The Momentum of Pension Reform in Wisconsin Must Be Extended to Health Insurance for Public Employees and Retirees

Many state and local public employee pension funds are struggling to make up large gaps in their funding — which cratered in the aftermath of the 2008-2009 recession. The one exception is Wisconsin, which, through responsible management of Wisconsin Retirement System (WRS) finances, has successfully maintained close to full funding of its retirement system since 2001.

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Executive Summary

This paper reviews Wisconsin's pension system to explore the reasons for its successful financial stewardship.

Similar accolades are not warranted, however, for Wisconsin's Health Insurance Program, which provides pre-Medicare retiree coverage at subsidized premium rates. This benefit is funded on a pay-as-you-go basis. Evaluated on the same basis as WRS (under the reporting rules of the Government Accounting Standards Board), this other post-employment benefit (OPEB) program has an unfunded actuarial accrued liability equal to a burdensome 29 percent of all the future wages of active participants. Wisconsin would be better served by reducing its OPEB commitments and by introducing a new system of health saving accounts to fund OPEB benefits for younger and future employees.

The important features of WRS that help to secure its objectives are:

- No guarantees of annual retirement benefit increases and cost of living adjustments;
- Employee choice in contributing to funds with alternative investment styles;
- Provision of a benefit floor; and
- Annual adjustments to benefits above the floor according to investment performance.

In 2012, the WRS undertook policy measures that strengthened the system and reduced employer (and taxpayer) costs, including:

- Increased the creditable service work-hours requirement to 1,200 hours per year for regular employees and 880 hours per year for teachers and employees in education-related jobs;
- Introduced a five-year creditable service vesting period for those hired after June 2011;

■ Reduced the benefit-formula factor for certain employee categories; and

■ Eliminated contributions by employers of employees' share of pension contributions.

The Milwaukee County Employee Retirement System also shifted its policy to require worker contributions after 2000. However, the Milwaukee County system is not as financially secure as WRS; its funding ratio is 87.3 percent, but the plan's liabilities are discounted at the unrealistically high rate of 8 percent. The system needs reform to restore financial sustainability, possibly including better methods of liability assessment, more conservative investment of assets, asset-liability matching and the introduction of a defined-contribution plan for younger and future employees.

However, Wisconsin's actuarial liability on account of post-employment health care benefits, which amounts to a significant share of the state's general revenues, is totally unfunded. Moreover, under the assumptions employed by Wisconsin's actuaries, the size of the liability reported in the state's Comprehensive Annual Financial Report appears to be underestimated. Because current contributions (premiums plus state contributions) fall short of the annual required contribution, the taxpayer burden is likely to grow larger over time. A reform that 1) charges higher premiums to retirees, 2) closes the health insurance program to younger and future employees, 3) and shifts young and new employees to a new prefunded system with health saving accounts would be a fiscally sound reform. The sooner it is implemented, the better.

About the Author

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Introduction

Many state and local pension plans are finding it difficult to recover from the ravages of the 2008-2009 recession.[2] The decline in asset values during those years left many pension plans severely underfunded and, despite the subsequent recovery in market asset valuations, many pension plans continue to struggle.[3] According to the latest available information on pension funding for 2012, plan liabilities have grown at a faster rate than plan actuarial assets. The funding ratios of as many as 116 of the 150 largest state and local pension plans have declined since 2009.[4]

- In 2012, fully two-thirds of the 150 largest public pension plans had a funding ratio below 80 percent — a benchmark for adequate funding of a government-operated pension plan.

- As many as 33 pension plans had funding ratios below 60 percent.

What can be done to remedy the poor condition of U.S. state and local pension plans? Although the answer to this question is not straightforward, an examination of particular cases where public pension fund managers and the state's political institutions have delivered a strong performance — at least in terms of maintaining a high and stable funding ratio — could reveal some pointers. One such case is that of the Wisconsin Retirement System (WRS), which covers almost all Wisconsin public employees. It has maintained a near-100 percent funding ratio since 2000.

The rationale for maintaining a well-funded public pension system is quite clear: The investment of employee and employer contributions to fund future benefit payouts is always subject to economic and financial risks. Hence, the provision of promised retirement and auxiliary benefits to retirees — without substantial increases in worker contributions and tax increases on residents — requires proper management of assets accrued from past worker and employer contributions. A financially strong pension system depends, in part, on its design features. It should minimize and appropriately distribute financial and economic risk exposures across its stakeholders — beneficiaries, employees and employers. In addition, a plan that maintains funding discipline through strong governance and conducts and monitors investments with appropriate risk management strategies stands a better chance of delivering on its objectives.
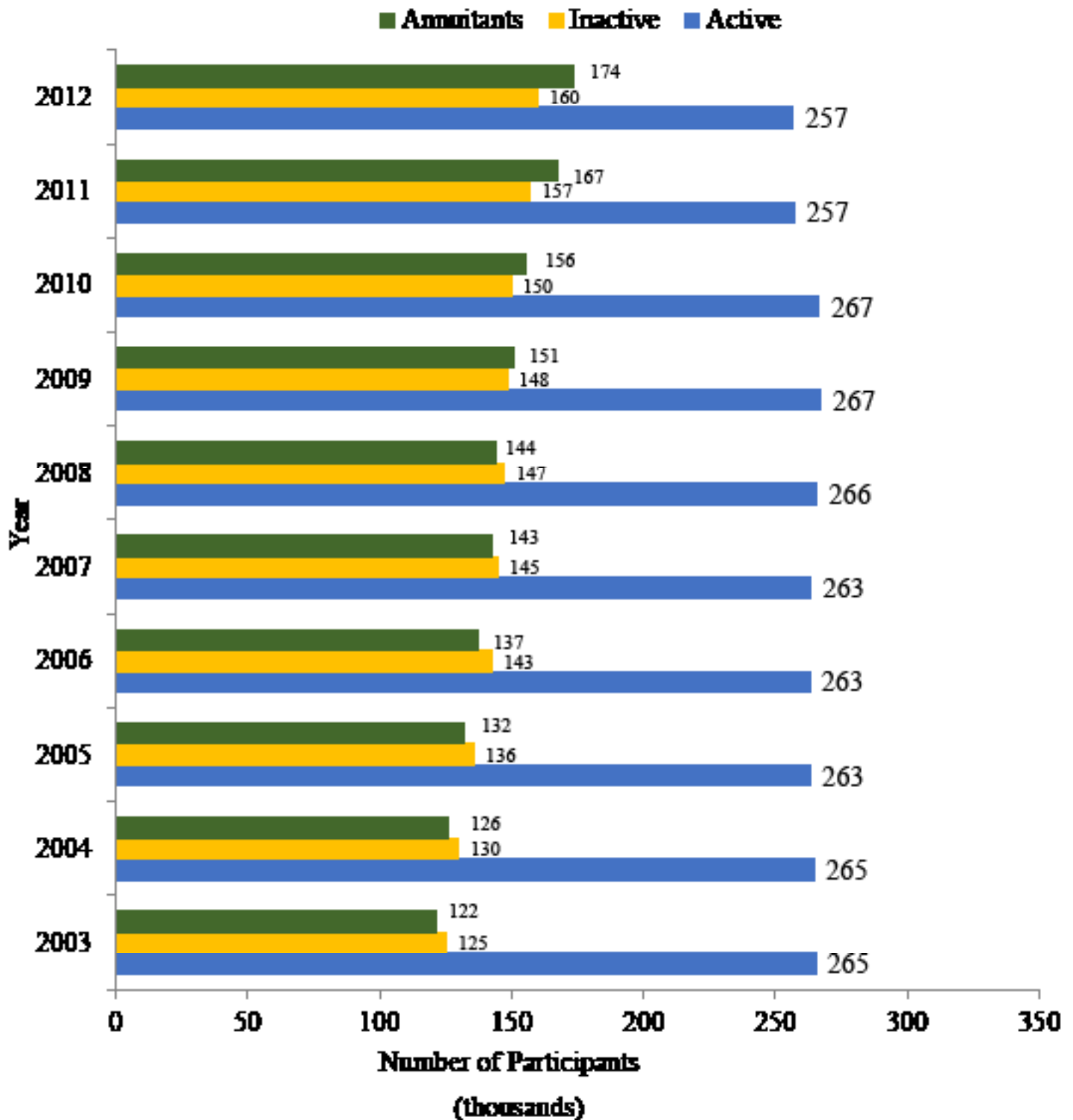
The Wisconsin Retirement System

