Indiana's Public Pensions

Understanding their fiscal health and the affect it has on Hoosier taxpayers and public employees

An IFPI Information Brief

By Brad Gottschlich

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About the Author

Brad Gottschlich is a 2016 graduate of the Masters of Public Affairs program at Indiana University's School of Public and Environmental Affairs in Indianapolis. Gottschlich was the Indiana Fiscal Policy Institute's research fellow in 2015 and 2016, and he's served several internships related to the Indiana General Assembly since he was an undergraduate student at Ball State University.

About the Indiana Fiscal Policy Institute

The Indiana Fiscal Policy Institute (IFPI), formed in 1987, is a private, non-profit government research organization. The IFPI's mission is to enhance the effectiveness and accountability of state and local government through the education of public sector, business and labor leaders on significant fiscal policy questions, and the consequences of state and local decisions. The IFPI makes a significant contribution to the important, on-going debate over the appropriate role of government. The IFPI does not lobby and does not support or oppose candidates for public office. Instead it relies on objective research evidence as the basis for assessing sound state fiscal policy.

Contact

John Ketzenberger
President
Indiana Fiscal Policy Institute
One American Square, Suite 150
Indianapolis, IN 46282
Phone: 317-366-2431
www.indianafiscal.org

Executive Summary

John Ketzenberger, IFPI President

When it comes to understanding the fiscal health of state pension funds, the popular measure is the unfunded liability. Yet there are many other measures that provide a more complete look at the health of state pensions and how it affects those who depend on the benefits—and the taxpayers who foot the bill. This report provides a more detailed look into Indiana's public pension plans through the two largest—the Teacher's Retirement Fund and the Public Employees Retirement Fund. What we find is a well-funded PERF and an improving TRF, but significant challenges that remain, especially for local governments and school corporations as the share they're asked to pay has grown.

The INPRS manages nine plans, eight of them are defined benefit plans and seven of those are funded at greater than 60 percent of their liabilities, a generally healthy condition. Four of the plans are well-funded at more than 80 percent of their liabilities and the largest, the Public Employees Retirement Fund, is funded at 75 percent of its liabilities. There is one plan that skews the overall ranking—the Pre-1996 Teachers Retirement Fund, which is funded at 28 percent of its liabilities. This plan, established in 1921 as the state's first retirement fund, is a pay-as-you-go plan, which meant the state made payments into the system as teachers retired. It is the only plan of its type in the Indiana system. The others are considered hybrid plans with contributions made by the state, employers and employees as they're working. To address concerns about the growing unfunded liability and its potential impact on the state's budget in future years, the General Assembly capped membership in 1996 and created a new hybrid plan that is currently funded at 88 percent of its liabilities.

Changing the TRF is just one of many steps the General Assembly has taken over the years to improve Indiana's pension system. Others include a constitutional amendment allowing the funds to invest in generally higher yielding equities, establishing the pension stabilization fund and reducing the unfunded liabilities with proceeds from the lottery and a portion of surplus general funds. The General Assembly also merged management of the funds, which has permitted cost efficiencies. These proactive measures have allowed the state to better predict its retirement costs and limited the chance that taxpayers will face a huge bill in future years.

Challenges remain, however, which will require the General Assembly's continued diligence. Among them is boosting the number of active members in the pension plans. Changes allowed in recent years may account for one challenge to stabilizing the number of active members. The changes have meant significant increases to contributions from local governments and school systems on behalf of employees. These increased retirement costs have occurred as local governments are adapting to reductions in property tax collections, so the General Assembly has to balance the need for stable active membership with the costs incurred by local governments to do so. Another challenge is attracting more participation in the newer defined contribution plans, which reduce the government's overall cost for benefit plans, limiting taxpayer exposure. Finally, establishment of an investment committee with the sophistication to better develop strategies and advise managers would benefit the INPRS.

Indiana's pension plans are not a worrisome factor as the General Assembly begins to consider its priorities and options for the new two-year state budget. The plans are generally well funded and managed with an eye toward limiting future shocks to the system thanks to changes made over the last 25 years. Yet the constantly shifting financial markets and regulatory concerns mean legislators and pension administrators must remain diligent to ensure Indiana taxpayers don't face a future financial crisis caused by underfunded state pensions.

Introduction

Indiana's Public Employee Retirement System (INPRS) oversees a total of nine retirement plans. As of fiscal year 2016, it had a total of 462,945 members with approximately $47.4 billion in actuarial accrued liabilities (future pension benefits) and approximately $31.3 billion in actuarial assets (INPRS CAFR 2016, p. 16). In addition to total assets and liabilities, total general fund appropriations (including employer contributions) to the aggregate INPRS plans totaled about $1.7 billion in fiscal year 2015, excluding member annuity savings account (ASA) contributions (INPRS 2015). In fiscal year 2016 alone, upon which the most recent budget was passed, included a 2016 general fund budget appropriation to the pre-1996 teachers retirement fund (TRF) pay-as-you-go account totaling $763 million (P.L. 213, 2015).

Several aspects are clear from examining the system in aggregate: the numbers are large and reflect pension benefits that former and current public employees depend on, the system is complex, and it commands a significant portion of the upcoming budget currently being considered by the General Assembly. In addition to the complexity, the fiscal stress of the credit crisis nearly a decade ago led to a significant reform process of state pension systems across the country. The credit crisis reduced state and local pension fund assets from $3.2 trillion at the end of calendar year 2007 to $2.1 trillion by March of 2009 (Brainard and Brown 2016). This had led nationally to higher costs to government expenditures in their general funds.

In order to examine the recent data that is available, two funds that make up a significant portion of the total system in terms of assets and liabilities were chosen: The Public Employees Retirement Fund (PERF) and the Teachers Retirement Fund (TRF). The following analysis examines these funds' liabilities, assets, and relevant supplementary trends over recent fiscal years in order to determine observable effects on the budget, taxpayers, and pension participants. An overview of the entire fund system is also presented from the most recent fiscal year taken from the Comprehensive Annual Fiscal Report (CAFR) when looking at the system trends overall.

Several major aspects are noteworthy:

- The funded status as a percent of total liability is approximately 63 percent. The total net pension as a percentage of liability includes the pre-1996 TRF account which has about $5 billion in assets combined with the pay-as-you-go structure.
- Over the last 10 fiscal years, defined benefit (DB) investment fund asset allocation has moved into alternative investments including risk parity and private equity.

