

INDIANA PUBLIC RETIREMENT SYSTEM

# Understanding Indiana's Largest Pension System

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November 2011



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## Funds Overview

The Indiana Public Retirement System (INPRS) includes the two largest retirement plans in the state. These plans trace their existence back more than a generation to the early and middle parts of the 20<sup>th</sup> Century. The Indiana State Teachers' Retirement Fund (TRF) was created in 1921 and the Indiana Public Employees' Retirement Fund (PERF) was created in 1945. In 2011, the Indiana General Assembly integrated the management of the two systems under INPRS. Combined, the integrated system includes seven separate retirement funds, representing more than 236,000 active members and 117,000 benefit recipients.

### System Membership: Active & Retired — 6/30/2010

Fund	Active Members	Benefit Recipients
PERF	147,792	69,023
TRF	74,343	44,492
1977 Police Officers' and Firefighters' Pension and Disability Fund	13,184	2,935
State Excise Police, Gaming Agent Gaming Control Officers and Conservation Enforcement Officers' Retirement Plan	443	161
Judges' Retirement System	288	301
Prosecuting Attorneys' Retirement Fund	221	43
Legislators' Retirement System - Defined Benefit Plan	33	57
<b>TOTAL</b>	<b>236,304</b>	<b>117,012</b>

In addition to the funds noted above, INPRS manages the Pension Relief Fund, created by the Indiana General Assembly in May, 1977, to address the unfunded pension obligations of the police officers' and firefighters' pension systems of Indiana's cities and towns. Administered by the INPRS Board of Trustees, this fund derives its revenues from cigarette and alcohol taxes and investment income earned on them. A fixed distribution formula provides for relief payments two times per year, and is based on the number of retirees and amount of benefits paid the previous year.

INPRS is not responsible for the administration of those local pension funds addressed by the Pension Relief Fund. Those local funds have been closed to new membership since the creation of the 1977 Police Officers' and Firefighters' Pension and Disability Fund.



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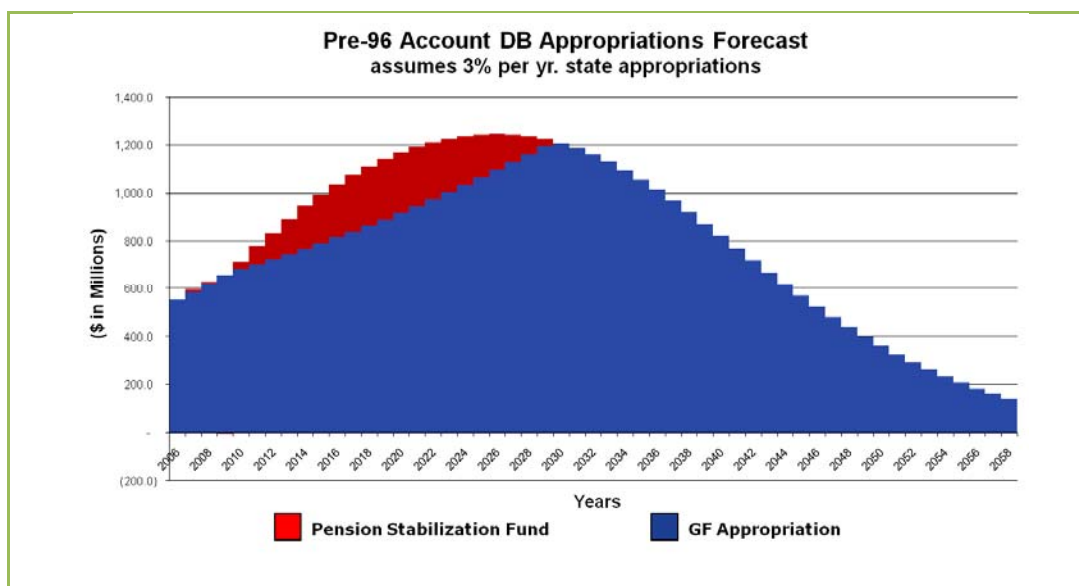
## Actuarially Funded vs. Pay-As-You-Go

Pension plans at INPRS are funded in one of two ways. First, the main PERF plan as well as the 1996 TRF fund are actuarially funded, meaning money is set aside today to fund projected benefits years in the future. Actuaries, using data ranging from gender and age, to compensation and likely investment returns, project the amount of benefit payouts will be years in the future, and what funding must be set aside today to fund the future benefit. Funded status reported for an actuarially funded plan is the difference between the accrued liability and the actuarial value of assets. Often this number is reported as a percent.