The Wisconsin Retirement System (WRS) appears to possess the features of a financially strong pension system. Measured under the standards set by the Government Accounting Standards Board (GASB), the WRS stands out as the exemplar of proper management in terms of funding stability. Given the relatively conservative assumptions the system uses to value its actuarial liabilities, the WRS is also likely to remain among the best-funded retirement systems in the United States — even under the more stringent valuation approaches for public defined-benefit pension plans suggested recently by academic experts.[5]

Many states and localities are exploring alternative pension plan frameworks, such as defined-contribution plans.[6] Wisconsin introduced several reforms to its existing defined-benefit pension plan in 2011. Those reforms modified vesting rules, contribution rates and formula factors that, combined with existing rules about benefit adjustments in response to investment performance, ensure the financial stability of WRS pension funds. That stability led a Wisconsin state commission recently to declare there was no need for WRS pension plans to adopt defined-contribution-style features. Indeed, the commission's analysis shows that existing WRS pension plans already include several features similar to defined-contribution plans. So, perhaps, there are lessons from Wisconsin that other states could emulate in designing, implementing and managing defined-benefit pension plans.

Background on the Wisconsin Retirement System (WRS). The Wisconsin Retirement System pays retirement, disability and other benefits to employees of its constituent members (employers). Benefits are funded out of employee and employer contributions managed by WRS's investment arm, the State of Wisconsin Investment Board.

The watershed moment of Wisconsin's employee pensions — the culmination of a long process of consolidations — occurred in 1981. In that year, Wisconsin's legislature merged several pension funds — the Wisconsin Retirement Fund, the State Teachers Retirement System and the Milwaukee Teachers Retirement Fund — into one public employee retirement system. As a result, more

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Figure I
Composition of WRS Participants
(in thousands)

than 90 percent of all Wisconsin public employees were assembled under a unified pension system. The Wisconsin Department of Employee Trust Funds Board was established to develop rules and operational procedures. The WRS today is an umbrella system with numerous participating government entities, including state agencies, city, town, village and county governments, school districts, college boards, other educational service agencies and so on.

However, employees of the City of Milwaukee and Milwaukee County are covered under separate pension plans. The operation and funding status of those plans and potential policy approaches to improve their finances are discussed separately below.

Participation: Vesting and Benefits. Prior to July 1, 2011, regular employees of participating state and local employers who worked at least 600 hours per year and teachers and education-related employees who worked at least 440 hours per year were covered by the WRS. However, legislation increased the annual amount of work required for a "creditable-service" year for vesting in the pension plan to at least 1,200 hours for regular employees and 880 hours for teachers and employees in education-related jobs. Further, WRS vesting requirements have varied in the past but have been tightened since 2011. Participants entering after June 2011 must accrue five years of creditable service for full vesting in the WRS.

The evolution of WRS's membership has followed a predictable change in composition across current "active" employees,

"inactive" workers who are vested but no longer in state employment, and "annuitants" currently receiving retirement and other benefits [see Figure I]:

■ There are now more annuitants as the baby-boomers among Wisconsin's state and local employees transition into retirement and as more "inactive" individuals become annuitants.

■ Fewer active employees may also reflect shrinkage in both the demand for and supply of workers as state employers downsize because of budget pressures and employee compensation (including pensions) becomes less attractive, prompting fewer workers to seek employment in state agencies.

Retirement benefits for each individual are determined by a formula comprised of the individual's final average earnings, years of service credits and a formula multiplier.[7, 8] Eligibility for benefits depends on the participant's age and years of creditable service. Vested participants who retire earlier than the normal Social Security retirement age receive an actuarially-reduced benefit.[9] Benefit payments — which are funded out of a unified retiree life fund — are increased each year if income on the fund's assets exceeds the assumed benefit discount rate (5 percent today) and other plan attributes are within expected ranges.[10]

These factors imply smaller benefit levels in Wisconsin than in most other states. For instance, in 2011, Wisconsin reduced the formula factor for executive and elected employees

from 2.0 to 1.6 — now much lower than the average (1.95 percent) across major public employee retirement systems. (Table I shows the formula factors applied to compute retirement benefits for various employee categories.) Due to these changes:

■ A Milwaukee elementary school teacher who began service before 2000 and earned an average of $75,000 in his three highest-earning years before retirement with 30 years of creditable service would receive $39,712.50 a year in pension income ($75,000 × 30 × 0.01765). But a teacher hired after 2011 with the same characteristics would receive $36,000 per year in pension income ($75,000 × 30 × 0.016).

■ An elected official who entered service in 2005 and retires after 20 years of creditable service with average highest three-year earnings of $120,000 per year will receive a pension of $48,000 per year ($120,000 × 20 × 0.02). However, an elected official hired after 2011 with the same characteristics would receive a pension $38,400 per year upon retirement.