- Funding ratios for both funds are mixed. TRF has an improved funding ratio trend while PERF has a declining funded ratio trend.
- Required employer contributions, which are made by state, county and local governments and school districts, have increased in recent years, although the increases boost the contributions as a percent of employer payroll.
- Total membership (including retirees) has remained flat in TRF and increased in PERF in conjunction with declining active membership in both funds.[1]
- Actuarial assets in TRF (including general fund appropriations) against annual benefit payments has continued to improve in recent years while the same ratio for PERF has fallen since 2008. It has remained stable in recent years but not gotten back to pre-credit-crisis levels.

Indiana's Public Pension System

Indiana's retirement benefits that are distributed to public employees are managed and administered by the Indiana Public Retirement System (INPRS). The General Assembly merged management of largest plans, PERF and TRF (both the 1996 and Pre-1996 accounts), which became effective at the start of fiscal year 2012. INPRS also is responsible for administering and managing the 1977 Police and Firefighters (1977 Fund), Judges Retirement System (JRS), State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan (EG&C), Prosecuting Attorney's Retirement Fund (PARF), and the Legislators' Retirement System (LRS).[2]

On Aug. 31, 2016, INPRS gave an update to the General Assembly's Pension Management Oversight Committee that included an updated mix of Defined Benefit and Defined Contribution assets that totaled approximately $30 billion.[3] Of the total assets, 82.7 percent are consolidated defined benefit assets and 17.1 percent are made up of Annuity Savings Account assets. The remainder consists of Legislators Defined Contribution Plan (LEDC), Pension Relief Fund, and Death Benefit Funds (CAFR 2016, pg. 125). For their part, PERF and Pre-1996 / 1996 TRF have annuity savings account aspects that make Indiana a hybrid system in which investment risk is shared between the plan sponsor and the employees with ASA accounts.

Liabilities

To analyze a snapshot of the Indiana public pension system's liabilities, the Governmental Accounting Standards Board (GASB) has initiated reporting standards that have been taken into account the last three fiscal years, and have focused on calculating annual change in the net pension liability for defined benefit plans (Barkley 2012). Net pension liability is defined as the total pension liability that is actuarially determined present value of future benefits less the plan net position that includes assets for benefit payments (Barkley 2012). With more than 80

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[1] Active memberships are plan members accruing benefits in the plan structure, with the total number defined as a head count used in the actuarial valuations.

[2] Listed are the eight primary defined benefit (DB) plans. Within the LRS is the Legislators' Defined Benefit Plan (LEDB) which is analyzed in the report and the Legislators' Defined Contribution Plan (LEDC).

[3] Update to the interim study committee. Available online at: http://iga.in.gov/legislative/2016/committees/i_pension_management_oversight_interim_study_committee_on

percent of assets in consolidated defined benefit plans, the table below provides all of these plans at a glance. It is clear that some funds are in better shape than others. Those plans with higher net pension liabilities can be associated with greater challenges full funding. Whereas the 1977 Fund in FY 2015 had a negative net pension liability, indicating it was over funded.[4]

Total liabilities and net pension liabilities include annuity savings account liabilities and assets at the end-of-year balances. Most of the funds net positions as percentages of liability are in similar groupings with most other public plans in the nation. For example, Munnell & Aubry (2016) showed distributions of funded ratios for all large public plans in 2015. About 44 percent of plans fell in the range of between 60-70 percent funded ratio, while 17 percent of plans were between 40-59 percent funded ratio, and 33.3 percent were funded between 80-99 percent as a ratio.[5]

DB Plans Net Pension Liability

		Total Liability	Net Pension Liability (NPL)	Net Position as % Liability
PERF	$	18,408,947.00	$4,538,445.00	75.3%
TRF 1996	$	6,391,750.00	$780,520.00	87.8%
1977 Fund	$	5,039,836.00	$88,837.00	98.2%
JRS	$	501,125.00	$59,335.00	88.2%
EG&C Plan	$	138,965.00	$27,636.00	80.1%
PARF	$	85,033.00	$32,241.00	62.1%
LEDB Plan	$	4,015.00	$1,096.00	72.7%
Pre- 1996 TRF	$	16,840,200.00	$12,052,671.00	28.4%

Source: INPRS CAFR 2016

Total liabilities for the eight major defined benefit plans amount to approximately $47.4 billion that leads to a net position as a percentage of total liability of approximately 63 percent.

[4] Numbers are in thousands.

[5] Their funded ratio of market assets to liabilities is essentially the same as how net position as a percent of liability is calculated above.

Liabilities are calculated by actuaries that follow GASB 67 and involve a given amount of assumptions (INPRS CAFR 2016).

Examining Indiana's Larger Pension Funds

In order to analyze the pension system in more detail, it is useful to present information for Indiana's largest funds, PERF and TRF (Pre-1996 and 1996).[6] Together, these funds make up approximately 77.6 percent of the combined 82.7 percent of defined benefit assets and almost all annuity savings account assets (INPRS CAFR 2016, p. 125-126). And, as was just described, together they make up most of the total liabilities projected into the future, representing an opportunity to analyze a large portion of the pension system in a concise arrangement.

Data for the following analysis comes from Public Plans Data and is collected as a partnership between the Center for Retirement Research at Boston College and the Center for State and Local Government Excellence, with review and assistance by NASRA.[7] Data is collected from publicly available sources and primarily from CAFR reports and Actuarial Valuations (AV) reports. The data are aggregated and downloadable in Microsoft Excel spreadsheet form between 2001-15, the most recent year for available data in most cases. Some of the graphs presented here follow similar methods as those cited in research sources that have access to the Public Plans Data.

To begin with, it is helpful to examine the development of asset classes both funds have included since 2001.

