597	$10,399	$31,109	$8,088	$24,424	$6,284	$19,154
23	$36,546	$14,270	$56,045	$11,106	$44,237	$8,638	$34,894	$6,712	$27,494
24	$39,031	$15,240	$74,367	$11,861	$58,973	$9,226	$46,737	$7,168	$36,999
25	$41,685	$16,276	$94,733	$12,668	$75,474	$9,853	$60,095	$7,655	$47,800
26	$44,519	$17,383	$117,327	$13,529	$93,909	$10,523	$75,126	$8,176	$60,038
27	$47,547	$18,565	$142,345	$14,449	$114,462	$11,239	$91,999	$8,732	$73,874
28	$50,780	$19,827	$170,001	$15,431	$137,333	$12,003	$110,901	$9,326	$89,479
29	$54,233	$21,176	$200,527	$16,481	$162,741	$12,819	$132,038	$9,960	$107,044
30	$57,921	$22,616	$234,172	$17,602	$190,920	$13,691	$155,632	$10,637	$126,780
31	$61,859	$24,154	$271,205	$18,798	$222,128	$14,622	$181,926	$11,360	$148,917
32	$66,066	$25,796	$311,917	$20,077	$256,643	$15,616	$211,186	$12,133	$173,708
33	$70,558	$27,550	$356,623	$21,442	$294,767	$16,678	$243,703	$12,958	$201,431
34	$75,356	$29,424	$405,661	$22,900	$336,827	$17,812	$279,792	$13,839	$232,392
35	$80,480	$31,424	$459,396	$24,457	$383,178	$19,023	$319,800	$14,780	$266,925
36	$85,953	$33,561	$518,224	$26,120	$434,205	$20,317	$364,102	$15,785	$305,399
37	$91,798	$35,843	$582,570	$27,896	$490,325	$21,698	$413,108	$16,859	$348,217
38	$98,040	$38,281	$652,892	$29,793	$551,989	$23,174	$467,264	$18,005	$395,820
39	$104,707	$40,884	$729,685	$31,819	$619,688	$24,750	$527,059	$19,229	$448,695
40	$111,827	$43,664	$813,482	$33,983	$693,951	$26,433	$593,021	$20,537	$507,371
41	$119,431	$46,633	$904,856	$36,294	$775,351	$28,230	$665,727	$21,934	$572,431
42	$127,552	$49,804	$1,004,427	$38,762	$864,511	$30,150	$745,806	$23,425	$644,512
43	$136,226	$53,191	$1,112,862	$41,398	$962,102	$32,200	$833,941	$25,018	$724,314
44	$145,489	$56,808	$1,230,877	$44,213	$1,068,851	$34,389	$930,876	$26,719	$812,599
45	$155,383	$60,671	$1,359,246	$47,219	$1,185,546	$36,728	$1,037,420	$28,536	$910,206
46	$165,949	$64,796	$1,498,801	$50,430	$1,313,037	$39,225	$1,154,452	$30,476	$1,018,050
47	$177,233	$69,202	$1,650,437	$53,859	$1,452,243	$41,893	$1,282,928	$32,549	$1,137,134
48	$189,285	$73,908	$1,815,120	$57,522	$1,604,161	$44,741	$1,423,889	$34,762	$1,268,552
49	$202,156	$78,934	$1,993,885	$61,433	$1,769,865	$47,784	$1,578,465	$37,126	$1,413,505
50	$215,903	$84,302	$2,187,850	$65,611	$1,950,517	$51,033	$1,747,882	$39,651	$1,573,304
51	$230,584	$90,034	$2,398,216	$70,072	$2,147,373	$54,503	$1,933,477	$42,347	$1,749,381
52	$246,264	$96,156	$2,626,274	$74,837	$2,361,789	$58,209	$2,136,697	$45,226	$1,943,305
53	$263,010	$102,695	$2,873,414	$79,926	$2,595,232	$62,168	$2,359,117	$48,302	$2,156,788
54	$280,895	$109,678	$3,141,130	$85,361	$2,849,283	$66,395	$2,602,446	$51,586	$2,391,701
Single Premium Annuity Factor			13.6294		12.3631		11.2917		10.3776
Annual Benefit at Age 55			$230,467		$230,467		$230,474		$230,468

Schedule V

Employee is hired at age 50 with annual compensation of $30,000
Employee retires at age 60 with 10 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table
Assumed postretirement cost-of-living adjustments of 1.75% per year granted every 5 years

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($47,547 + $50,780 + $54,233)/3 = $50,853)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $50,853 x 10 = $12,713)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		35.533%		30.906%		27.045%		23.798%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
50	$30,000	$10,660	$10,660	$9,272	$9,272	$8,114	$8,114	$7,139	$7,139
51	$32,040	$11,385	$22,631	$9,902	$19,777	$8,665	$17,387	$7,625	$15,371
52	$34,219	$12,159	$36,035	$10,576	$31,638	$9,254	$27,946	$8,143	$24,821
53	$36,546	$12,986	$51,002	$11,295	$44,989	$9,884	$39,925	$8,697	$35,628
54	$39,031	$13,869	$67,676	$12,063	$59,976	$10,556	$53,476	$9,289	$47,945
55	$41,685	$14,812	$86,210	$12,883	$76,758	$11,274	$68,760	$9,920	$61,940
56	$44,519	$15,819	$106,771	$13,759	$95,506	$12,040	$85,957	$10,595	$77,800
57	$47,547	$16,895	$129,538	$14,695	$116,409	$12,859	$105,263	$11,315	$95,728
58	$50,780	$18,044	$154,706	$15,694	$139,669	$13,733	$126,891	$12,085	$115,950
59	$54,233	$19,271	$182,486	$16,761	$165,509	$14,667	$151,075	$12,906	$138,712
Single Premium Annuity Factor			14.3538		13.0186		11.8833		10.9108
Annual Benefit at Age 60			$12,713		$12,713		$12,713		$12,713

Schedule VI

Employee is hired at age 40 with annual compensation of $30,000
Employee retires at age 60 with 20 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table
Assumed postretirement cost-of-living adjustments of 1.75% per year granted every 5 years