■ A protective service employee without Social Security coverage who was hired in 2005 and who retires after 35 years of creditable service with average highest three-year earnings of $80,000 per year would receive a pension of $70,000 per year ($80,000 × 35 × 0.025).

The year-2000 pension law changes provided higher negotiated formula multipliers for some Wisconsin employees. In addition, some Wisconsin protective service employees are covered under federal

Table I
WRS Formula Factors (in Percent) for Computing Retirement Benefits

Employment Category	Beginning Service Date		
	Before 1/1/2000	Between 2000 & 2011	After 2011
General and Teachers	1.765%	1.600%	1.600%
Executive and Elected	1.765%	2.000%	1.600%
Protective Services:			
With Social Security	2.165%	2.000%	2.000%
Without Social Security*	2.665%	2.500%	2.500%

*Local firefighters.

Social Security. Social Security benefits are adjusted downward for retirees with noncovered earnings, but such employees would still receive higher incomes during retirement. Hence, Wisconsin's protective service employees without Social Security are subject to a higher contribution rate and are provided larger formula multipliers to prevent their relative total retirement incomes from being smaller than those of other WRS participants. The formula factors are designed to deliver (along with Social Security, where applicable) a monthly income that is 60 percent to 85 percent of preretirement pay. The pension benefit is provided on a progressive scale so that those credited with fewer years of service and those with higher preretirement salaries receive a smaller pension replacement rate.

Plan Contributions. Contributions are calculated to make the required total (employer and employee) contribution rate constant as a percentage of payrolls over a preselected time horizon (normally 30 years).[11] The calculation determines the fixed share of payrolls necessary to fund the plan's normal costs — current accrued benefits plus prior unfunded service costs that accrued before the state agency joined WRS. This means the total contribution rate depends upon the benefit formula, employee demographics (mortality and employment growth), and the likelihoods of future job-separations, retirement patterns, payroll growth rates, discount rates and so on — variables that plan actuaries must estimate (or make assumptions about) in order to calculate the accrual of normal costs and the size of prior unfunded liabilities in today's dollars.[12]

One particularly noteworthy item is the distinction made between the pre- and post-retirement discount rates of 7.2 percent and 5.0 percent, respectively, to reflect the relatively greater certainty of benefit payments for those already retired compared to current workers and inactive annuitants (individuals no longer in public employment who are not yet receiving retirement benefits). Another notable feature is that there is no guaranteed increase in post-retirement benefits, including no cost of living adjustments. Actual increases are determined by investment return experience during prior years and the development of other factors. These features help minimize the risk of unexpected contribution rate changes for employees.

Employee contributions are deducted at the source. Before June 2011, Wisconsin government agencies could pay some or all employee pension contributions. Such shifts of pension funding costs onto taxpayers were eliminated by legislation passed in June 2011, after which employers may not pay the required employee contribution unless a pre-existing collective bargaining agreement required such employer contributions.[13] In general, required employee contributions must be one-half of the actuarially determined contribution rates, with employers required to contribute the remainder.

Market Valuation of Assets and Liabilities and Funding Status Assessment. WRS resources are channeled through two main funds: the Core Investment Trust and the Variable Investment Trust.[14] The two funds are represented as the same pension plan and are separated for accounting purposes due to differences in the funding valuation methods employed: Assets from any of the funds may be used to pay benefits to any WRS beneficiary. WRS members bear 100 percent of the risk associated with the Variable Fund and most of the risk (approximately 75 percent) associated with the Core Fund, with taxpayers bearing the remainder.

Such risk-sharing mechanisms built into the WRS rules minimize risks for taxpayers.

The Core Fund. The Core Fund's goal is to earn a higher long-term return by tolerating exposure to an acceptable level of investment risk. Core Fund investments are composed of a diversified portfolio balanced across fixed income, equity and other instruments. Diversification delivers stability under a broad range of economic conditions.

The Variable Fund. The Variable Fund primarily holds and actively manages equity securities with the goal of achieving higher returns than comparable portfolios, and employees must opt into this fund. The higher risk exposure of the Variable Fund is associated with higher (expected) returns. Unlike the Core Fund, annual Variable Fund investment experience is not smoothed over the previous five years.

Evaluating the funding status of a pension program involves the key step of comparing "valuation assets" with "computed liabilities." The latter term describes valuation of what the program owes and will pay out in the future based on benefits earned by employees' service through the valuation date. The computations involve projections about the covered population and benefit outflows based upon assumptions about employee tenure, retirement age distributions, rates of mortality, disability, dependency and survivorship, and so on. The resulting aggregate payment flows over future years through the preselected time horizon are discounted to yield a present value of computed (or actuarial) liabilities. This amount is also called the Actuarial Accrued Liability (AAL).

Actuarial (or valuation) assets are those assets whose value can be estimated with considerable precision, especially over short time horizons, and that are recognized and available to finance payment of the program's liabilities. Assets in the Variable Investment Trust are marked to market each year, meaning their current fair market value is assessed without consideration of their potential future value. Assets in the Core Investment Trust are valued (recognized) by taking into account the timing of investment returns — the sum of ordinary income and capital value changes.

> *"Benefits are adjusted for annual investment performance."*

The statutory asset valuation method used for the WRS Core Investment Trust recognizes investment returns by gradually phasing in current fair value returns over a five-year "smoothing" period. Thus, the assumed return in any given year includes one-fifth of the returns over the past five years. Using such an assumed return, rather than the current fair market value return, recognizes long-term changes in asset values and minimizes short-term volatility in capital market returns.[15] The five-year market-price smoothing when valuing assets available to pay future benefits yields the pension plan's Actuarial Assets (AA).

