SOLVING THE FUNDING CRISES IN PERA*

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Introduction

Two bills were introduced in the Colorado Legislature in the 2012 session designed to solve the funding crises in the Public Employees Retirement Association (PERA). Senate Bill 119 would require the Board of Directors of PERA to adjust benefits in order to "maintain the long term actuarial soundness of each trust fund." That bill would also prohibit PERA from increasing contribution rates above that authorized by law as of December 31, 2011. Senate Bill 82 would increase the age at which new public employees would be eligible for retirement benefits. Neither of these bills was enacted into law. This paper will explore why reform is needed and options for reforming PERA.

PERA's Funding Crisis

PERA's pension plan is not actuarially sound. For more than a decade the funding crises in PERA has worsened despite several attempts by the Colorado Legislature to address the problem. PERA is not actuarially sound because it is not meeting the standards for state pension plans established by the Government Accounting Standards Board (GASB).

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GASB guidelines and Colorado Statutes require that PERA meet a 30 year amortization period. According to the most recent annual financial report only one of the PERA divisions, local government, meets this standard. The state, school, judicial, and Denver Public Schools (DPS) have amortization periods far in excess of the 30 year standard. Indeed the amortization period for the DPS division is infinite.

Table 1. Amortization Period (assumes 8% return on assets)

Division	Amortization Period
State	47 years
School	50 "
Local	19 "
Judicial	83 "
DPS	infinite

Source: Colorado Public Employees' Retirement Association, Comprehensive Annual Financial Report, 2010

Actual employer contributions to the PERA pension plan are far below the actuarially required contribution rates (ARC) set by GASB. The following table compares the actual employer contribution rates with the ARC rates for 2010.

Table 2. Contribution Rates (assumes 8% return on assets)

Division	Actual Contribution Rate	Actuarial Required Contribution Rate (ARC)
State	11.58%	18.93%
School	12.83%	18.75%
Local	12.68%	12.31%
Judicial	15.09%	18.63%
DPS	1.39%	14.61%

Source: Colorado Public Employees' Retirement Association, Comprehensive Annual Financial Report, 2010

Only for the local government division is the actual contribution rate equal to the actuarial required contribution rate (ARC). This difference between the actual contribution rate and actuarial required rate is not something new. The so called ARC deficiency has varied between $300 million and $553 million every year for the past five years. The cumulative ARC deficiency since 2003 is in excess of $3.5 billion.

In short over the past decade PERA has been digging a deeper financial hole in the defined benefit pension plan. Benefit obligations to employees and retirees have been growing faster than contributions into the pension plan. The following table shows the current ratio of benefits to contributions for each of the divisions

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Table 3. Ratio of Benefits to Contributions (assumes an 8% return on assets)

Division	Ratio of Benefits to Contributions
State	2.2
School	2.0
Local	1.1
Judicial	1.7
DPS	5.0
Source: Colorado Public Employees' Retirement Association, Comprehensive Annual Financial Report, 2010	

The funded ratio is a measure of the ratio of assets to liabilities in the PERA pension plan. The funded ratio for most PERA Divisions is far below that considered critical for state pension plans.

Table 4. The Ratio of Assets to Liabilities (assumes an 8% return on assets)

Division	Ratio of Assets to Liabilities
State	62.8%
School	64.8%
Local	73.0%
Judicial	75.0%
DPS	88.9%
Source: Colorado Public Employees' Retirement Association, Comprehensive Annual Financial Report, 2010	

The cost to taxpayers of the funding crises in PERA is best measured by accrued actuarial unfunded liabilities (AAUL). This measure of the excess of liabilities over assets in the plan is currently estimated at about $22 billion. On a per capita basis the accumulation of unfunded liabilities ranks PERA as one of the most under funded pension plans in the nation.

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The funding crises in PERA is actually worse than that reported in their annual financial report. That is because PERA assumes an 8% rate of return on assets and uses that estimate to discount liabilities in the pension plan. A number of state and local pension plans have reduced the assumed rate of return on assets, reflecting the lower returns to assets over the past decade. The PERA financial report for the first time provides estimates showing how sensitive the funding status of the plan is to this assumption. For example, when the assumed rate of return on assets is 6.5% the estimated unfunded liabilities in the plan increase by one third, to $33 billion. The funded ratio of each division falls significantly with this assumed lower rate of return.