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($91,798 + $98,040 + $104,707)/3 = $98,182)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $98,182 x 20 = $49,091)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		37.706%		31.341%		26.162%		21.923%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
40	$30,000	$11,312	$11,312	$9,402	$9,402	$7,849	$7,849	$6,577	$6,577
41	$32,040	$12,081	$24,015	$10,042	$20,055	$8,382	$16,820	$7,024	$14,160
42	$34,219	$12,903	$38,238	$10,724	$32,083	$8,952	$27,033	$7,502	$22,865
43	$36,546	$13,780	$54,121	$11,454	$45,622	$9,561	$38,622	$8,012	$32,821
44	$39,031	$14,717	$71,815	$12,233	$60,820	$10,211	$51,730	$8,557	$44,167
45	$41,685	$15,718	$91,482	$13,064	$77,838	$10,906	$66,515	$9,139	$57,060
46	$44,519	$16,786	$113,300	$13,953	$96,850	$11,647	$83,151	$9,760	$71,670
47	$47,547	$17,928	$137,460	$14,902	$118,047	$12,439	$101,826	$10,424	$88,186
48	$50,780	$19,147	$164,167	$15,915	$141,635	$13,285	$122,748	$11,132	$106,814
49	$54,233	$20,449	$193,645	$16,997	$167,839	$14,188	$146,143	$11,889	$127,783
50	$57,921	$21,840	$226,135	$18,153	$196,901	$15,153	$172,257	$12,698	$151,342
51	$61,859	$23,325	$261,898	$19,387	$229,087	$16,184	$201,360	$13,561	$177,768
52	$66,066	$24,911	$301,213	$20,706	$264,683	$17,284	$233,746	$14,484	$207,362
53	$70,558	$26,605	$344,384	$22,114	$304,001	$18,459	$269,736	$15,468	$240,456
54	$75,356	$28,414	$391,739	$23,617	$347,379	$19,715	$309,681	$16,520	$277,415
55	$80,480	$30,346	$443,631	$25,223	$395,182	$21,055	$353,962	$17,644	$318,639
56	$85,953	$32,409	$500,440	$26,939	$447,807	$22,487	$402,996	$18,843	$364,567
57	$91,798	$34,613	$562,577	$28,770	$505,685	$24,016	$457,237	$20,125	$415,680
58	$98,040	$36,967	$630,486	$30,727	$569,281	$25,649	$517,179	$21,493	$472,506
59	$104,707	$39,481	$704,643	$32,816	$639,101	$27,393	$583,361	$22,955	$535,624
Single Premium Annuity Factor			14.3538		13.0186		11.8833		10.9108
Annual Benefit at Age 60			$49,091		$49,091		$49,091		$49,091

Schedule VII

Employee is hired at age 30 with annual compensation of $30,000
Employee retires at age 60 with 30 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table
Assumed postretirement cost-of-living adjustments of 1.75% per year granted every 5 years

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($177,233 + $189,285 + $202,156)/3 = $189,558)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $189,558 x 30 = $142,169)

Defined Contribution Plan Alternatives

Investment Earnings	5.50%	6.50%	7.50%	8.50%
Defined Contribution Percentage	39.962%	31.780%	25.299%	20.154%

Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
30	$30,000	$11,989	$11,989	$9,534	$9,534	$7,590	$7,590	$6,046	$6,046
31	$32,040	$12,804	$25,452	$10,182	$20,336	$8,106	$16,265	$6,457	$13,017
32	$34,219	$13,674	$40,526	$10,875	$32,533	$8,657	$26,142	$6,896	$21,020
33	$36,546	$14,604	$57,359	$11,614	$46,261	$9,246	$37,348	$7,365	$30,173
34	$39,031	$15,597	$76,112	$12,404	$61,672	$9,874	$50,023	$7,866	$40,603
35	$41,685	$16,658	$96,956	$13,247	$78,928	$10,546	$64,321	$8,401	$52,456
36	$44,519	$17,791	$120,079	$14,148	$98,207	$11,263	$80,408	$8,972	$65,887
37	$47,547	$19,001	$145,684	$15,110	$119,701	$12,029	$98,467	$9,583	$81,070
38	$50,780	$20,293	$173,989	$16,138	$143,619	$12,847	$118,699	$10,234	$98,195
39	$54,233	$21,673	$205,231	$17,235	$170,190	$13,720	$141,322	$10,930	$117,472
40	$57,921	$23,146	$239,665	$18,407	$199,659	$14,653	$166,575	$11,673	$139,130
41	$61,859	$24,720	$277,567	$19,659	$232,296	$15,650	$194,717	$12,467	$163,423
42	$66,066	$26,401	$319,235	$20,996	$268,391	$16,714	$226,035	$13,315	$190,629
43	$70,558	$28,196	$364,989	$22,423	$308,260	$17,851	$260,838	$14,220	$221,053
44	$75,356	$30,114	$415,177	$23,948	$352,245	$19,064	$299,466	$15,187	$255,030
45	$80,480	$32,162	$470,174	$25,577	$400,717	$20,361	$342,286	$16,220	$292,927
46	$85,953	$34,349	$530,382	$27,316	$454,080	$21,745	$389,703	$17,323	$335,149
47	$91,798	$36,684	$596,237	$29,173	$512,768	$23,224	$442,155	$18,501	$382,138
48	$98,040	$39,179	$668,209	$31,157	$577,255	$24,803	$500,119	$19,759	$434,379
49	$104,707	$41,843	$746,803	$33,276	$648,053	$26,490	$564,118	$21,103	$492,403
50	$111,827	$44,688	$832,566	$35,539	$725,715	$28,291	$634,718	$22,538	$556,795
51	$119,431	$47,727	$926,084	$37,955	$810,842	$30,215	$712,537	$24,070	$628,193
52	$127,552	$50,973	$1,027,991	$40,536	$904,082	$32,269	$798,247	$25,707	$707,296
53	$136,226	$54,439	$1,138,969	$43,293	$1,006,140	$34,464	$892,579	$27,455	$794,872
54	$145,489	$58,140	$1,259,753	$46,237	$1,117,776	$36,807	$996,330	$29,322	$891,758
55	$155,383	$62,094	$1,391,133	$49,381	$1,239,812	$39,310	$1,110,365	$31,316	$998,873
56	$165,949	$66,316	$1,533,962	$52,738	$1,373,138	$41,983	$1,235,625	$33,445	$1,117,222
57	$177,233	$70,826	$1,689,156	$56,325	$1,518,717	$44,838	$1,373,135	$35,720	$1,247,906
58	$189,285	$75,642	$1,857,701	$60,155	$1,677,589	$47,887	$1,524,008	$38,149	$1,392,126
59	$202,156	$80,786	$2,040,661	$64,245	$1,850,877	$51,144	$1,689,452	$40,743	$1,551,200

Single Premium Annuity Factor	14.3538	13.0186	11.8833	10.9108
Annual Benefit at Age 60	$142,169	$142,172	$142,170	$142,171