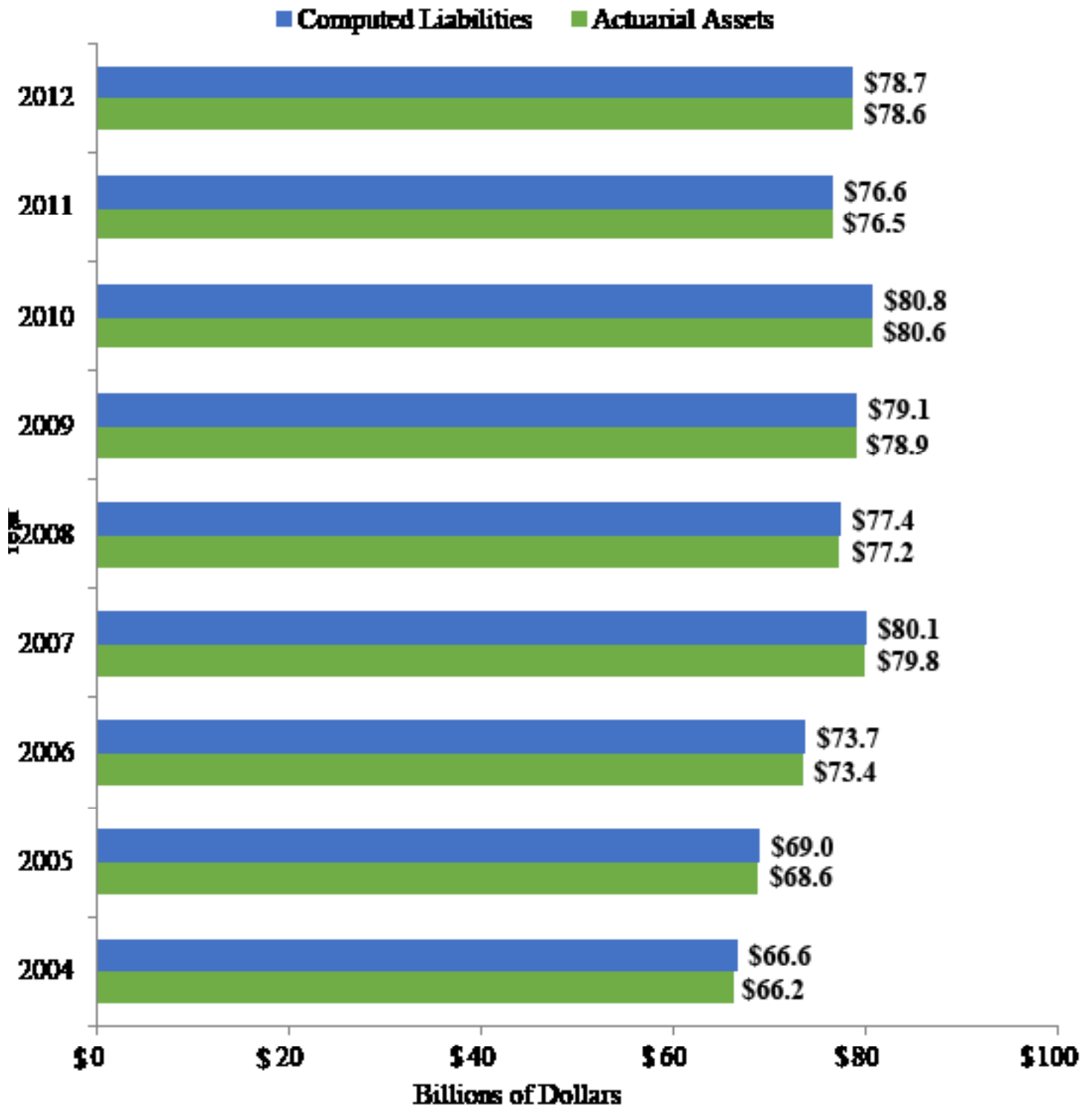Figure II shows the size and trends in the valuation of WRS assets and

computed liabilities, and the funding ratio — the ratio of valuation assets to computed liabilities. The WRS funding ratio was 99.9 percent in 2012, placing it third among the 50 states and the District of Columbia.[16] Alternatively, subtracting AA from AAL yields the Unfunded Actuarial Accrued Liability (UAAL) — the portion of AAL that is not covered by assets on hand and must either be funded by raising additional resources or reduced by enacting cuts in future benefits.[17]

WRS has maintained its funding ratio (calculated under procedures allowed by the GASB) near 100 percent since before the Great Recession. How does WRS manage to keep its funding ratio close to 100 percent? This outcome stems from the "risk sharing" feature of WRS benefits: Annual investment returns on WRS assets determine whether retiree benefits can increase or decrease from year to year.

Retirees' monthly pension payments (annuities) are periodically adjusted based on annual investment performance and are increased or decreased each May 1st after the investment performance evaluation of the trust funds is completed. WRS retirees enjoyed many years of positive adjustments to their monthly Core annuities because of high investment returns before 2008. Those annuities grew well above the guaranteed, or "floor," amounts (determined at retirement) over time. The sizable market downturn during 2008-2009, however, compelled several years of negative annuity adjustments for those not already at their floor annuity levels.[18] Table II shows the annual adjustments applied after 2008.

Because the assets and investment

Figure II
WRS Funding Status Around the Great Recession
(in billions of dollars)

■ Computed Liabilities   ■ Actuarial Assets

Year	Computed Liabilities	Actuarial Assets
2012	$78.7	$78.6
2011	$76.6	$76.5
2010	$80.8	$80.6
2009	$79.1	$78.9
2008	$77.4	$77.2
2007	$80.1	$79.8
2006	$73.7	$73.4
2005	$69.0	$68.6
2004	$66.6	$66.2

Billions of Dollars

returns are measured after five years of historical values, annual changes in actuarial investment returns are not as large those actually earned on the market value of assets each year. Since annuity adjustments are based on measured (or actuarially smoothed) returns, fluctuations in retirement annuity payments are less volatile than annual market returns.[19] However, large increases or declines in asset returns in particular years continue to influence annuity adjustments for five years after they occur. Thus, the market downturn during 2008 will cause negative Core annuity adjustments through 2013.

What are the implications of similar prospective benefit adjustments? One consideration is that GASB standards for valuing liabilities turn out to be more appropriate for WRS, unlike many other public pension plans where retiree benefits are guaranteed — either in the state's constitution, its laws or through court decisions. The discount rate assumptions used to value WRS liabilities — 7.2 percent for current employees' and inactive participants' projected accrued benefits and 5 percent for retiree benefits — are already more conservative (smaller) than those used by many other state and local pension plans.[20] And this higher-than-riskless discount rate applied by WRS to accrued non-retiree benefits seems to be appropriate because those benefits are neither guaranteed nor riskless.

How to Improve the Wisconsin Retirement System

Though pension benefits under the Wisconsin Retirement System are nearly fully funded, improvements to the system could be made that would reduce costs and/or increase retirement security for participants.

Use two discount rates for workers and retirees. One worthwhile modification in WRS' liability valuation method may be to split projected accrued benefits of both active members and retirees into two parts: benefits up to the floor (which are guaranteed) should be discounted using a safe (nominal) rate of return (approximately 5 percent per year), and the variable component (above the floor) should be discounted using a higher rate consistent with the risk and variability of future annuity adjustments —

approximately the market risk premium on risky investments such as stocks, real estate and other securities. This would be a refinement in addition to the already conservative discount rate of 5 percent per year applied to the pension liabilities for retirees relative to the rate (7.2 percent per year) applied to the future accrued benefits of active members described earlier. Adding this refinement would be more consistent with the WRS rule that benefit adjustments cannot reduce benefits to below floor level for each participant — implying that the floor level of benefits is guaranteed. This adjustment is likely to result in a higher UAAL.