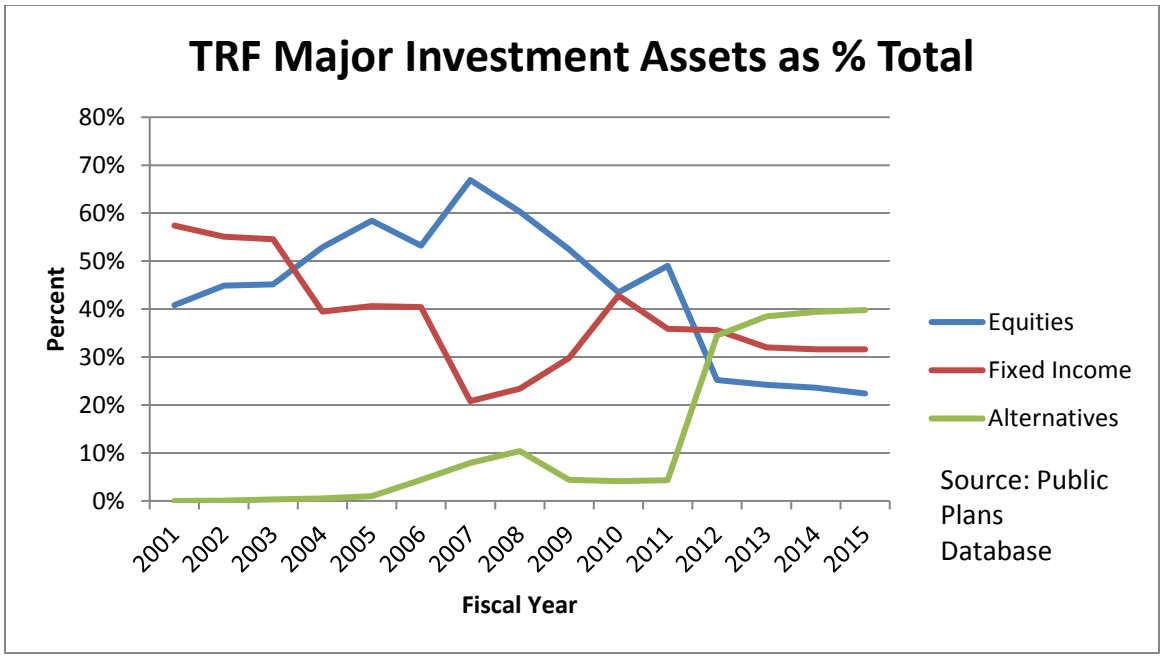
Below are the historical changes in the three largest asset classes of equities (domestic, international, and commingled), fixed income (U.S. Government, non-U.S. Government, U.S. agencies, corporate bonds, etc.), and alternative investments (private equity, absolute return, private real estate, etc.).

Again, the charts show percentage of asset allocation since 2001 and a few observations are notable: beginning Jan. 1 in FY 2012 the funds began reporting defined benefit assets together, the reaction to the credit crisis, and the percentage increase in alternative investments.

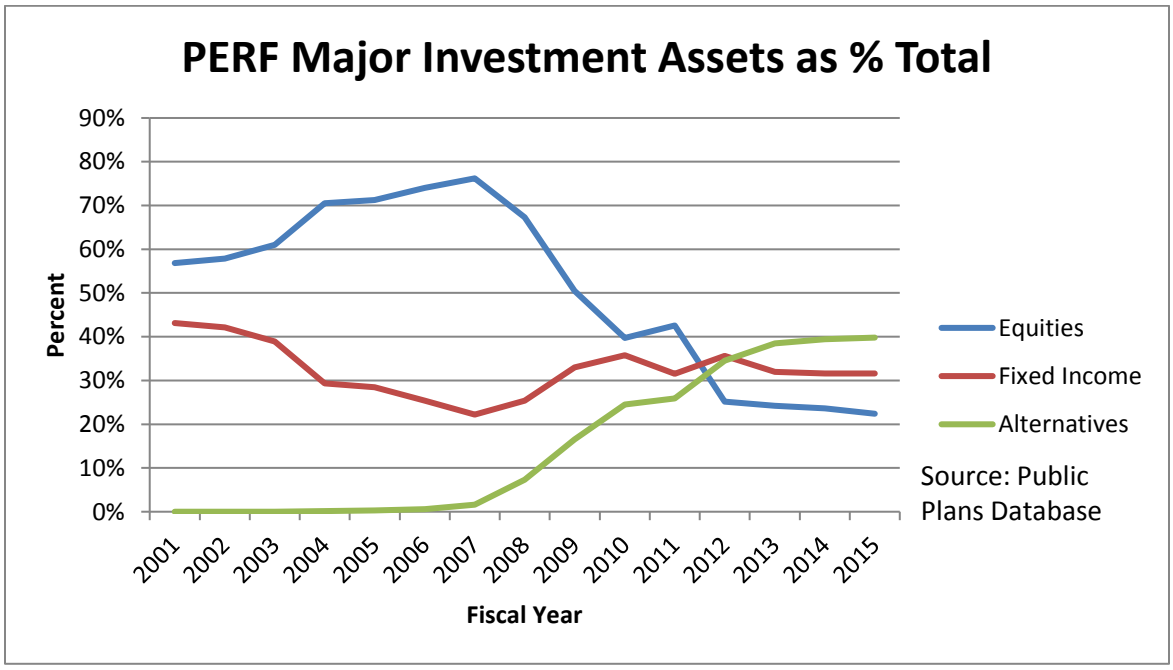
For all investments under INPRS, private equity as of FY 2016 now make up the 3rd-largest percent of total asset class allocation at 13.3 percent, continuing the upward trend from FY 2015 allocation class investment of 12.9 percent and prior years (INPRS CAFR 2016, p. 127).

[6] Data used in graphs for the TRF is combined to include both pre-1996 and 1996 accounts. This presents some nuance and descriptive necessity later in the analysis because of the characteristics of the two accounts. Pre-1996 account is a pay-as-you-go fund that is primarily funded by state appropriations in statute. The reader is encouraged to examine the 2015 CAFR describing the TRF structure with the two accounts on pg. 153. And, for investment purposes the two teacher's accounts are combined on pg. 102.