Schedule VIII

Employee is hired at age 20 with annual compensation of $30,000
Employee retires at age 55 with 35 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table
Assumed postretirement cost-of-living adjustments of 1.75% per year granted every 5 years

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($246,264 + $263,010 + $280,895)/3 = $263,390)

Annual defined benefit payable at age 55 = 2.5% x FAC x years of service (.025 x $263,390 x 35 = $230,466)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		45.983%		35.352%		27.189%		20.910%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
20	$30,000	$13,795	$13,795	$10,606	$10,606	$8,157	$8,157	$6,273	$6,273
21	$32,040	$14,733	$29,287	$11,327	$22,622	$8,711	$17,480	$6,700	$13,506
22	$34,219	$15,735	$46,632	$12,097	$36,189	$9,304	$28,095	$7,155	$21,809
23	$36,546	$16,805	$66,002	$12,920	$51,461	$9,936	$40,138	$7,642	$31,304
24	$39,031	$17,947	$87,579	$13,798	$68,604	$10,612	$53,760	$8,161	$42,127
25	$41,685	$19,168	$111,564	$14,736	$87,800	$11,334	$69,126	$8,716	$54,424
26	$44,519	$20,471	$138,171	$15,738	$109,245	$12,104	$86,415	$9,309	$68,359
27	$47,547	$21,863	$167,634	$16,809	$133,155	$12,927	$105,824	$9,942	$84,111
28	$50,780	$23,350	$200,204	$17,952	$159,762	$13,807	$127,567	$10,618	$101,879
29	$54,233	$24,938	$236,153	$19,172	$189,319	$14,745	$151,880	$11,340	$121,878
30	$57,921	$26,634	$275,775	$20,476	$222,100	$15,748	$179,019	$12,111	$144,349
31	$61,859	$28,445	$319,388	$21,869	$258,405	$16,819	$209,264	$12,935	$169,554
32	$66,066	$30,379	$367,333	$23,356	$298,557	$17,963	$242,921	$13,814	$197,780
33	$70,558	$32,445	$419,981	$24,944	$342,907	$19,184	$280,325	$14,754	$229,345
34	$75,356	$34,651	$477,731	$26,640	$391,836	$20,489	$321,838	$15,757	$264,596
35	$80,480	$37,007	$541,014	$28,451	$445,757	$21,882	$367,857	$16,828	$303,916
36	$85,953	$39,524	$610,293	$30,386	$505,117	$23,370	$418,816	$17,973	$347,721
37	$91,798	$42,211	$686,071	$32,452	$570,402	$24,959	$475,186	$19,195	$396,472
38	$98,040	$45,082	$768,886	$34,659	$642,138	$26,656	$537,482	$20,500	$450,673
39	$104,707	$48,147	$859,323	$37,016	$720,893	$28,469	$606,261	$21,894	$510,874
40	$111,827	$51,421	$958,007	$39,533	$807,284	$30,405	$682,136	$23,383	$577,681
41	$119,431	$54,918	$1,065,615	$42,221	$901,978	$32,472	$765,768	$24,973	$651,757
42	$127,552	$58,652	$1,182,876	$45,092	$1,005,699	$34,680	$857,881	$26,671	$733,828
43	$136,226	$62,641	$1,310,575	$48,159	$1,119,228	$37,038	$959,260	$28,485	$824,688
44	$145,489	$66,900	$1,449,557	$51,433	$1,243,412	$39,557	$1,070,762	$30,422	$925,209
45	$155,383	$71,450	$1,600,733	$54,931	$1,379,164	$42,247	$1,193,316	$32,491	$1,036,342
46	$165,949	$76,308	$1,765,081	$58,666	$1,527,476	$45,120	$1,327,935	$34,700	$1,159,131
47	$177,233	$81,497	$1,943,658	$62,655	$1,689,418	$48,188	$1,475,718	$37,059	$1,294,716
48	$189,285	$87,039	$2,137,598	$66,916	$1,866,146	$51,465	$1,637,861	$39,580	$1,444,347
49	$202,156	$92,958	$2,348,123	$71,466	$2,058,912	$54,964	$1,815,665	$42,271	$1,609,387
50	$215,903	$99,279	$2,576,549	$76,326	$2,269,067	$58,702	$2,010,542	$45,145	$1,791,330
51	$230,584	$106,030	$2,824,289	$81,516	$2,498,072	$62,694	$2,224,026	$48,215	$1,991,808
52	$246,264	$113,240	$3,092,864	$87,059	$2,747,506	$66,957	$2,457,785	$51,494	$2,212,606
53	$263,010	$120,940	$3,383,912	$92,979	$3,019,074	$71,510	$2,713,628	$54,995	$2,455,673
54	$280,895	$129,164	$3,699,191	$99,302	$3,314,616	$76,373	$2,993,523	$58,735	$2,723,140
Single Premium Annuity Factor			16.0508		14.3819		12.9889		11.8156
Annual Benefit at Age 55			$230,468		$230,471		$230,468		$230,470

Schedule IX

Employee is hired at age 32 with annual compensation of $22,655
Employee retires at age 58 with 26 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($102,873 + $109,869 + $117,340)/3 = $110,027)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $110,027 x 26 = $71,518)