Increase the retirement age. With improving population health and increasing longevity, the WRS normal and early retirement rules are becoming obsolete. For example:

- Federal mandatory retirement rules for protective service employees and air-traffic controllers are higher than those of Wisconsin.
- Social Security retirement ages are being gradually increased from 65 to 67.

Going beyond the standard and bland label of "deferred compensation," pensions are (or should be) intended to protect (or

Table II
Post-Retirement Benefit Adjustments Based on Core and Variable Fund Investment Performance* (percent)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Core Adjustment	17.1%	5.7%	3.3%	0.0%	1.4%	2.6%	0.8%	3.0%	6.6%	-2.1%	-1.3%	-1.2%	-7.0%	-9.6%
Variable Adjustment	21%	-11%	-14%	-27%	25%	7%	3%	10%	0%	-42%	22%	11%	-7%	9%

*Note: The figures show maximum adjustments (in percent) applied, contingent on remaining above the floor level of benefits.

replace) income when working ability and earnings erode during old age. But Americans' health, longevity and working ability is gradually extending to older ages. If these retirement age limits were increased for younger and future participants (perhaps in tandem with increases in normal retirement ages for federal programs) to keep up with these trends, WRS financial liabilities would decline and its funding status would improve still further.[21] Indeed, given that contribution rates are adjusted to maintain a nearly 100 percent funding ratio, higher retirement age limits would facilitate reductions in employee and employer contribution rates, providing more disposable income for employees and more resources for other state spending priorities. Indeed, it would prevent workers from continuing to work as "consultants" in order to draw a pension and a salary and enjoy state-subsidized health insurance after retiring from regular state employment while their health still permits full-time labor force participation.

Employees' Retirement System of the County of Milwaukee

The Employees' Retirement System of the County of Milwaukee is a single-employer defined-benefit plan that provides retirement, disability and death benefits to County of Milwaukee (the "County") employees. County laws mandate the establishment of the Retirement Plan as a legally independent entity. Milwaukee County's Retirement system is controlled and managed by a 10-member Pension Board with member appointments controlled by

various stakeholders — the County Executive, active employees, Board Chairperson, County Deputy Sheriffs Association and retirees. As of year-end 2012:

- The Milwaukee County retirement system had retirees, active employees and terminated, inactive employees numbering almost 13,000.
- Retirees form the overwhelming majority of members, numbering almost 7,900.
- Current employees number almost 4,000.

The system was mostly noncontributory until 2011, but now requires mandatory contributions by most full-time employees. Contribution rates varied between 4.4 percent and 6.59 percent of worker salaries in 2013 and are determined each year on the basis of the system's performance and financial status as evaluated by its actuaries. The County's annual required contribution (ARC) is calculated to cover the system's annual normal cost, interest and an additional charge to amortize its unfunded (or overfunded) actuarial accrued liability after subtracting expected participant contributions. The actuarial calculation is based on the prior fiscal year's demographics. The actual County contribution is set during the County's budget process and may differ from the annual required contribution for various reasons such as changes in plan provisions and budgetary constraints.

Milwaukee Country's retirement rules are determined by the date of employment and the collective bargaining agreement in force. Most employees' normal retirement age is either 60 or 64; some employees are subject to a five-year-creditable-

service vesting requirement; protective service employees enjoy a normal retirement age of 57 (55 if they are credited with 15 years of service); some employees are eligible to retire when their age plus credited years of service add up to 75. The benefit formula is the product of final average salary, service years and a multiplier that varies between 1.5 percent and 2.5 percent across employee types. An employee's three or five consecutive years of highest earnings are used to calculate the final average salary. The monthly benefit annually accrues an increase equal to 2 percent of the first month's benefit, with the limitation that it must remain below 80 percent of the employee's final average salary.

Following GASB reporting standards, the Milwaukee County retirement system's ratio of actuarial assets to actuarial liabilities was 87.3 percent on January 1, 2013, having declined steadily from 95.7 percent in 2009. Its underfunding implies that its annual contribution rate will be higher than normal costs under a 30-year amortization period. In 2013, the annual contribution rate calculated under GASB standards was $32 million, but actual contributions made fell short by about $3.5 million.

The Pension Board exercises full control over the investment and management of assets and follows a set of self-imposed constraints to limit risk exposures. However, its investment policies appear to deliberately increase exposure to risk by investing in derivative securities and contracts in order to "improve the performance of the fund." As of January 1, 2013, according to the latest report available, about 70 percent of Milwaukee County's

retirement system assets were invested in domestic and international stocks, hedge funds, real estate and Real Estate Investment Trusts and private equity securities. The Pension Board appears to be well aware that its derivative, futures and forward contracts (which represent off-balance-sheet risky investments) involve the risk of nonperformance by its counterparties. The system's investments are also exposed to the risk that changes in market conditions may cause capital losses. It has probably adopted such an investment style in order to maximize the chance that the system's unfunded actuarial liability would not have to be met out of employee or employer (taxpayer) contributions in the future. However, such a strategy implies exposure to the risk that required contributions from those stakeholders and taxpayers may be even higher if market conditions worsen.

In part, the county's risky investment strategy may stem from high underlying actuarial liabilities to pay future benefits — a liability that appears to be understated by the adoption of a high, 8 percent discount rate. GASB's latest reporting standards allow the use of the "expected rate of return on assets" to discount benefit liabilities until current assets are exhausted. Correspondingly, to reap high expected returns on assets, the county's retirement system may be choosing to invest in risky securities. Thus, were it to use a more conservative rate of return to value its liabilities — say 5 percent per year — its reported actuarial liabilities and annual required contributions would be much larger and its funded ratio would be much smaller than the reported 87.3 percent.

How to Improve the Milwaukee County Retirement System. A better approach and policy Milwaukee County should adopt is to evaluate its pension liabilities in a more conservative manner, limit investment to less risky securities to facilitate closer asset-liability matching, remove guaranteed benefit increases that current annuitants have not earned through prior contributions and require current employees to make contributions more in line with the actuarial value of benefits they would receive under the benefit formula.

It may also be worth exploring the closure of the existing system to younger and future employees and shifting them to a new defined-contribution pension plan with custodial and investment management functions outsourced to insurance companies with professional institutional investment experience. Taking these steps would require making difficult political decisions, with sacrifices by all stakeholders. But the earlier that such measures are taken, the less costly, overall, will the solution be to the system's pension underfunding problem.