[7] http://publicplansdata.org/about/our-research/

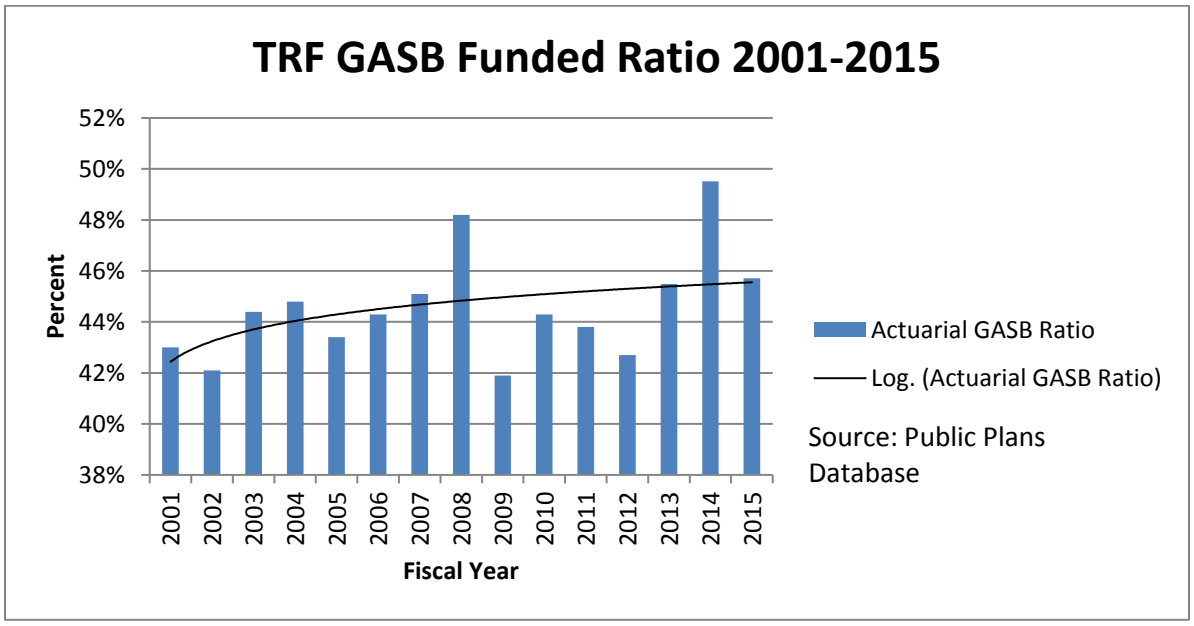


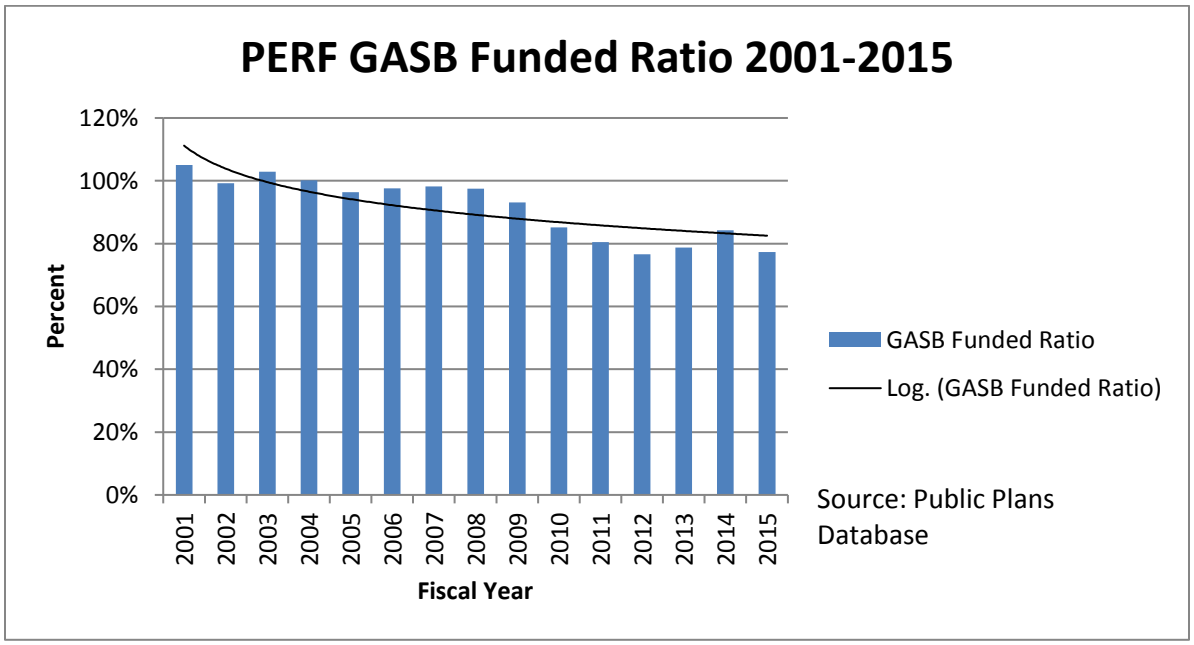
While TRF had investments assets in alternatives before the credit crisis, the rise in asset percentage came largely when the two accounts were merged with PERF.



Another way to begin to determine the financial health of public plans is to examine the funding ratio – actuarial assets divided by the actuarial accrued liability– by fiscal year (Munnell, Haverstick, Sass & Aubry 2008). As shown earlier as a snapshot of all plan funded ratios in 2015,

the two graphs below show funded ratios for both PERF and TRF over time. Assets in both major funds included annuity savings account amounts in calculation.