Annual defined benefit payable at age 58 = $62,879 ($71,518 x .8792)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		30.964%		25.206%		20.565%		16.809%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
32	$22,655	$7,015	$7,015	$5,710	$5,710	$4,659	$4,659	$3,808	$3,808
33	$24,196	$7,492	$14,893	$6,099	$12,180	$4,976	$9,984	$4,067	$8,199
34	$25,841	$8,001	$23,713	$6,513	$19,485	$5,314	$16,047	$4,344	$13,239
35	$27,598	$8,545	$33,563	$6,956	$27,708	$5,676	$22,926	$4,639	$19,004
36	$29,475	$9,127	$44,535	$7,429	$36,939	$6,061	$30,707	$4,954	$25,573
37	$31,479	$9,747	$56,732	$7,935	$47,274	$6,474	$39,484	$5,291	$33,038
38	$33,620	$10,410	$70,262	$8,474	$58,821	$6,914	$49,359	$5,651	$41,498
39	$35,906	$11,118	$85,244	$9,050	$71,695	$7,384	$60,445	$6,035	$51,060
40	$38,347	$11,874	$101,807	$9,666	$86,021	$7,886	$72,864	$6,446	$61,846
41	$40,955	$12,681	$120,087	$10,323	$101,936	$8,422	$86,752	$6,884	$73,987
42	$43,740	$13,544	$140,236	$11,025	$119,587	$8,995	$102,253	$7,352	$87,628
43	$46,714	$14,465	$162,413	$11,775	$139,134	$9,607	$119,529	$7,852	$102,929
44	$49,891	$15,448	$186,794	$12,575	$160,754	$10,260	$138,754	$8,386	$120,064
45	$53,283	$16,499	$213,566	$13,431	$184,633	$10,958	$160,118	$8,956	$139,226
46	$56,906	$17,621	$242,933	$14,344	$210,978	$11,703	$183,829	$9,565	$160,626
47	$60,776	$18,819	$275,113	$15,319	$240,011	$12,499	$210,115	$10,216	$184,495
48	$64,909	$20,098	$310,342	$16,361	$271,973	$13,349	$239,222	$10,911	$211,087
49	$69,323	$21,465	$348,876	$17,473	$307,124	$14,256	$271,420	$11,652	$240,682
50	$74,037	$22,925	$390,989	$18,662	$345,749	$15,226	$307,002	$12,445	$273,585
51	$79,071	$24,484	$436,977	$19,931	$388,153	$16,261	$346,289	$13,291	$310,131
52	$84,448	$26,148	$487,159	$21,286	$434,669	$17,367	$389,627	$14,195	$350,686
53	$90,190	$27,927	$541,880	$22,733	$485,656	$18,548	$437,397	$15,160	$395,655
54	$96,323	$29,826	$601,509	$24,279	$541,503	$19,809	$490,010	$16,191	$445,477
55	$102,873	$31,854	$666,445	$25,930	$602,631	$21,156	$547,917	$17,292	$500,634
56	$109,869	$34,020	$737,120	$27,694	$669,496	$22,595	$611,605	$18,468	$561,656
57	$117,340	$36,333	$813,994	$29,577	$742,589	$24,131	$681,607	$19,724	$629,120
Single Premium Annuity Factor			12.9452		11.8097		10.8398		10.0052
Annual Benefit at Age 58			$62,880		$62,880		$62,880		$62,879

Schedule X

Employee is hired at age 32 with annual compensation of $22,655
Employee retires at age 58 with 26 years of service
Annual compensation increases by 6.8% per year
Postretirement mortality based upon GA1983 Table
Assumed postretirement cost-of-living adjustments of 1.75% per year granted every 5 years

Defined Benefit Plan

FAC = Average of highest 3 years of compensation (($102,873 + $109,869 + $117,340)/3 = $110,027)

Annual defined benefit payable at age 60 = 2.5% x FAC x years of service (.025 x $110,027 x 26 = $71,518)

Annual defined benefit payable at age 58 = $62,879 ($71,518 x .8792)

Defined Contribution Plan Alternatives

Investment Earnings		5.50%		6.50%		7.50%		8.50%	
Defined Contribution Percentage		36.036%		29.020%		23.443%		18.987%	
Age	Annual Compensation	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance	Current Annual Contribution	EOY Balance
32	$22,655	$8,164	$8,164	$6,574	$6,574	$5,311	$5,311	$4,302	$4,302
33	$24,196	$8,719	$17,332	$7,022	$14,023	$5,672	$11,381	$4,594	$9,261
34	$25,841	$9,312	$27,597	$7,499	$22,434	$6,058	$18,293	$4,906	$14,955
35	$27,598	$9,945	$39,060	$8,009	$31,901	$6,470	$26,135	$5,240	$21,466
36	$29,475	$10,621	$51,830	$8,554	$42,528	$6,910	$35,005	$5,596	$28,887
37	$31,479	$11,344	$66,025	$9,135	$54,428	$7,380	$45,010	$5,977	$37,319
38	$33,620	$12,115	$81,771	$9,756	$67,722	$7,881	$56,267	$6,383	$46,875
39	$35,906	$12,939	$99,208	$10,420	$82,544	$8,417	$68,904	$6,817	$57,676
40	$38,347	$13,819	$118,483	$11,128	$99,037	$8,990	$83,062	$7,281	$69,860
41	$40,955	$14,758	$139,758	$11,885	$117,360	$9,601	$98,892	$7,776	$83,574
42	$43,740	$15,762	$163,207	$12,693	$137,682	$10,254	$116,563	$8,305	$98,983
43	$46,714	$16,834	$189,017	$13,556	$160,187	$10,951	$136,257	$8,870	$116,266
44	$49,891	$17,979	$217,391	$14,478	$185,078	$11,696	$158,172	$9,473	$135,621
45	$53,283	$19,201	$248,549	$15,463	$212,571	$12,491	$182,526	$10,117	$157,266
46	$56,906	$20,507	$282,726	$16,514	$242,902	$13,341	$209,556	$10,805	$181,438
47	$60,776	$21,901	$320,177	$17,637	$276,328	$14,248	$239,520	$11,540	$208,400
48	$64,909	$23,391	$361,177	$18,837	$313,126	$15,217	$272,701	$12,324	$238,438
49	$69,323	$24,981	$406,023	$20,117	$353,596	$16,251	$309,405	$13,162	$271,868
50	$74,037	$26,680	$455,034	$21,485	$398,065	$17,356	$349,966	$14,057	$309,034
51	$79,071	$28,494	$508,555	$22,946	$446,886	$18,537	$394,750	$15,013	$350,315
52	$84,448	$30,432	$566,958	$24,507	$500,440	$19,797	$444,154	$16,034	$396,126
53	$90,190	$32,501	$630,641	$26,173	$559,142	$21,143	$498,609	$17,124	$446,921
54	$96,323	$34,711	$700,038	$27,953	$623,440	$22,581	$558,586	$18,289	$503,199
55	$102,873	$37,071	$775,611	$29,854	$693,817	$24,117	$624,596	$19,533	$565,503
56	$109,869	$39,592	$857,862	$31,884	$770,799	$25,757	$697,197	$20,861	$634,432
57	$117,340	$42,285	$947,329	$34,052	$854,953	$27,508	$776,995	$22,279	$710,637
Single Premium Annuity Factor			15.0658		13.5969		12.3569		11.3016
Annual Benefit at Age 58			$62,879		$62,879		$62,879		$62,879

Appendix III

July 3, 2002, Memorandum from Governor's Office of General Counsel Regarding Liability and Fiduciary Considerations

COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM
STATE EMPLOYEES' RETIREMENT SYSTEM
Office of Chief Counsel
Governor's Office of General Counsel

DATE: July 3, 2002

SUBJECT: House Resolution 266 – Analysis of Legal Issues Relating to Defined Contribution Plans

TO: Dale H. Everhart
Executive Director
Public School Employees'
Retirement System

John Brosius
Executive Director
State Employees'
Retirement System

FROM: Charles K. Serine
Deputy Chief Counsel
Public School Employees'
Retirement System

Through Thomas E. Ross
Chief Counsel
Public School Employees'
Retirement System

Nicholas Joseph Marcucci
Deputy Chief Counsel
State Employees' Retirement
System

Through Harold H. Dunbar
Chief Counsel
State Employees' Retirement
System

Introduction and Background

You have asked the Public School Employees' Retirement System ("PSERS") and the State Employees' Retirement System ("SERS") to jointly respond to certain legal issues raised in paragraphs four and five of House Resolution 266.