Another reform approach would be to take the historical progression of merging disparate retirement systems to its logical conclusion by merging the Milwaukee County Retirement System into WRS. The rules for doing so are already in place: If a nonparticipating public employer wishes to join the WRS, its governing body must first adopt a formal resolution of inclusion. A determination must be made of the amount of prior service credits that the employer wishes to recognize for its current employees. These prior service credits represent allowances for future retirement benefits that are applicable to employment service by current employees before the employer joined the WRS.

For example, the merger in 1981 of the State Teachers Retirement System and the Milwaukee Teachers Retirement Fund into the WRS resulted in consolidation of $588 million of unfunded accrued liabilities into the expanded WRS. This approach would result in a sharing of pension funding costs and risks across a broader group of state employees and retirees. But it would also extend the better fund management and oversight practices of the WRS to stakeholders in the Milwaukee County Retirement System.

The City of Milwaukee Employee Retirement System

The City of Milwaukee provides disability and defined-benefit pension benefits to employees through its Employee Retirement System. The Common Council of the City of Milwaukee adopted legislation in 2000 to increase benefits for current and future retirees but gave current members the option of rejecting the changes. Members enrolled after June 2000 were given no opt-out choice. Although the vast majority of members have consented, separate funds have been established to pay benefits to consenting and non-consenting members.

Plan members must contribute a percentage of their wages equal to 5.5 percent for general city employees, and 7 percent for police officers, firefighters and elected officials. Until 2010, contributions could be made by

the employer on behalf of employees. Changes enacted in 2010 require some employee groups to make their own pension contributions. In addition, active members had to contribute 1.6 percent of pensionable earnings for eight years after January 1, 2000, to finance the improved escalator benefits described above. However, general city employees who are required to make pension contributions on their own behalf are not subject to the 1.6 percent additional contribution requirement.

General city employees may elect to retire at the minimum service retirement age of 60 years (57 for police officers and firefighters). Alternatively, general city employees who are 55 years old and older and have 30 years of service credits are eligible for retirement. Police officers with 25 years of service (regardless of age) and firefighters who are age 49 and older with 22 years of service can opt to retire. Retirement benefits are calculated by applying a multiplier to the final average salary (or highest of any three creditable service years) times the number of creditable service years. The multiplier is 2 percent for general service employees and 2.5 percent for policemen and firefighters. Escalators applied to pension benefits and cost of living adjustments mean that City of Milwaukee retirees are assured benefit growth, often exceeding the rate of price inflation.

The city's retirement system funding ratio declined from 96 percent as of January 1, 2012, to 90.8 percent as of January 1, 2013 — the result of continuing to recognize asset losses from the 2008-2009 recession. Among the significant accounting curiosities, again, is a discount rate of 8.25 percent per year through 2017

and 8.5 percent beginning in 2018 — too high for measuring the system's liabilities. As is true for many other state and local pension plans, the city's investment policy guidelines allow significant risk exposure stemming from interest rate, credit and overall market volatility.

The City of Milwaukee Employee Retirement System holds exposures to derivatives of various types — interest rate, credit, index, currency and bond futures, and option and forward contracts in bonds, currency, and interest rates and other markets. *Thus, a not-insignificant possibility* exists that changes in the values of investment securities will occur in the near term that could materially and negatively affect the net position of the city retirement system's balance sheet. Other questionable assumptions include projected salary increases of 3 percent to 7.5 percent per year — and up to 14.4 percent per year for police and fire personnel.[22] City employee productivity growth is unlikely to justify such assumptions, implying optimistic future growth of employee plan contributions.

Similar to the case of Milwaukee County's retirement system described earlier, future retirement system reforms of the city retirement system should increase employee retirement ages for younger and future generations, seek to reduce market investment risks, value its liabilities by using more conservative (smaller) discount rates and attempt to match asset payoffs with liabilities as they come due. Emulating the risk spreading features of WRS described above would improve the funding and financial stability of the City of Milwaukee Employee Retirement System. Alternatively, as described

earlier for county's retirement system, merging the city's retirement system with WRS may be worth considering.

Wisconsin's Retiree Health Insurance and Other Post-Employment Benefits

Spending on health care varies widely across states, but Wisconsin ranks among states that have comparatively high health care costs per capita and high health insurance premium rates. As is the case in many states, Wisconsin's provision of retiree health insurance at subsidized rates is financed on a pay-as-you-go basis: No prefunding means this system transfers resources from younger to future generations — a transfer that is slated to grow larger as more employees retire and age with higher incidences of health problems and costs.

Wisconsin provides eligible state and local workers and retirees with a Health Insurance Plan (HIP) whose coverage extends up to age 65 (Medicare's qualifying age).[23] The state's Other Post-Employment Benefits (OPEB) program includes disability coverage for state and local protective-services employees and life insurance coverage for eligible retirees. All of these post-employment benefit programs are cost-sharing, multiple-employer defined-benefit plans. The health plan is the largest of the three programs, providing group medical coverage to eligible employees and retirees of the state and participating local government employers. As of January 2011 (the latest information available), there were 57,934 active and 7,021 retiree beneficiaries participating in the plan. The Insurance Plan is the only OPEB

program with an actuarial shortfall. Wisconsin's disability and retiree life insurance coverage programs are currently prefunded and enjoy more than full funding.

The HIP premium for retirees is the same as for active employees, implying an implicit subsidy for the former. The level health insurance premiums result in a subsidy because retirees utilize health system services more and generate larger claims than active employees, but the premiums they pay are community-rated (blended) across all participants. This premium rate subsidy (through age 65) is treated as an OPEB benefit and is funded on a purely "pay-as-you-go" basis. No reforms to gradually shift to a prefunded system are currently under consideration.[24] Retiree premium rates are established by the Group Insurance Board and are calibrated according to the rate structure contracted with health care service providers.

GASB reporting requirements include computation of the employer's Annual Required Contribution (ARC) — an actuarially determined funding level that would cover normal costs each year and amortize any existing unfunded actuarial liability over 30 years. According to Wisconsin's Comprehensive Annual Financial Report, the ARC as of June 30, 2013, was $91.6 million while the employer contributions were just $38.9 million. Taking account of beneficiary premiums, the resulting upward ARC adjustment was $29.7 million.