TRF's pre-1996 fund is a pay-as-you-go plan that has been in place since 1921. It is not pre-funded and its funding status is low by design. Typically in pay-as-you-go plans, no funds are set aside today to fund projected benefits years in the future. Instead, these plans are funded in the year the benefit payment is provided to the member. The federal Social Security system is pay-as-you-go. Reporting a funded status percent for pay-as-you-go plans is misleading as these plans are not actuarially funded.

### Pension Stabilization Fund

In the case of Indiana TRF, the state's General Assembly recognized potential risks of the pay-as-you-go approach and, in 1995, established a separate fund to protect TRF retirees against any disruption in payments and to smooth out payments from the state as the baby boomer generation retires. At that time, the pre '96 plan was closed to new entrants and the actuarially funded 1996 fund was established for all new members. As of the end of fiscal year 2010, the Pension Stabilization Fund fund's assets were \$1.9 billion.



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## System Funded Status: 6/30/2010

Fund	Funded Status %
TRF Pre-96	33.1%
TRF 96	94.7%
<b>TRF Total</b>	<b>44.3%</b>
PERF	85.1%
1977 Police Officers' and Firefighters' Pension and Disability Fund	92.7%
Judges' Retirement System	66.5%
State Excise Police, Gaming Agent Gaming Control Officers and Conservation Enforcement Officers' Retirement Plan	71.8%
Prosecuting Attorneys' Retirement Fund	53.3%
Legislators' Retirement System - Defined Benefit Plan	83.7%
<b>PERF Total</b>	<b>86.1%</b>
<b>Indiana Total</b>	<b>64.5%</b>
<b>Total less TRF Pre-96</b>	<b>87.5%</b>
Nationally, state pension plans were funded at about 69 percent according to the <i>2011 Wilshire Report on State Retirement Systems</i> .	

Standard & Poor's *Global Credit Report* (June 8, 2011) found that, in Indiana, total unfunded state pension liabilities of \$13.7 billion (80% represents the closed TRF plan) translate to a below-average \$2,110 per capita and 6.3% of personal income.<sup>6</sup>

### Annual Required Contribution

The annual required contribution (ARC) is the amount an employer is required to contribute each year to fund the plan liabilities over time. The ARC, in effect, recognizes that pension benefits are "earned" and are financial obligations accrued during an employee's entire period of service. The ARC is the annual amount the plan would have to pay to fund its liabilities over time.

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Moody's Investor Service analyst Ted Hampton<sup>3</sup> reported in January, 2011 that pension underfunding across the nation has been driven by weaker-than-expected investment results, previous benefit enhancements, and, in some states, failure to pay the annual required contribution to the pension fund.

Both the PERF and TRF systems have a long and solid track record of paying the ARC as required for plan health and stability.

## **Actuarial Assumptions**

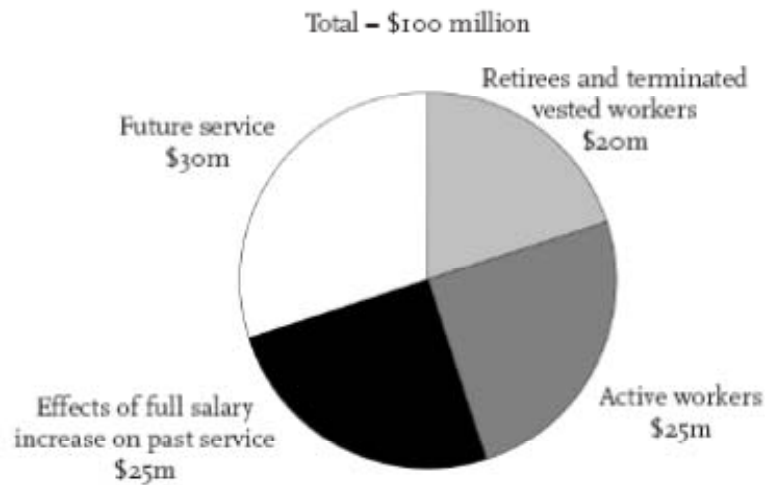
The amount of funding that INPRS pension funds must set aside each year for future benefits is driven by the work of actuaries assisting the funds by determining how costs should be allocated to a particular year. Not all pension funds' actuaries use the same actuarial cost method, as noted in the information below<sup>4</sup> from the Center for Retirement Research at Boston College.