Specifically, the General Assembly, in paragraph four, seeks an analysis of the exposure to liability on the part of the Commonwealth and school employers arising out of legislation providing employees a choice between and/or a right to convert to either a Defined Benefit ("DB") plan or Defined Contribution ("DC") plan, including any liability for poor investment performance in a DC plan and possible contract impairment issues.

The General Assembly, in paragraph five, seeks an analysis of any changes in the fiduciary responsibilities and duties of the Commonwealth and school employers that may result from instituting a DC plan.

Although both paragraphs mention only the Commonwealth and school employers, nevertheless we believe that non-Commonwealth employers (*e.g.*, various independent authorities) will be implicated, as well as PSERS and SERS. The Retirement Systems will no doubt be required to select, and monitor the performance of, the DC plan providers. The Commonwealth and/or school employers may be secondarily liable, because ultimately, they would bear the brunt of any

financial loss incurred by the Systems. In addition, there is a potential for the Systems' fund assets to be adversely impacted by the creation of a DC plan, which in turn may cause changes in the investment decisions of the Systems.

The extent of the liability exposure may depend on whether employees are given a choice to join a DC plan, and on whether the choice is offered to existing employees (either with or without an option to convert from the prior DB plan to the DC plan) or to new employees only on a prospective basis. The extent of the exposure may also depend on whether the DC plan is offered as an exclusive plan or as a supplement to the DB plan.[1]

Finally, there may also be some tax-related issues for current members who elect to transfer into a DC plan, and tax qualification issues for the fund itself as a result of such changes, but we do not view these issues as within the scope of the request.[2] Accordingly, we have not addressed these issues in this response.

Impact on Liability

The analysis regarding potential exposure of liability to the Systems and the employers must begin with an understanding of the fundamental difference between a DC plan and a DB plan.

Comparison of DB and DC Plans

Under a DB plan, such as exists at SERS and PSERS, the plan consists of a general pool of assets rather than individual dedicated accounts. The employee, upon retirement, is entitled to receive a fixed periodic payment, calculated on a pre-determined formula consisting of a percentage of final average salary times years of service. The employer bears the entire investment risk, and must cover any underfunding as a result of any shortfall that may result from the plan's investments. *See* 24 Pa.C.S. §8531 and 71 Pa.C.S. §5951 (the payment of annuities and other benefits are made an obligation of the Commonwealth).

Under a DC plan, however, the employer's contribution is fixed, and the employee receives whatever level of benefits the amount contributed will provide. An individual account for each employee is created, and benefits are based solely on the amount contributed to the employee's account. The employer's funding obligation is completed as soon as the employer makes the required contribution to the employee's account, and subsequent events have no impact on this obligation. Thus, the employee bears the entire investment risk. *See, e.g., Nachman Corp. v. PBGC,* 446 U.S. 359 (1980).

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[1] For certain employee groups in the SERS System, any change may be problematic. For example, there are limits on the prospective amendment of judges' pensions. *See Goodheart v. Casey,* 565 A.2d 757 (Pa. 1989). State police pensions have also been given special treatment under collective bargaining agreements that may make changes difficult to implement. *See Commonwealth v. Conference of State Police Lodges,* 525 Pa. 40, 575 A.2d 94 (1990).

[2] For example, there may be tax-related issues concerning the treatment of employee contributions and the treatment of deemed employer contributions on a conversion to a DC plan.

There are certainly advantages and disadvantages to each type of plan. *See, e.g.* Jonathan Barry Forman, "Public Pension: Choosing between Defined Benefit and Defined Contribution Plans," 1999 L. Rev. M.S.U.-D.C.L. 187 (Spring 1999).[3] Even in the absence of a downturn in the market, however, an individual will usually fare worse, over time, under a DC plan than a DB plan, for two significant reasons. First, individuals tend to invest too conservatively, particularly as they approach the end of their working careers. *See* Gerald W. McEntee, "Others' Views: The Public Interest and Switch to DC Plans," Pension and Investment, June 23, 1997, at 12. Second, individuals are less likely to adequately diversify their portfolio, and less likely to recognize when to transfer funds from one type of investment to another. *See* Regina T. Jefferson, "Rethinking the Risk of Defined Contribution Plans," 4 Fla. Tax Rev. 607 (2000). *See also* John R. Neville, "Retire at Your Own Risk: ERISA's Return on Investment?," 68 St. John's L. Rev. 527, 545-46 (1994) (noting that "the majority of self-directed pension plan investors transferred funds to the stock market after it reached its high in 1987, and bailed out after the market crashed soon thereafter").

Liability for Poor Performance

This transfer of the risk of poor performance of investments from the employer to the individual, with the inevitable result of some individuals faring far worse under the DC plan than under the DB plan, will undoubtedly increase the potential liability exposure of SERS and PSERS, and indirectly the Commonwealth and school districts. Individuals who choose (or who are forced to accept) a DC plan will compare their own result to that of similarly situated employees under the DB plan, and will be quick to blame SERS and PSERS for any deficiency.

The individuals will likely claim that: (1) the investment choices offered by the Systems under the DC plan were themselves not sufficiently diversified or appropriate; (2) the Systems were negligent in selecting and monitoring the DC plan providers; or (3) the Systems did not adequately advise the individuals about their investment choices. *See* Regina T. Jefferson, "Rethinking the Risk of Defined Contribution Plans," 4 Fla. Tax Rev. 607, 630 (2000).