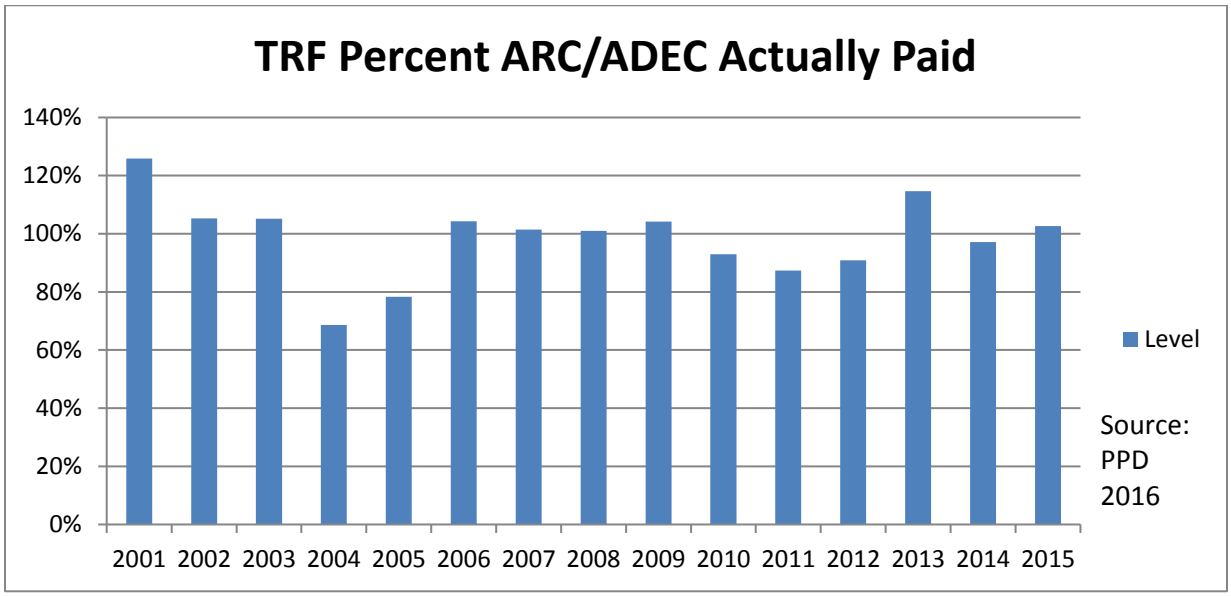


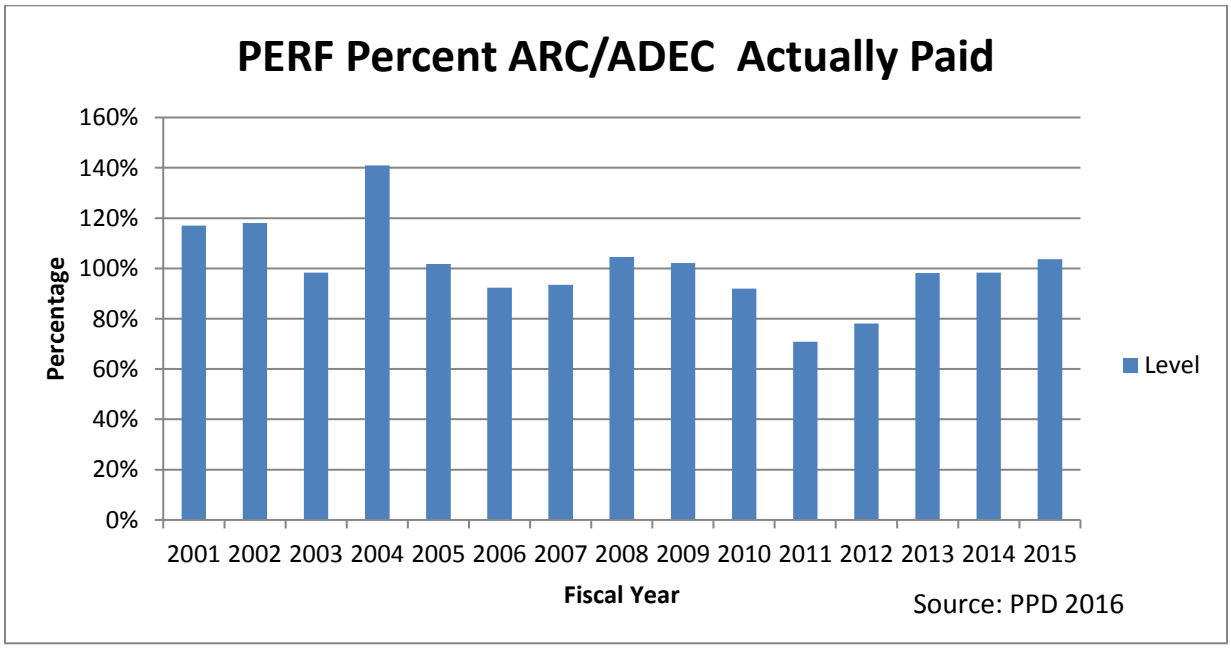


For both graphs the actuarial assets are smoothed over a period of time to account for changing assumptions that are used in the calculation. For reporting purposes, decisions to change the length of the smoothing period can have an effect on the ratios. For example, the smoothing period for investment gains and losses was changed from four years to five, which decreased the unfunded actuarial accrued liability by $19.3 million (INPRS CAFR 2016, pg. 163).

In order to keep the plans on continued funding, it is also helpful to measure the Annual Required Contribution (ARC) and GASB's recent changes to the Actuarially Determined

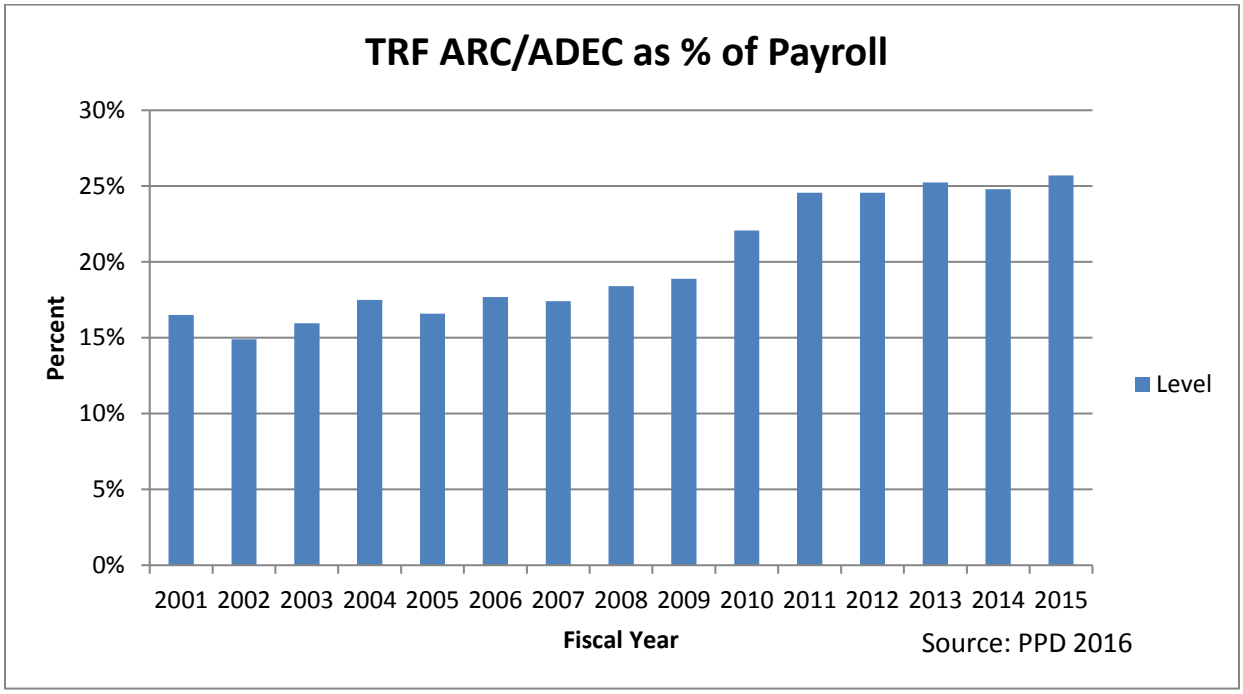
Employer Contribution (ADEC). Data on the Public Plans Data have stopped recording the annual required contribution the last few years as the change to the actuarially determined employer contribution has not required public plans to keep two sets of measurements (Munnell and Aubry 2016). In the charts below the annual required contribution is reflected from 2001-2012 and subsequent years are the actuarially determined employer contribution. The intent in requiring the calculation is to analyze the employer required contribution, yet the recent changes to the actuarially determined employer contribution reporting allows the ADEC to reflect a statutory contribution as opposed to the annual required contribution, which was actuarially calculated. In the short-run the difference does not appear to be great but this will be something to keep in mind for future analysis.