Wisconsin's total future OPEB liability on account of HIP — the present value of retiree health care subsidies over the next 30 years — is estimated by program

actuaries (using various actuarial assumptions) to be $953 million as of year-end 2010. This estimate is based on a discount rate assumption of 4 percent, the sum of 3 percent for inflation and 1 percent for returns on investments. The annual payroll growth assumption is 3.2 percent. Other assumptions include future employment, mortality and health care cost trends.[25] However, since there are no assets to prefund OPEB benefits, the inclusion of a 1 percent expected "investment return" in the discount rate seems unwarranted. Moreover, health care costs are assumed to grow at 3.82 percent per

> *"The WRS has no assets to prefund retiree health benefits."*

year initially, and the growth rate is adjusted gradually to an ultimate rate of 5 percent. This assumption also appears to be understated relative to that of the Congressional Budget Office, which projects federal health care expenditures to increase at a 7 percent annual rate through 2024.[26] Further, Wisconsin's historical annual average cost growth was 6.7 percent — *higher* than the national average historical health care cost growth rate of 6.5 percent.[27] These facts mean that Wisconsin's OPEB unfunded actuarial accrued liability for its health plan of $953 million is likely to be considerably understated. Even with that (under)estimate, just the interest cost on the OPEB liability equaled $16.3 million in 2011 — or

13 percent of the program's 2011 annual cost of $128.4 million.

As a ratio of the present value of covered payrolls of active plan members, the unfunded accrued actuarial liability ($953 million) amounts to 29.4 percent. Thus, Wisconsin's OPEB obligation due to its health plan represents a significant prospective financial burden on employees and taxpayers and should be reformed. Indeed, without early and meaningful reforms, the rapid projected growth in health care costs will likely escalate this financial burden and require additional contributions from active members and state taxpayers.[28]

The urgency of reform is reinforced by the likely side-effects of the Health Insurance Plan's pay-as-you-go financing structure: It is likely promoting economically costly behavioral effects such as earlier retirements and reduced saving for retirement overall. For example, recent evidence suggests that providing retirees with more generous (more actuarially fair benefits relative to out-of-pocket costs) health coverage induces them to save less on their own for health expenses during retirement.[29] In addition, recent findings suggest that without pre-age-65 health coverage (of the type that the Health Insurance Plan provides) public employees would choose to extend their employment until they become eligible for Medicare.[30]

Higher Premiums for Retirees. OPEB reforms for the future should follow two principles.

First, beneficiaries should pay more according to the value of the health care coverage they are

receiving. That means either making continued post-retirement coverage contingent on a "continuation charge," or charging retirees some combination of higher premiums, copays and deductibles. These charges and copayments could be calibrated to bring retiree out-of-pocket coverage charges closer in line to their health care utilization and costs as a separate group. Perhaps such cost sharing charges could be made progressive — varying according to retiree incomes from pensions, Social Security and other sources to protect financially vulnerable retirees.

Second, rather than continuing to accrue OPEB unfunded liabilities on account of a pay-as-you-go funded HIP program, Wisconsin should close the current program to future employees and to those below a cut-off age (say 45).[31] These groups should be offered a new health care plan that prefunds pre-Medicare retiree health care coverage. Any residual unfunded liability of the closed HIP program should be funded out of bond issues to allocate the fiscal burden and risks more broadly. Limiting the growth in HIP unfunded obligations would contain and eventually reverse the negative economic effects of pay-as-you-go systems outlined above.

Health Savings Accounts for Younger Employees. For younger and new employees, the most straightforward approach to providing similar coverage would be to introduce health savings accounts (HSAs) to fund current out-of-pocket health care expenses and to save for future health care needs in a tax-deductible manner. Indeed, 21 states across the United States have introduced HSAs or

related legislation since 2007 to complement or replace retiree health care provision.[32] The advantages of HSAs include exemptions from income taxes at the state and federal levels; funds withdrawn to pay medical expenses are also tax free; HSA funds are portable when changing jobs; and funds not used for current medical expenses accrue interest that is also tax free. After the age of 64, employees could withdraw HSA funds for any reason. A reform along these lines would go a long way toward helping the state reduce its unfunded health plan liabilities and leave more general fund revenues for developmental, environmental, education and other needs.

Conclusion

The Wisconsin Retirement System serves as an example to other states about how to design a defined-benefit pension plan that is financially stable and sustainable. Recent WRS reforms — such as increased work hours to accrue creditable service years, a five-year vesting period for new employees, reduced benefit formula factors for certain high-income employee categories and ensuring that employees who will receive benefits from WRS actually make contributions prior to retirement — have strengthened Wisconsin's retirement system. These adjustments to WRS exemplify the types of reforms that could be undertaken to successfully impart greater stability to pension plans in other states and localities, to secure resources meant for providing retiree benefits and minimize risk exposures of stakeholders — retirees, state employees and taxpayers.

The Milwaukee County Employee Retirement System also shifted

policy to require worker contributions after the year 2000 but remains less financially secure than the WRS. Reforms to restore financial sustainability are needed for MCERS, possibly including more appropriate assumptions and methods for liability assessment, a more conservative investment policy, asset liability matching and the introduction of a defined-contribution plan for younger and future employees. Similar remarks apply to the City of Milwaukee's retirement system.

Wisconsin's OPEB liabilities — primarily premium subsidies provided to retirees on pre-Medicare health insurance coverage — however, are fully unfunded, with the actuarial liability amounting to a significant share of the state's general revenues. Because current contributions (premiums plus state contributions) fall short of the ARC, the taxpayer burden is likely to grow larger over time. Another reason this is likely to happen is that Wisconsin's OPEB health care liabilities are being underestimated primarily because of an unwarrantedly low assumption about future health care cost growth. A reform to charge higher premiums to retirees and to close the HIP program to younger and future employees by shifting them to a new prefunded system with health saving accounts would be a fiscally sound reform. The sooner that future costs are properly estimated and recognized, and the sooner that it is reformed, the more secure this program will become to the benefit of the Wisconsin's state employees, retirees and taxpayers.

Notes

1. The author thanks Erin Partin for excellent research assistance, an anonymous referee for very helpful comments on an earlier version of this paper, Peter Vandoren Nathan Pritchard, and two anonymous referees for helpful comments.

2. See "State and Local Pension Plans: Funding Status, Asset Management, and a Look Ahead," by Jagadeesh Gokhale, Cato Institute White Paper, 2012. Available at http://object.cato.org/sites/cato.org/files/pubs/pdf/Gokhale-WP-State-and-Local-Pension-Plans.pdf.

3. The S&P 500 index increased from 896 at mid-year 2009 to 1466 by end-year 2012 — but still remained below its peak value of 1562 during mid-2007. Stock market investments constitute a large portion of public pension fund investments.

4. The figures cited here are based on data obtained from the Boston College Retirement Research Consortium. The data is available at http://nianticsystems.com/pls/apex/f?p=1988:3:0.

5. See the section below on "Market Valuation of Assets and Liabilities and Funding Status Assessment."

6. In a defined-contribution pension plan, workers contribute a share of their earnings to their own retirement savings account, much like a 401(k) account offered by private employers.