PSERS and SERS will be exposed to these types of suits under the Commonwealth Tort Claims Act, 42 Pa.C.S. §8521 et seq. In *Potter v. Springfield Township,* 681 A.2d 241 (Pa. Cmwlth. 1996), *appeal denied,* 547 Pa. 760, 692 A.2d 568 (1997) (involving a suit under the virtually identical Political Subdivision Tort Claims Act), members of the Township Pension Fund sought to compel the Pension Fund Trustees to refund money stolen by the Pension Fund Administrator, who had been hired by the Trustees. The complaint asserted that the Trustees failed to make reasonable and prudent efforts to ensure that the Pension Fund was adequately and soundly

[3] Among the advantages of a DC plan are: (1) easier and less costly to administer; (2) easy to explain to employees; (3) provides greater portability; and (4) has more immediate vesting. Among the disadvantages of a DC plan are: (1) lump sum distributions of entire benefit tends to dissipate the assets more quickly; (2) women have a greater likelihood of outliving their benefit; (3) lack of disability annuity benefit; (4) generally poorer investment rates of return; and (5) no provision for cost of living adjustments.

managed. The Court held that the Trustees were not liable for theft of funds under the Tort Claims Act because the Act applied only to negligent conduct, not criminal conduct. The implicit holding of the Court, however, is that trustees of pension plans will be held liable for the negligent conduct of third parties hired to administer the plan.[4]

Because the Commonwealth guarantees the DB pension benefit, and the Systems can spread out any loss incurred by a specific fund manger across the entire fund over a significant period of time, both PSERS and SERS are far less likely to be sued under the current structure by members. Indeed, individual members cannot pursue a claim, absent a showing that any such loss has actually impaired their ability to receive a benefit. *Compare Geary v. Allegheny County Retirement Board*, 426 Pa. 254, 231 A.2d 743 (1967) (theoretical possibility that payments will not be met does not give rise to cause of action) *with Dombrowski v. City of Philadelphia*, 431 Pa. 199, 245 A.2d 238 (1968) (individual member could pursue claim where the system was actually and presently unsound as a result of failure of city to appropriate sufficient funds). Under a DC plan, however, individual members are more likely to suffer a loss of benefits as a result of the mismanagement, because their funds are more directly tied to the performance of the particular manager with whom they have invested.

Direct Employer Liability

A similar legal analysis also exposes the employers in a DC plan to potential direct liability for failure to make required employer or employee contributions. One advantage of DB plans is that there are a variety of actuarially accepted funding methods and time periods. As a result, employers have some flexibility in determining how much cash needs to be contributed to the plan each funding cycle. Additionally, if any given payment of employer contributions is delayed, the Commonwealth guarantee of SERS and PSERS benefits, and the self-adjusting mechanism of the DB actuarial process, in which unfunded liabilities are paid for through future adjustments of employer contributions, mitigates against the ability of the plan participants to successfully proceed against an employer who has failed to make timely employer contributions.

Under a DC plan, however, employer contributions are a fixed percentage of compensation. There is virtually no flexibility for sponsors or employers to adopt funding methods or time periods to accommodate the fiscal needs of the employers. Employer failure to make the established contributions on time may expose the employers or the governmental sources of funding to direct liability in actions by the participants. Additionally, because of the fiduciary status of the Retirement Boards as trustees for the DC plan members, the Retirement Boards may themselves be compelled as a matter of law to institute action against non-performing employers. *See e.g. Dadisman v. Moore,* 384 S.E. 2d 816 (W.Va. 1988) (failure of the Board to file suit to force the Legislature to properly fund the pension plan constituted a breach of fiduciary duties).

[4] When trustees are sued in their official or individual capacity, the Commonwealth normally indemnifies the trustees for any judgment and expenses arising out of their negligent or unintentional conduct, if they were acting within the scope of their authority and in an official capacity. *See* 4 Pa. Code §39.2. It is also possible for the General Assembly to reinstitute sovereign immunity for such conduct.

This in turn raises practical and public policy issues under the Commonwealth Attorneys Act, Act of Oct. 15, 1980, P.L. 950, No. 102, 71 P.S. §§732-101 to 732-506.

There is also the issue of the timing of employer and employee contributions as a result of changes in employment status. In a DB plan, with a fixed rate of interest, the timing of the contributions is largely irrelevant. In a DC plan, however, employees who do not have timely contributions made may seek lost opportunity earnings as part of damages in any suit or labor action against the employer. The failure to make the required employer and employee contributions may stem from as routine a matter as disputes over dismissal, reclassification or promotion. SERS and PSERS both envision that DC covered employees, who receive back pay awards on reclassification or reemployment, would seek not only the retroactive employer contributions, but also any investment returns that would have been realized had those contributions been timely made.

Education Programs

The Systems can reduce their risk of exposure by adopting a comprehensive education program describing the options available to the members. While the Systems must provide sufficient information under such a program to enable the members to make sound investment decisions, nevertheless the Systems must at the same time be careful not to render investment advice. The Systems can be held liable as a fiduciary for rendering investment advice that later proves to be incorrect or incomplete. *See, e.g.,* Mary Rowland, "Educate or Litigate: Educating Pension Plan Participants," Institutional Investor, March 1, 1995.

While "investment advice" and "investment information" can be differentiated,[5] nevertheless many individuals, who are unsophisticated investors, may, as a practical matter, be unable to distinguish between investment advice and an investment recommendation. For example, the aggressive marketing of certain investments by the approved broker or DC plan provider may be interpreted by the individual as investment advice rather than general information. *See* Jefferson, "Rethinking the Risk of Defined Contribution Plans," *supra,* at 632. If the individual relies on the information and fares poorly, the risk of suit against the Systems is increased.

The Systems can also reduce their liability exposure by adopting the substantive rules and regulations of a "safe harbor" plan under section 404(c) of ERISA, 26 U.S.C. §1104(c).[6] The 404(c) Regulations, contained at 29 C.F.R. §2550.404c-1 et seq., provide that plan fiduciaries will avoid liability for investment decisions of individuals under a DC plan if the plan offers "an

[5] Investment advice consists of recommendations pertaining to property value; investment information consists of mere information that is general in nature. Thus, providing a list of investment vehicles and instructions about the investment selection process is likely to be considered investment information, while specific recommendations about particular investments is likely to be considered investment advice. Jefferson, *supra*, at 631.

[6] Although governmental plans are not subject to ERISA, 29 U.S.C. §1004(b)(1), nevertheless a plan meeting these requirements would probably survive a breach of fiduciary liability challenge.

opportunity to choose from a broad range of investment alternatives," defined as alternatives sufficient to provide the participant with a reasonable opportunity to:

(1) Materially affect the potential return;
(2) Choose from at least 3 investment alternatives:
    a. Each of which is diversified;
    b. Each of which has materially different risk and return characteristics;
    c. Which in the aggregate enables the participant to achieve a portfolio with aggregate risk and return characteristics within the normal range appropriate for the participant; and
(3) Diversify the investment to minimize the risk of large losses.