Both major funds have a relatively good history of keeping up with the payments which represent the present value of accrued benefits. In addition to the performance of the payment percentages, the graphs also include any additional money that was either appropriated from the general fund or from other sources that, when taken together, came in under the 100-percent threshold or above. For example, in FY 2015 the actuarially determined employer contribution for PERF was $517 million and the total amount paid was $536 million, which included general fund and other payments. Teachers Retirement Fund payments for the pre-1996 account are labeled in the INPRS CAFR (2016) as 100 percent funded because the system allows the statutory general fund payment to serve in lieu of the ARC/ADEC. The general fund appropriation for the pre-1996 account was $851 million, including employer contributions, in addition to budget in 2015 (INPRS 2015).

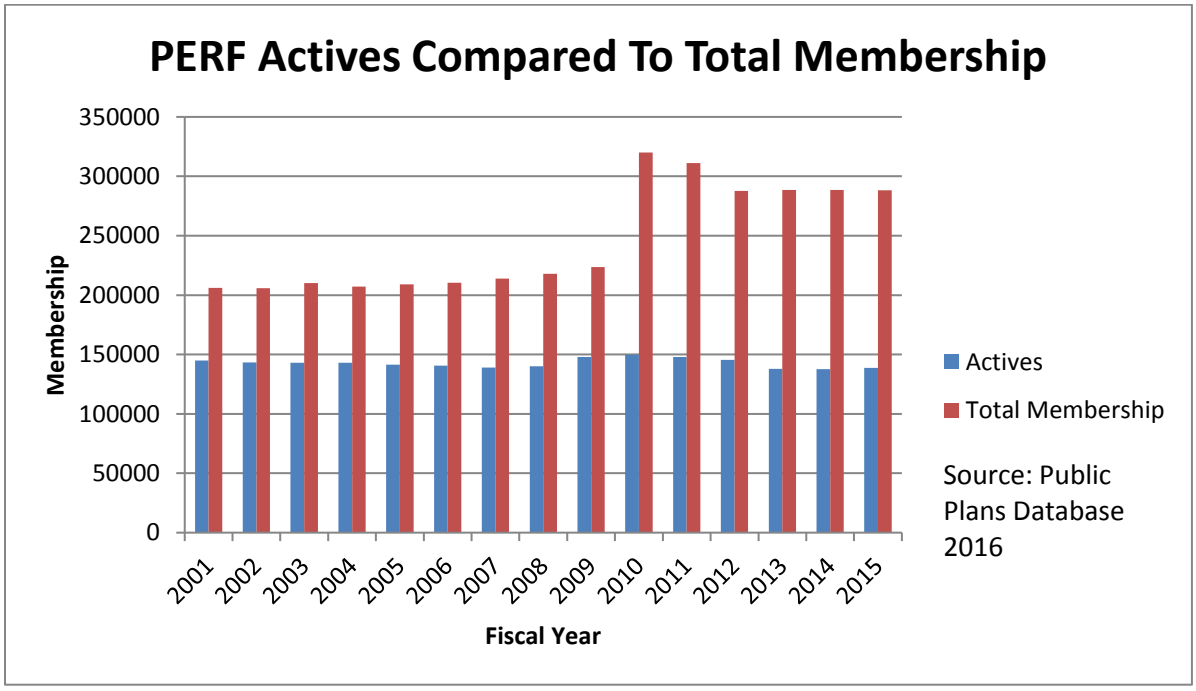
The required contribution also can be plotted against employer payroll (total pensionable earning of plan participants) over the same time period. For PERF the required employer contribution in 2001 was 5 percent of payroll; in 2015 the required contribution was 10 percent (PPD 2015). Likewise, the trend in both TRF accounts directionally is the same but with higher percentages. Nationally, ARC/ADEC as a percentage of payroll for major plans is up to 18.6 percent in 2015 from 6.7 percent in 2001 (Munnell and Aubry 2016). The interpretation of this trend suggests greater reliance on general fund appropriations for accounts around the country structured like pre-1996 TRF and perhaps greater reliance on employer contributions for all plans.



Against this growth in required contributions is the growing number of retirees with a stable or declining active membership in both funds. For TRF this is intuitively expected as the purposed structure is to have new employees join the 1996 account and 3 percent growth in pay as you

go general fund appropriations are expected as more individuals retire in the pre-1996 account without new members to join (INPRS 2015).

However, when both accounts are combined there has been a shift from approximately 75,000 actives in 2001 to 68,000 in 2015, and 114,000 total membership (including retirees and non-vested) in 2001 to 144,000 in 2015. The situation for PERF in this ratio has grown substantially in recent fiscal years.



Active membership for PERF has gone down from about 145,000 in 2001 to 138,000 in 2015. In terms of only beneficiary retirees in PERF, in 2001 total service retirees were 47,000 and by 2013 the amount of retirees had increased to fewer than 62,000. The trend of higher employer contributions, general fund payments, and increasing retiree rates with declining active membership is cause for concern. Higher employee contributions essentially means local governments and school districts must pay more into the system, increasing their costs. The general fund payments are made through state budgets. Both factors mean potentially greater use of tax dollars to support the pensions, especially as fewer new members are enrolled to support those who retire.

The Pension System in Context

Pension fund health is dependent upon factors including underlying assumptions and policy direction, the performance of the market in various asset classes, and employer/employee cost sharing and regulations. This, in turn, relieves pressure or adds pressure on taxpayers. Many of these factors impact pension system performance in ways that influence decision-making over time. A number of takeaways are available from the observed data that can add some augmentation to the system outside of an actuarial or investment study.