The precise amount of money that state and local plans need to put aside each year depends on how the actuaries allocate costs to a particular year — that is, it depends on the actuarial cost method adopted. In order to appreciate the differences between cost methods, a useful starting place is the total amount of benefits that the plan sponsor ultimately will have to pay for past and current employees.

Figure 2 shows the present value of projected benefits for a hypothetical entity. The total value of projected benefits of \$100 million consists of four major components. The first (\$20 million) is the value of benefits earned to date by retired employees, including employees who have left the company with vested pension rights and who have not yet begun to collect benefits. The second major component (\$25 million) is the value of pension obligations to active employees based on their current salaries and years of service. The next portion (\$25 million) represents the effect of future salary increases on the value of pension rights already earned by active workers. The final portion (\$30 million) represents the benefits that will be earned by current employees over the remainder of their work lives.

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FIGURE 2. PRESENT VALUE OF PROJECTED BENEFITS



Source: Authors' illustration.

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Under the projected unit credit approach, the dominant costing method in the private sector (see Table 1), the firm's total liability will be \$70 million. No account is taken of credits that current workers will gain through future service. The entity's normal cost in a given year is the value of additional pension benefits that each employee earned in that year based on his projected salary at retirement. If the benefit formula and salary projections remain unchanged, the additional pension benefits each employee earns in subsequent years will also remain unchanged. The cost of that benefit, however, will rise as workers approach retirement and annual pension contributions have less time to accumulate investment earnings. So employers with an aging workforce that use this costing method will see their annual pension expense rise over time.

TABLE 1. PERCENT OF LARGE PRIVATE SECTOR AND PUBLIC SECTOR PLANS USING ALTERNATIVE ACTUARIAL METHODS, 2006

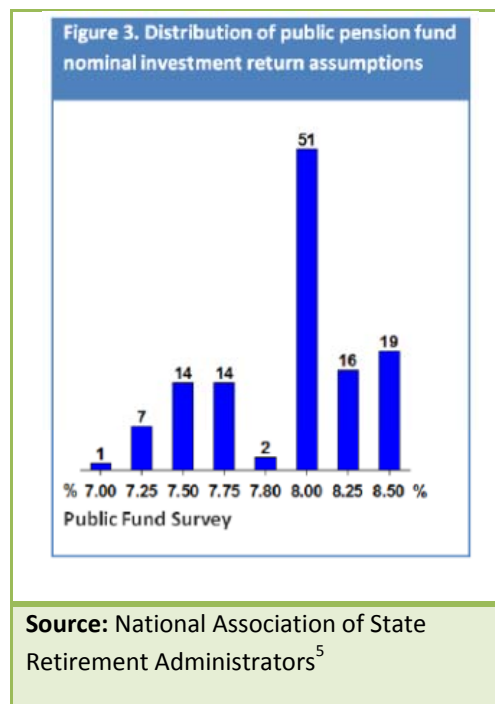
Actuarial cost method	Private sector	Public sector
Projected unit credit	74 %	14%
Entry age normal	19	70
Other	7	16

Sources: Watson Wyatt Worldwide (2006); and National Association of State Retirement Administrators, *Public Fund Survey* (PFS), 2006.

### Plan Health: Comparing Apples to Oranges

Two key factors having a significant influence on the reported actuarially funded status for a plan include Assumed Investment Return (AIR) and Cost of Living Adjustments (COLA). If a plan assumes there will be an annual COLA, this is built into the actuarial assumptions with the result being higher actuarial liabilities. If a plan assumes a higher investment return rate, the result can again impact projected liabilities.

INPRS has a set of conservative actuarial assumptions that may result in the plans' reported numbers comparing unfavorably to other plans that are actually in poor financial condition, but have opted for a more aggressive set of actuarial assumptions. A case in point is the assumed investment returns of both TRF and PERF. Both Indiana funds assume a 7% return over a long, multi-year horizon; placing the funds among the lowest (most conservative) plans in the nation, as illustrated in the chart at right.



## Conclusion

Many researchers rely on actuarial data supplied by via open records requests or pulled from plan annual reports from throughout the nation. It is essential that the researcher understand – before comparing data – that there may be significant differences in the underlying assumptions that generated the numbers. To illustrate the point, Indiana PERF and TRF have provided the tables below demonstrating the impact of varying actuarial assumptions – assumed investment returns and COLAs – on the perception of overall plan health.

Ultimately, conservative actuarial assumptions avoid artificially low employer contributions, prevent the publishing of an artificially positive funded status, and lead to more stable and sustainable retirement systems. While based on conservative actuarial assumptions, data from the TRF and PERF plans continues to compare favorably to many plans that use more aggressive actuarial assumptions. In addition, TRF’s pre-1996 pay-as-you-go plan is supported by a strong Pension Stabilization Fund aimed at keeping that fund healthy in the future.