See 29 C.F.R. §2550.404c-1(b)(3). Adoption of such a plan is not fool proof, however. A plan fiduciary will retain liability for exercising improper influence or concealment of material nonpublic facts known by the fiduciary, or for taking instructions from a participant that is known by the fiduciary to be legally incompetent. 29 C.F.R. §2550.404c-1(c)(2). Moreover, plan fiduciaries are still liable for failure to ensure that the investment options offered are sound and that the investment managers selected are competent. 29 C.F.R. §2550.404c-1(a)(2). *See also* "Investments: Pension Plan Participants Need Education on Investments," 21 Pens. & Ben. Rep. (BNA) 775 (Apr. 18, 1994).

We also note that, on February 4, 2002, HR 3669 was introduced in Congress, entitled the "Employee Retirement Savings Bill of Rights." Under this proposal, certain pension plans would be required to notify each individual in a plan of "generally accepted investment principles, including principles of risk management and diversification." §4980G(e)(1). Although this proposal does not generally apply to governmental plans such as PSERS and SERS, nevertheless the proposal does apply to governmental 457 plans and 403(b) plans, and the proposal might be expanded to include all governmental plans with DC components.

Any educational program, of course, will be an expensive undertaking. The significant cost involved will have an impact on the Systems' finances. As discussed in the succeeding sections, this cost cannot come from the Systems' DB plan assets, but must be separately provided for under any legislation establishing a DC plan.[7]

Potential Contract Impairment and Due Process Issues

Generally, public retirement benefits are viewed as deferred compensation for work already performed, which confers upon public employees contractual rights protected by both the United

[7] *See, e.g.,* 19 Montana Statutes §19-3-112(c). Montana, which has a DB retirement system for its public employees, recently enacted legislation to allow members to opt into a newly created DC plan. As part of this legislation, the Legislature established a separate contribution rate of 0.04% to pay for an education program for the DC plan alternative.

States (Article 1, section 10) and Pennsylvania (Article I section 17) Constitutions.[8] *Police Officers of Hatboro v. Borough of Hatboro,* 559 A.2d 113 (Pa. Cmwlth 1989); *McKenna v. State Employees' Retirement Board,* 495 Pa. 324, 433 A.2d 871 (1981); *Catania v. State Employees' Retirement Board,* 498 Pa. 684, 450 A.2d (1982). These contractual pension rights become fixed upon the employee's entry into the system and cannot be subsequently unilaterally diminished or adversely affected, regardless of whether (1) the member is vested; or (2) the devaluation is necessary for actuarial soundness. *Association of Pa. State College and University Faculties v. State System of Higher Education,* 505 Pa. 369, 479 A.2d 962 (1984). *See also Hughes v. Public School Employees' Retirement Board*, 662 A.2d 701 (Pa. Cmwlth. 1995), *alloc. denied,* 542 Pa. 678, 668 A.2d 1139 (1995) (member has property interest in pension benefit).

Related to this concept is the Fourteenth Amendment of the United States Constitution, which prevents states from depriving a person of life, liberty, or property without due process of law. This procedural protection of property is a safeguard of the security of interests that a person has already acquired in specific benefits. *Board of Regents v. Roth,* 408 U.S. 564 (1977).

Any legislation establishing a DC plan that allows <u>existing members</u> to transfer assets (including employer contributions, employee contributions and investment returns on such contributions) contained in the DB plan to the newly created DC plan might have an impact on the actuarial soundness of the plan. This impact might also have an effect on the contractual and due process rights of the remaining members.

This claim, in fact, was made successfully by the Milwaukee County Pension Board in *Association of State Prosecutors v. Milwaukee County, et al.,* 199 Wis. 2d 549, 544 N.W. 2d 888 (1996), a case involving the Wisconsin Retirement System (State Plan). The Legislature, wanting to create a uniform statewide pension for all county prosecutors, enacted legislation requiring all prosecutors to become state employees (rather than county employees). The legislation also allowed existing prosecutors the option to remain in the county pension system (County Plan) or to transfer to the State Plan. Those who were not yet vested in the County Plan could transfer to the State Plan all employer contributions made on their behalf, along with accrued interest, from the County Plan.

The County Plan refused to transfer the funds, arguing that such a transfer would misappropriate funds held in trust exclusively for the benefit of vested employees, thereby impairing their right to receive a benefit. The Court agreed with the County Plan and declared the legislation unconstitutional. The Court's reasoning is instructive:

> Any pension plan's ability to meet its obligations can be jeopardized when funds are taken from it, since every dime is arguably part of a management strategy dependent upon spreading the fund's monies as broadly as possible. …

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[8] The U. S. Constitution provides: "No state shall … pass any … Law impairing the Obligation of Contracts … ." The Pa. Constitution provides: "No ex post facto law, nor any law impairing the obligations of contract, … shall be passed."

> The Association contends that, since the contributions to be transferred make up less than one-third of one percent of the County Plan's net assets, the transfer will not diminish or "take" the benefits of County Plan employees and retirees. We disagree. Governmental takings do not become exempt from due process requirements simply because they may be actuarially insignificant. …
>
> While the specific transfer of trust funds … may not immediately threaten the benefits of vested County Plan beneficiaries, the precedent set by such a transfer certainly could. … If the legislature orders contributions made "on behalf of" employees to be transferred to such new employers, the actuarial soundness of the plan could eventually suffer. …
>
> [W]e hold that vested employees and retirees have protectable property interests in their retirement trust funds which the legislature cannot simply confiscate under the circumstances of this case.

Id. at 892-896 (citations omitted). *See also Resolution Trust Corp. v. Financial Institutions Retirement Fund*, 71 F.3d 1553 (10th Cir. 1995) (employer withdrawing from a multi-employer pension plan was not permitted to withdraw its portion of a future employer contribution offset because such withdrawal would diminish the pension fund assets, a risk not tolerable under the exclusive benefit rule). The reasoning of these cases may be equally applicable to Pennsylvania, because, as noted above, Pennsylvania has also held that employees have a property interest in their retirement benefits. The existence of the Commonwealth guarantee, however, will mitigate against this type of claim.