Discount Rates and Investment Returns

Although a more descriptive discussion on the appropriate liability discount rate belongs in an actuarial study, it is worth comparing Indiana to other states. Indiana currently utilizes a discount rate of 6.75 percent, which is slightly below the 2015 average of major plans of 7.6 percent (Munnell & Aubry 2016). Although Indiana's discount rate is below average, it has followed the trend of most major plans in that it has declined over the time period of 2001-15.

Discount rates used in reporting future liabilities and its relation in size is well understood, and is expressed in the INPRS CAFR (2016) that shows individual fund changes in reported liability along with 1-percent increases and decreases from the current 6.75 percent rate. If the discount rate (also the investment return assumption under GASB) gets lowered, the reported liability goes up; if the discount rate gets raised, the reported liability goes down. Therefore, lowering the rate can create immediate funding gaps relative to the plan's status. Illinois recently lowered its largest pension fund's return rate to 7 percent from 7.5 percent. The half-percent decrease in return rate increased that state's yearly contribution by almost $420 million.[8]

Similarly, this situation likely will affect the amount employers—state and local governments, and school corporations—contribute to the retirement system. If the rate, which is determined by the INPRS board, goes down, then employers likely will be asked to contribute more to the retirement plans.

It is this relationship that has caused some discussion where studies have argued that the GASB standards allow United States public pension funds to link the liability discount rate to the expected rate of return on assets. Therefore it could provide a regulatory incentive to shift investments to riskier assets, with higher return possibilities needed, in an environment of declining yields, which results in the challenge of maintaining a relatively higher liability discount rate (Andonov, Bauer, & Cremers 2013). In other words, many public plans nationally are over-investing in order to maintain their high return assumption and discount rate.

The discount rate critique of current GASB standards seems to be on the side that at least for reporting purposes, future streams of payment should be discounted reflecting risk as opposed to expected investment return (Munnell & Aubry 2016). Regardless of how funding is measured and presented, significant market declines in asset values can be especially problematic for the plan sponsor to balance the needs of yearly benefit payments and other budget constraints.

The Investment Landscape

A significant shift has been observed in the last 15 years toward alternative investments now totaling approximately 38 percent of the asset allocation for the two largest funds, PERF and TRF, as of 2015. Much of the public pension literature regards investments that aren't high quality sovereign or municipal debt as risky. This is despite an environment where investment risk and strategy is changing rapidly due to monetary policies around the world that have created negative yielding government bonds in some countries, which in turn have drawn funds

[8] http://www.pionline.com/article/20160826/ONLINE/160829889/illinois-teachers-lowers-assumed-rate-of-return-to-7

into a relatively high yield U.S. Treasury market, driving down yields here.[9] Bond yields are in a 35-year bull market with historic lows that have been recently recorded at 1.35 percent for 10-year U.S. Treasuries.[10] How interest rates will ever increase substantially in an environment where many current fixed-income investments are highly sensitive to interest rate increases and, therefore, asset price decreases, is an issue of some concern nationally.

At the same time, attention to investing in Indiana private equity continues as in July 2016 the Governor announced a request to do so.[11] New Gov. Eric Holcomb has expressed a similar goal. In terms of investment management expense for the defined benefit assets, private equity management fees are relatively high compared to other asset classes and currently are the second-largest expense totaling just under $42.1 million (INPRS CAFR 2016, p. 145). Private equity investments also carry some liquidity concerns as they are not redeemable, but rather distribute funds as the underlying securities are sold (INPRS CAFR 2016, p. 81).

Along with the shifts in investment, the defined benefit investment returns on average since 2001 have not kept pace with the actuarial assumed rate. Since management of the PERF and TRF funds was merged the average return on assets has been 4.3 percent while the assumed rate was lowered from 7 percent to 6.75 percent. Average returns for the two funds between 2001 and when their management was merged were also below the assumed rate during this period.