**Indiana State Teachers' Retirement Fund**  
**Summary of Projection Scenarios -- Varying Interest Rate & COLA Assumptions**

**\$ In Millions**

Scenario Number	2011 Assumptions		Fiscal Year 2010						Fiscal Year 2017					
	Interest Rate	COLA	Unfunded Accrued Liability (UAL)			Funding Ratio			Unfunded Accrued Liability (UAL)			Funding Ratio		
			Pre-1996 Account	1996 Account	Total Fund	Pre-1996 Account	1996 Account	Total Fund	Pre-1996 Account	1996 Account	Total Fund	Pre-1996 Account	1996 Account	Total Fund
1 (Baseline)	7.00%	0.00%	10,918	215	11,133	31.9%	93.1%	41.9%	10,015	(181)	9,835	34.9%	102.9%	54.6%
2	7.00%	0.50%	10,918	215	11,133	31.9%	93.1%	41.9%	10,740	36	10,777	33.2%	99.4%	52.3%
3	7.00%	1.00%	10,918	215	11,133	31.9%	93.1%	41.9%	11,453	238	11,692	31.6%	96.4%	50.1%
4	7.00%	1.50%	10,918	215	11,133	31.9%	93.1%	41.9%	12,280	499	12,780	29.9%	92.8%	47.8%
5	7.50%	1.00%	10,918	215	11,133	31.9%	93.1%	41.9%	10,717	(285)	10,433	33.6%	104.5%	53.5%
6	8.00%	1.00%	10,918	215	11,133	31.9%	93.1%	41.9%	9,994	(775)	9,220	35.7%	113.1%	57.1%
7	8.50%	1.00%	10,918	215	11,133	31.9%	93.1%	41.9%	9,281	(1,247)	8,035	38.0%	122.2%	61.0%

Other Assumptions:

- (1) FY2011 -- 13th Check
- (2) FY2011 -- Assumes 15.0% investment return
- (3) Funding discount rate for measuring liabilities equals assumed investment return

**Public Employees' Retirement Fund**  
**Summary of Projection Scenarios -- Varying Interest Rate & COLA Assumptions**

**\$ In Millions**

Scenario Number	Assumptions		Fiscal Year 2010		Fiscal Year 2015	
	Interest Rate	COLA	UAL	Funding Ratio	UAL	Funding Ratio
1 (Baseline)	7.00%	1.00%	2,160	85.1%	4,525	76.0%
2	7.00%	0.00%	2,160	85.1%	3,489	80.3%
3	7.00%	0.50%	2,160	85.1%	3,999	78.1%
4	7.00%	1.50%	2,160	85.1%	5,068	74.1%
5	7.50%	1.00%	2,160	85.1%	3,745	79.4%
6	8.00%	1.00%	2,160	85.1%	2,991	82.9%
7	8.50%	1.00%	2,160	85.1%	2,239	86.7%

UAL = Unfunded Accrued Liability

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## Citations

- <sup>1</sup> Neumann, Jeannette. "States Shift to Hybrid Pensions." *Wall Street Journal*. 10 July 2010
- <sup>2</sup> Snell, Ronald. "State Defined Contribution and Hybrid Pension Plans." *National Council of State Legislatures*. June 2010, 1-9.
- <sup>3</sup> Moody's Investor Service . "Announcement: Moody's report dimensions the pension and debt liabilities of U.S. states." Available from [http://www.moody.com/viewresearchdoc.aspx?lang=en&cy=global&docid=PR\\_213170](http://www.moody.com/viewresearchdoc.aspx?lang=en&cy=global&docid=PR_213170). Internet; accessed 14 February 2011.
- <sup>4</sup> Munnell, Alicia H., Kelly Haverstick, Steven A. Sass, Jean-Pierre Aubry. "The Miracle of Funding by State and Local Pension Plans." Center for Retirement Research at Boston College. April 2008, 1-11.
- <sup>5</sup> Brainard, Keith. "Public Pension Plan Investment Return Assumptions." NASRA Issue Brief. March 2010, 1-3.
- <sup>6</sup> Standard & Poor's. "Global Credit Report" Available from [http://www.in.gov/gov/files/Press/S&P\\_Rating\\_Indiana\\_2011.pdf](http://www.in.gov/gov/files/Press/S&P_Rating_Indiana_2011.pdf)