We should note that the current version of SB 486, P.N. 513, amending the SERS Retirement Code, and SB 487, P.N. 514, amending the PSERS Retirement Code, limits the DC plan option to <u>new employees</u> only. Although such limitation will avoid the argument raised in Wisconsin, nevertheless such legislation will still impair the actuarial soundness of the Systems, because future employees, who would otherwise have been mandatory members of, and contributing to, the Systems, will be excluded, thereby reducing the ability of the Systems to fund benefits.

This issue has been addressed by Montana, which recently added a DC plan alternative to their DB plan System. Montana has created a separate "plan choice rate" in the amount of 2.37% of compensation, to be added to the employer contribution rate. This plan choice rate, which will be adjusted from year to year, is designed to make up for the loss of contributions resulting from: (1) losses caused by current members transferring to the DC plan; and (2) losses caused by new members joining the DC plan that would have been required to join the DB plan. *See* 19 Montana Statutes, §19-3-2121. Through this provision, Montana can avoid the impairment issue, because the state, by paying the loss caused by members opting into the DC plan, has expressly kept the DB system from suffering any loss.

<u>Impact on Fiduciary Responsibility</u>

In determining the impact of a DC plan alternative on the Systems' fiduciary responsibilities, one must first understand the nature and extent of that duty as it exists today.

Fiduciary Standards

The Retirement Codes impose a fiduciary relationship on the Boards and its officers and employees with respect to the members of the system.[9] Under common law, fiduciaries owe two basic duties to the members of the System: (1) the duty of loyalty; and (2) the duty of prudence.

Duty of Loyalty

The duty of loyalty has been described as follows:

> [T]he most fundamental duty owed by the trustee to the beneficiaries of the trust is the duty of loyalty. This duty is imposed upon the trustee not because of any provision in the terms of the trust but because of the relationship which arises from the creation of the trust.

A. Scott, Law of Trusts § 170 at 1297 (3d Ed. 1967). This duty of loyalty means that "the trustee owes a duty to the beneficiaries to administer the affairs of the trust in the interest of the beneficiaries alone, and to exclude from consideration his own advantages and the welfare of third persons. G. Bogert & G. T. Bogert, Handbook on the Law of Trusts, § 95 at 343 (5th Ed. 1973). Thus, fiduciaries must seek out the course of conduct that will best serve the interests of the beneficiary.

The Internal Revenue Code also imposes a similar duty, known as the "exclusive benefit rule," upon the Systems' trustees. In fact, the exclusive benefit rule must be followed if the Systems want to retain their tax-qualified status. This rule is reproduced below:

> **401. Qualified pension, profit-sharing, and stock bonus plans.**
> **(a) Requirements for qualification**.--A trust created or organized in the United States and forming part of a stock bonus, pension, or profit-sharing plan of an employer for the exclusive benefit of his employees or their beneficiaries shall constitute a qualified trust under this section--
>
> * * *
>
> (2) if under the trust instrument it is impossible, at any time prior to the satisfaction of all liabilities with respect to employees and their beneficiaries under the trust, for any part of the corpus or income to be (within the taxable year or thereafter) used for, or diverted to, purposes other than for the exclusive benefit of his employees or their beneficiaries . . .

26 U.S.C. § 401(a)(2).

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[9] *See* PSERS Retirement Code, 24 Pa. C.S. §8521(e) and SERS Retirement Code, 71 Pa. C.S. §5931(e) ("The members of the board, employees of the board, and agents thereof shall stand in a fiduciary relationship to the members of the system regarding the investments and disbursements of any of the moneys of the fund …).

Duty of Prudence

The standard of care to which the Systems' Boards are subject is commonly known as the "prudent person rule." This Rule was first announced in a decision by the Supreme Judicial Court of Massachusetts in *Harvard College v. Amory*, 26 Mass. (9 Pick.) 446 (1831), in which the Court explained:

> All that can be required of a trustee to invest is that he shall conduct himself faithfully and exercise a sound discretion. He is to observe how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested. Thus, courts focus on the conduct of trustees of selecting investments rather than the investment performance results.

This Rule has been adopted in Pennsylvania. *Estate of Stetson,* 463 Pa. 64, 345 A.2d 679 (1975). The Rule has also been expressly incorporated into the Retirement Codes, 24 Pa.C.S. §8521(a); 71 Pa.C.S. §5931(a), as well as the Probate, Estates and Fiduciaries Code. 20 Pa.C.S. §7302(a).

Impact on Fiduciary Responsibility

Establishment of a DC plan, either as a supplement to the existing DB plan or as an alternative to the existing DB plan, would not, in and of itself, alter the level or degree of fiduciary responsibility imposed upon the Boards. Creation of such a plan would, however, expand the range of the Boards' fiduciary responsibilities. The real question, then, is whether the expanded scope of responsibility adversely impacts the Boards' ability to manage the existing DB plan.

In this regard, the Boards must insure that the DC plan, upon adoption, will not affect the operation or the finances of the DB plan. As discussed above, any outflow of funds caused by members selecting or opting into the DC plan must be made up by the Legislature. Otherwise, the funds' actuarial soundness, and the Boards' entire investment strategy, will be impaired.

To the extent that the Systems must use funds allocated to the DB plan to operate the DC plan, the Systems may be in danger of violating the exclusive benefit rule. *See, e.g. Resolution Trust Corporation v. Financial Institutions Retirement Fund*, 71 F.3d 1553 (10th Cir. 1995) (the exclusive benefit rule is violated where plan assets are used for the benefit of anyone other than the plan participants). This argument will apply more directly if the DC plan is an alternative to the DB plan, rather than a supplement to the DB plan. If the DC plan is an exclusive alternative, then arguably the plan participants in the DB plan are not the same as the participants in the DC plan. *See e.g.,* PSERS Retirement Code §§8902(a) and 9101(d) (health insurance program funds must be maintained separately from all other retirement funds).

Conclusion

We have analyzed the exposure to liability on the part of the Commonwealth and school employers, as well as the Retirement Systems, arising out of legislation providing employees the choice of joining a DC plan. We have concluded that establishment of a DC plan, either as a supplement, or as an alternative, to the existing DB plans, will increase the potential liability of the Systems, the Commonwealth and the public school districts. Potential claims include the lack of diversity in the choice of approved plans, negligence in selecting and monitoring plan providers, and inadequate advice about the various investment choices.

We have also analyzed the impact of the establishment of a DC plan on fiduciary duties of the Commonwealth, school employers and the Retirement Systems. We have concluded that there are contract impairment and due process issues in connection with the establishment of a DC plan, especially if no provisions are made for the loss of contributions caused by members electing into the DC plan, and for the additional educational expense that will be incurred by the Systems to explain the DC plan choices.