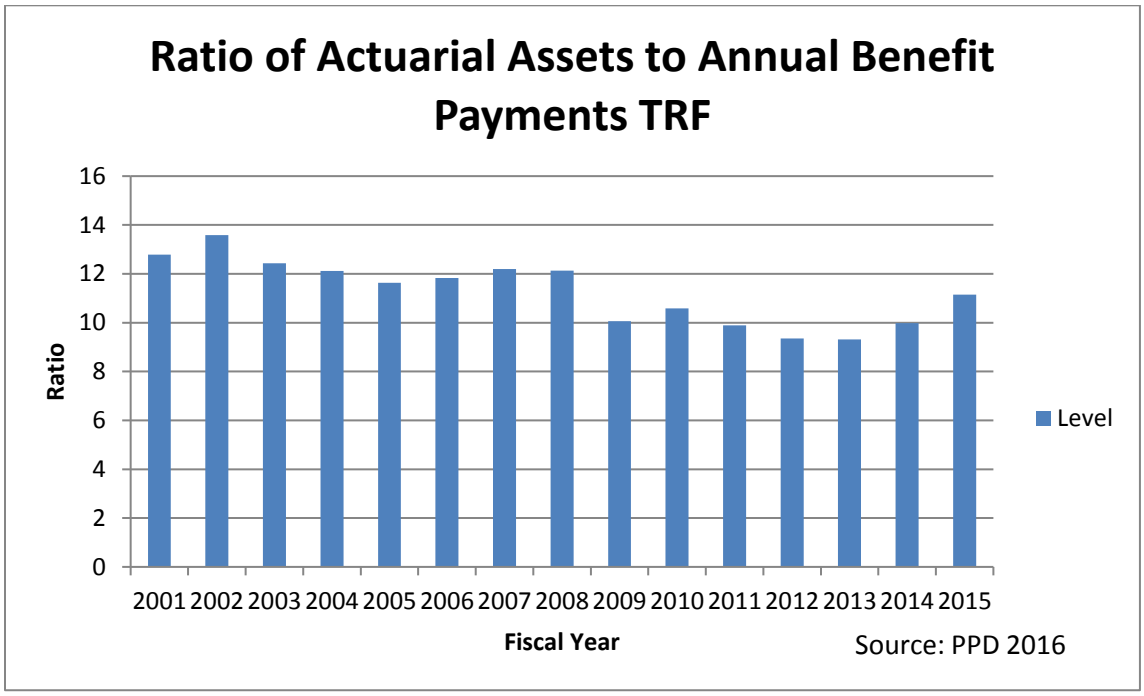
Regulatory Landscape

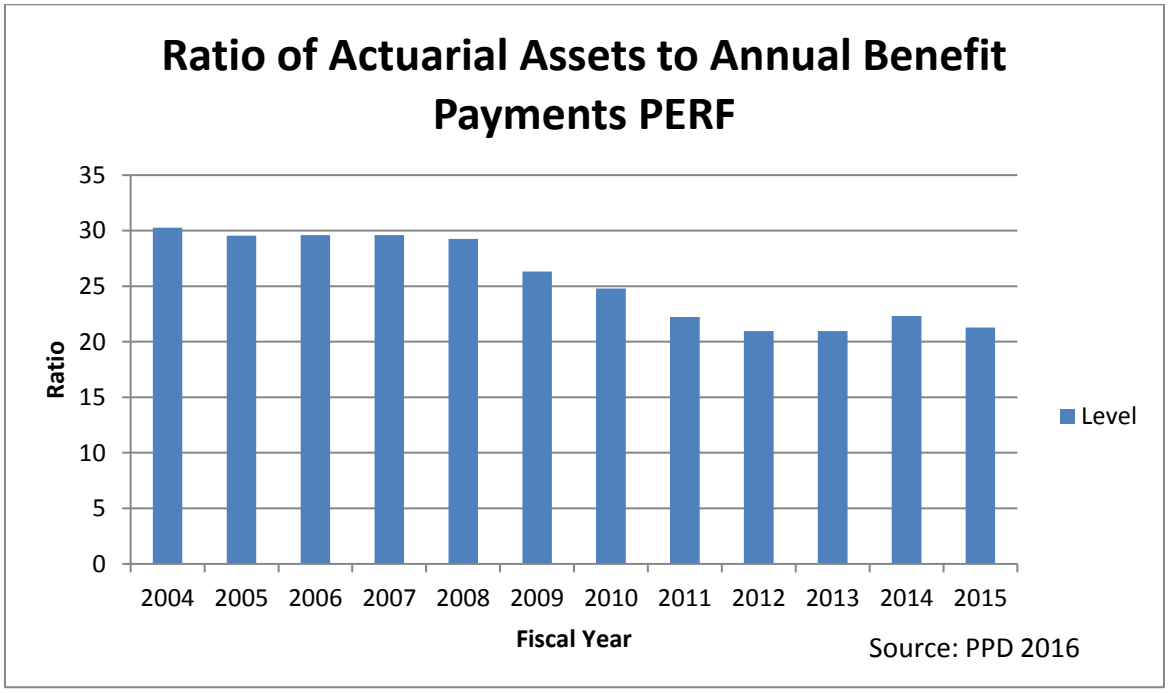
The regulatory environment in which pension funds must operate is causing reforms to state retirement systems more generally since 2007 (Brainard and Brown 2016). Most reforms have focused on the projected future liabilities and the directional shift in burdening those liabilities between the employer and employee.

The change has been with an overarching characteristic of reforms that have moved more risk associated with the financing of retirement benefits from employers to employees (Brainard and Brown 2016). Directional shifts were observed and recorded in the private-sector pension system after the passage of the Pension Protection Act of 2006. The act required plans to be 100-percent funded and removed much of the ability for assets to be smoothed, making them more vulnerable to swings in the marketplace (Munnell 2012). It also compelled investment managers toward “safe” investments over time like the U.S. 10-year Treasury, which is yielding lower returns, and has helped explain why many companies have ended their defined benefit plans. New GASB statements have begun to reduce the ability for public-sector plans to actuarially smooth their assets for reporting purposes. Employer contributions have been at or above 100-percent of the required level for some time, but are increasing.

[9] http://www.wsj.com/articles/government-bonds-retreat-on-higher-oil-stocks-1460383961
[10] http://www.bloomberg.com/news/articles/2016-07-08/treasuries-decline-as-u-s-adds-more-jobs-than-expected-in-june
[11] http://www.ibj.com/articles/60299-pension-system-may-up-bets-on-state-firms

One way to recognize the importance of keeping funding pace is to compare the ratio of assets to annual benefit payments. The charts below show the ratio from 2001 for TRF and 2004 for PERF.





Keep in mind the ratio for TRF includes annual state general fund contributions due to the pre-1996 plan being a pay-as-you-go structure that makes up a significant portion of assets;

however it is still revealing to the sustainability of Indiana's pension system. The challenge of deciding how the plans will be funded, and who will bear the burden of future liabilities should occur with great consideration. Transparency is critical so all employers in the state, active members and retirees can participate in the public policy debate on the ratios used to determine the funding splits, especially as the trend is away from defined benefit plans and toward defined contribution plans.

Conclusion and Recent Developments

Factors influencing a pension system aren't held constant. Many public pension systems around the country have relied heavily on short-term actuarial adjustments that reduce reported liabilities, increased employer/employee burdens (new members being encouraged to accept defined contribution plans can lead to lower defined benefit plan sustainability in the long run), and riskier investment strategies. These factors considered against an investment landscape that has gone through changes over the last decade that include lower investment rates of return than what is needed for the actuarial assumptions, some pension systems are facing critical decisions.

This is not to suggest that actions in public pension management policies have been taken out of incompetence or neglect, rather they were short-term decisions due in large part to external pressures created by regulatory and monetary policies that trickle down to state and local budgets. Along with keeping funding ratios within healthy boundaries, Indiana has established dedicated reserves to help protect the system's sustainability and implemented investment cost-saving measures. Sustainability and long-term planning are the key factors.

Some public plans recently have been realized immediate funding stress. Illinois has general fund budget problems as discussed, New Jersey has passed legislation requiring quarterly pension payments to bolster funded status[12], California has a Supreme Court case pending[13], and the city of Philadelphia is considering a plan buyout to encourage members to enter into a new plan with lower benefit payments over time.[14] These are examples of decisions forced upon states by the combination of lower asset returns, higher liability costs and short-term decision-making. Public plans that are still in the middle bracket of funded status that choose short-run policies to alleviate an immediate budget concern are becoming akin to picking up a penny in front of a steamroller. The INPRS deserves credit for its relatively effective management of the state's pension system. Continued clear-headedness will be needed for Indiana's public plans in to avoid the bad outcomes being noted elsewhere.

[12] http://www.nj.com/politics/index.ssf/2016/12/christie_signs_bill_requiring_quarterly_payments.html
[13] http://www.breitbart.com/california/2016/10/21/pension-california-supreme-court-may-allow-slashing/
[14] http://www.bondbuyer.com/news/regionalnews/philadelphia-controller-advocates-pension-conversion-plan-1120612-1.html

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