Table 5. The Ratio of Assets to Liabilities (assumes a 6.5% return on assets)

Division	Ratio of Assets to Liabilities
State	52.6%
School	53.9%
Local	60.0%
Judicial	63.7%
DPS	75.0%
Source: Colorado Public Employees' Retirement Association, Comprehensive Annual Financial Report, 2010	

At a 6.5% rate of return the annual required contribution rate (ARC) is about double that when assuming an 8% rate of return.

Table 6. Actuarial Required Contribution Rates (assumes a 6.5% return on assets)

Division	Actuarial Required Contribution Rate (ARC)
State	26.02%
School	26.85%
Local	17.68%
Judicial	29.75%
DPS	19.12%
Source: Colorado Public Employees' Retirement Association, Comprehensive Annual Financial Report, 2010	

Many economists argue that the rate of return used to discount liabilities in state pension plans should be even lower. The Government Accounting Standards Board has issued a preliminary recommendation that state pension plans should use a discount rate, which is a blend of their municipal bond rate and the Treasury rate.

Blueprint For Reform

The good news is that a number of states have successfully addressed the funding crises in their

pension plans, and those reforms provide a blueprint for Colorado. Reforms that have proven effective include the following (note that Colorado has enacted several of these reforms):

- Increasing Employee Contribution Rates
- Decreasing Cost of Living Adjustments (COLA)
- Increasing the Retirement Age and Years of Service Required to Qualify for Retirement Benefits
- Increasing Vesting Requirements
- Modifying the Salary Base and Multiplier Used to Calculate Final Average Salary.

The most successful reforms have been enacted in states replacing their defined benefit plan with some form of defined contribution plan, ten states have enacted such reforms. These states have enacted what is referred to as a 'soft freeze' in which the defined benefit pan is closed to new employees who are then required to enroll in a defined contribution plan or a hybrid plan combining defined contributions and defined benefits.

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Even states with massive unfunded liabilities in their retirement systems, such as California, have introduced legislation to impose a soft freeze. Governor Brown has proposed reforms in the defined benefit plan that would require new hires to enroll in a hybrid plan combining a scaled back annuity and a defined contribution plan. Republicans have introduced this plan as legislation, but Democrats have refused to endorse the plan. Public sector unions in California are blocking this effort and Democratic legislators have buckled under union pressure.

Democrats in California and legislators in many states assume that employer contribution rates can be increased to whatever level is required to pay off unfunded liabilities in their pension plan. However, that assumption is increasingly challenged as taxpayers learn of the magnitude of unfunded liabilities and the impact this has on public sector finances.

In Colorado Springs, for example, recent projections of General Fund Balances reveal that the city is going broke. Expenditures will exceed revenues in 2014, and reserves in the General fund will be exhausted by 2018. The culprit in this financial crisis is the rapid growth in benefits paid to PERA employees. Over the past three years benefits paid to PERA employees have increased on average 10.9 percent per year. Projections of these benefit costs show health inflation increasing 7.5 percent and pension benefits increasing 10.1 percent per year over the next decade. Colorado Springs is not unique in this regard, other municipalities and jurisdictions face double digit growth in benefits paid to PERA employees.

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Since Colorado Springs cannot reform PERA it faces several options. The city could increase taxes or issue new debt to cover these deficits. Under TABOR this would require voter approval. Given the past history of proposed tax and debt increases in Colorado Springs this is not a promising option, especially when tax payers learn that the taxes or debt would be used to cover liabilities in the pension plan, rather than to improve government services.

The city could cut back on government services and use that revenue to cover unfunded liabilities in the pension plan. But schools districts in Colorado Springs already face taxpayer backlash as schools reduce the number of teachers in order to meet pension obligations.

Given the failure to address the funding crises thus far, it is conceivable that Colorado Springs could muddle along to the brink of bankruptcy. That of course is not unprecedented, municipal governments in California and other states have already entered bankruptcy. Under actuarial necessity in bankruptcy proceedings the courts have allowed these jurisdictions to renegotiate wage and benefit packages for public sector employees.

In some states when municipalities have faced

bankruptcy the state has taken over their finances. The precedent for this in Colorado is the bankruptcy of the Denver Police and Firefighters pension plan. The state assumed these obligations and they remain a line item in the state budget. However, a state takeover of bankrupt pension plans for multiple employers in the PERA pension plan would be a formidable task. The state would most likely have to propose increased taxes or debt to cover these obligations. Under TABOR this would require voter approval and would also encounter taxpayer resistance. It is conceivable that such a funding crisis could bankrupt the state as well as municipal governments. While such an outcome may seem unlikely, this is not inconceivable in light of new studies of state and local government pension plans.