7. Final Average Earnings (FAE) is the average of the participant's three highest annual earnings periods, not necessarily consecutive. Creditable service includes current service and prior service for which a participant received earnings and made contributions as required. Creditable military service is included.

8. The benefit formula is simply FAE × Service Years × formula factor. The retirement benefit will be calculated as a money purchase benefit based on the employee's contributions plus matching employer's contributions, with interest, if that benefit is higher than the formula benefit. Maximum formula annuity is 85 percent of FAE for protective occupation participants not covered by Social Security, 65 percent of FAE for protective service employees covered by Social Security, and 70 percent for all other participants.

9. The normal retirement is at age 65 for regular employees (57 with 30 years of creditable service), 54 for protective service employees (53 with 25 years of creditable service) and 62 for elected and executive members (57 with 30 years of creditable service). Early retirement cannot occur before age 55 for regular employees and age 50 for protective service employees. The benefit is reduced 0.4 percent for each month that the annuity effective date precedes the normal retirement age. For nonprotective participants terminating after June 30, 1990, the 0.4 percent is reduced for months after the attainment of age 57 and before the annuity effective date by 0.001111 percent for each month of creditable service. Participants who terminate employment before becoming eligible for an annuity can elect to receive employee-required contributions plus interest as a separation benefit or leave contributions on deposit and defer application until eligible to receive a retirement benefit.

10. The adjustment must be at least 0.5 percent to trigger the increase.

11. The contribution rate calculation follows the "entry age normal with a frozen initial liability" actuarial method.

12. WRS actuaries reportedly conduct validation exercises to assess the accuracy of their key projection parameters by comparing them with accruing experience. This exercise is executed every three years and serves as a basis for recommending parameter changes for making multiyear forward projections. Thus, the parametric controls are informed by empirical experience and are not simply speculative guesses. Some of these assumptions are detailed in the 2012 Comprehensive Annual Financial Report of the State of Wisconsin Department Employee Trust Funds (DETF). They include: Investment return of 7.2 percent; pre-retirement discount rate of 7.2 percent; post-retirement discount rate of 5.0 percent; salary increase for inflation of 3.2 percent; salary increase for seniority/merit of between 0.2 and 5.8 percent; and a nonguaranteed post-retirement benefit adjustment of 2.1 percent (the actual adjustment is based on investment return experience and other factors).

13. Act 10 of 2011 recognized and permitted pre-existing collective bargaining agreements to run their course. In general, it first applied the prohibition on the employer paying the employee contribution after any pre-existing collective bargaining agreement expired.

14. A third fund exists to pay police and firefighters benefits.

15. Under this valuation method, the assumed return will tend to exceed the market value when capital markets are producing low returns, and will fall short of the market value when market returns are high. But the assumed return will follow and reflect the longer term trends in market returns quite accurately.

16. States with higher funding ratios in their DB plans in 2012 were Washington state (113 percent) and the District of Columbia (105 percent).

17. Thus, an alternative way of expressing the funded ratio is through the formula [1-(UAAL/AA)].

18. The annual adjustment rates are recommended by an independent board of actuaries and consultants — as determined after conducting an actuarial analysis of WRS funding status — including assets, future benefit obligations, mortality developments, and so on. The determination of annuity adjustments prioritizes maintaining an adequate annuity reserve for the future.

19. Without smoothing, Core annuities would have been reduced by approximately 34 percent in 2009. Instead, annuities that were not at the floor level were reduced 2.1 percent in 2009, 1.3 percent in 2010, 1.2 percent in 2011, and 7 percent in 2012. The large reduction in 2012 was imposed because earlier reductions reduced the number of annuitants who remained above the floor benefit level.

20. An overwhelming majority among the largest state and local pension plans use an annual discount rate assumption of more than 8.0 percent.

21. It should be noted that there are costs to keeping employees around for longer. Older employees may experience more rapid declines in productivity but their compensation may not be reduced. However, older employees are more experienced and keeping them employed longer would reduce the cost of worker turnover. There are alternative ways of achieving this objective than changing retirement age limits: One other way, for example, is to adjust the actuarial discount factors applicable to early retirees to impose a larger cost on them rather than employers.

22. A separate City of Milwaukee fund for policemen's annuity benefits was only 30.2 percent funded as of January 2013.

23. Retiree benefits constitute post-employment benefits requiring financial reporting under GASB's Statement No. 45. Wisconsin's Department of Employee Trust Funds and the Group Insurance Board have program administration and oversight responsibilities for the Health Insurance Plan.

24. Retirees pay premiums either directly "out-of-pocket" or by converting accumulated sick leave allowances when employed. The sick leave benefit — also called compensated absences — is reported per GASB requirements.

25. The assumptions underlying the calculations are noted in the State of Wisconsin's Comprehensive Annual Financial Report, 2013, page 137. Available at ftp://doaftp1380.wi.gov/doadocs/2013percent20CAFR_Linked.pdf.

26. See "The Budget and Economic Outlook: 2014 to 2024," United States Congressional Budget Office, February 2014, page 56.

27. Average annual growth rate of health care costs estimate based on information from the National Health Expenditures website of the Centers for Medicare and Medicaid Services. Available at http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/res-tables.pdf.

28. The projected annual health care cost trend rate is 3.82 percent initially adjusted by increments to an ultimate rate of 5.0 percent by the end of the amortization period of 30 years.

29. One study finds that state and local employees with retiree health coverage had accumulated about $72,000 less wealth compared to their private sector counter parts without retiree health coverage. See Robert Clark and Olivia S. Mitchell, "How Does Retiree Health Insurance Influence Public Sector Employee Saving?" National Bureau of Economic Research, Working Paper No. 19511, October 2013.

30. Health insurance coverage on the private market is costlier compared to state retiree health insurance systems, which charge smaller premiums, on average. Thus, HIP's premium subsidy discussed in the text likely promotes earlier retirement by public employees. See Robert Clark, "Impact of Retiree Health Insurance in the Public Sector," *Trends and Issues*, TIAA-CREF Institute, January 2014.

31. Pay-as-you-go funding promotes a transfer of resources from younger workers toward older retirees. In general the latter have higher propensities to consume out of their wealth. Thus, such resource transfers promote additional consumption and lower saving in the aggregate, with obvious negative connotations for capital formation and productivity. See Jagadeesh Gokhale, John Sabelhaus and Laurence J. Kotlikoff, "Understanding the Post War Decline in U.S. Saving: A Cohort Analysis," Brookings Papers on Economic Activity, Winter 1996.

32. See "State Legislation and Actions on Health Savings Accounts (HSAs) and Consumer-Directed Health Plans, 2004-2013," National Council of State Legislatures. Available at http://www.ncsl.org/research/health/hsas-health-savings-accounts.aspx#2009.