A recent study by finance professors Robert Novy-Marx and Joshua D. Rough uses a lower discount rate, between 4% and 5%, to calculate unfunded liabilities in state pension funds.[1] As you would expect, their estimates reveal a funding crises in state pension plans much greater than that reported in the annual financial reports. That study finds that most state pension funds have funding ratios below the critical 65% ratio. Given the likely volatility in returns to assets in these funds the study estimates a high probability that the plans with funding ratios below the critical level will run out of money over the next two decades.

These estimates reveal PERA to be the most under funded pension plan in the nation. To pay off liabilities over a 30 year amortization period annual employer contributions to PERA would have to more than quadruple from the current 11.3% to 53.9% of payroll.[2]

Novy-Marx and Rough also estimate the actuarial required contribution rate (ARC) for state pension funds using the lower discount rate. These estimates reveal PERA to be the most under funded pension plan in the nation. To pay off liabilities over a 30 year amortization period annual employer contributions to PERA would have to more than quadruple from the current 11.3% to 53.9% of payroll.[2]

If more than half of every salary dollar must be earmarked to pay off unfunded liabilities in the PERA pension plan that does not leave much discretion to public sector employers. It is fair to say that Colorado taxpayers are no longer willing to write a blank check to PERA to pay off unfunded liabilities in the pension plan, unlimited increases in employer contributions are no longer an option.

PERA must begin to enact reforms in the defined benefit pension plan required to make the pension plan actuarially sound. After Senate Bill 1 was passed in 2010, Senate President Brandon Shaffer was quoted in the Denver Post as saying that we fixed the pension system. Nothing could be further from the truth, solving PERA's funding crises will require more fundamental reforms than that enacted in Senate Bill1.

In their study, Novy-Marx and Raugh estimate that in most states a 'soft freeze' has moderate revenue saving effects. However, in seven states, including Colorado, they find that a 'soft freeze' will increase the fiscal burden of the pension plan to the state. That is because in these states the government must bear the full cost of the defined contribution plan plus the entire Social Security contribution. The authors find that in these states only a 'hard freeze' will have revenue saving effects. In a hard freeze all employees, including current employees, are required to enroll in the defined contribution plan. The benefits already earned by employees in the defined benefit plan are fully funded, and Social Security benefits are extended to all employees; however, all future benefits in the defined benefit plan are terminated. Novy-Marx and Raugh estimate that a hard freeze of the PERA pension plan would have revenue saving effects. The actuarial required contribution rate (ARC) would be reduced from 42.5% to 32%. Even with this hard freeze, however, significant increases in taxes or reductions in government services would be required to fully fund the pension plan.

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Conclusion

Clearly solving the funding crises in PERA is a formidable task. States such as Colorado that have amassed large unfunded liabilities and have funding ratios far below critical levels must enact

more far-reaching reforms than those enacted in states with more manageable funding problems. Colorado would be the first state to enact a hard freeze in the pension plan. However, many private employers have enacted a hard freeze in order to make their pension plans actuarially sound. Very few private employers have the kind of defined benefit pension plan offered by PERA. Thus, replacing PERA's defined benefit plan with a defined contribution plan would bring the benefits offered to public employees in Colorado in line with that offered to private employees. The alternative is to continue to muddle along with the current defined benefit plan, allowing unfunded liabilities to accumulate and funding ratios deteriorate until PERA runs out of money.

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That could not only bankrupt PERA it could bankrupt the state.

Endnotes

[1] Novy-Marx, Robert, and Joshua D. Rauh, "The Intergenerational Transfer of Public Pension Promises," Working Paper 14343, National Bureau of Economic research, Cambridge Massachusetts, September, 2008; "The Economics of State And Local Public Pensions, NBER Working Paper 16792, Cambridge Massachusetts, February 2011; "Policy Options for State Pension Systems and Their Impact on Plan Liabilities", NBER Working Paper 16453, October 2010

[2] Novy-Marx, Robert, and Joshua D. Rauh, "The Revenue Demands of Public Employee Pension Promises", Working Paper, June 2011