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## Estimated Savings From Michigan's 1997 State Employees Pension Plan Reform

By Richard C. Dreyfuss

### Executive Summary\*

In 1997, as a result of state legislation, the pension plan for the Michigan State Employees' Retirement System underwent a significant change. State employees who qualified for MSERS and who were hired on or after March 31, 1997, were placed in a "defined-contribution" retirement plan. Under this system, they were provided with individual retirement savings accounts to which the state government makes mandatory contributions and the employees make voluntary contributions.

This retirement savings plan, which defines the state's deposits to the retirement account but not the level of future retirement benefits, stands in contrast to MSERS' ongoing "defined-benefit" pension plan for state employees who were hired before March 31, 1997. Under that traditional plan, state government promises an employee a defined annual retirement income. To finance these future pension benefits, state government sets aside money and invests it annually, using the assets accrued over time to pay employees' retirement benefits as they come due. Under this traditional plan, the investment risk lies with the state — ultimately, with the taxpayers.

In this Policy Brief, the author analyzes state pension data to determine whether state taxpayers have saved money because of the decision to close the MSERS defined-benefit plan to new members and to place them in the MSERS defined-contribution plan instead. The author reviews three areas of potential cost-savings: annual "normal costs"; unfunded liability; and "political incentives."

\* Citations provided in the study's main text.

### ABOUT THE AUTHOR

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The "normal cost" of a defined-benefit plan is the annual cost to state government of prefunding the future retirement benefits that working members earned in that particular year. The average normal cost of the MSERS defined-benefit plan from fiscal 1997 through fiscal 2010 — i.e., from the first year of the MSERS transition through the most recent year for which complete data is available — was 8.1 percent of the previous year's payroll (the previous year's payroll is typically employed by the state when measuring this cost).

The state's annual cost of benefits earned under the MSERS defined-contribution plan cannot exceed 7 percent of the current year's payroll, due to the plan's design. Using data from the Michigan Office of Retirement Services, the Michigan Senate Fiscal Agency and the MSERS defined-benefit plan's comprehensive annual financial reports, the author estimates that from fiscal 1997 through fiscal 2010, state government saved a total of \$167 million in MSERS defined-benefit plan normal costs by switching new employees to the defined-contribution plan. This estimate includes an adjustment for the increased normal costs that can result from the closing of a defined-benefit plan.

A second potential area of savings involves the defined-benefit plan's unfunded liability. This liability occurs whenever contributing the normal costs proves insufficient to ensure that a defined-benefit plan remains on track to meet its future pension obligations. As of September 30, 2010, the MSERS defined-benefit plan had an unfunded liability of approximately \$4.1 billion. This shortfall has developed for several reasons, including the fact that the plan's assets have not been growing at the actuarially assumed rate of 8 percent annually and the fact that the Legislature did not make the annual required contributions needed to finance the unfunded liability once it arose. If new employees had continued to enter the

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MSERS defined-benefit plan, the plan's unfunded liability would almost certainly have been higher — an estimated \$2.3 billion to \$4.3 billion higher, given a proration based on state data.

Some argue that any savings from switching new employees from a defined-benefit to a defined-contribution plan is mitigated by the fact that closing the defined-benefit plan requires future amortization payments to be made on a “level-dollar basis,” which is initially more expensive than the level-percent-of-payroll basis used for an open plan. This “transition-cost” argument is dubious, however. The switch to a level-dollar amortization pattern does not alter the benefits ultimately paid, and in MSERS' case, the state has generally failed to make the level-dollar amortization payments.

A final area of cost analysis involves the change in political incentives that occurs with the creation of a defined-contribution plan. A defined-benefit plan can carry considerable unfunded liabilities, while retroactive benefit increases can be enacted and necessary funding significantly deferred. Indeed, since proper funding of a defined-benefit plan requires taxing current voters to provide pension benefits that may not be paid out for years, sound funding policy can be unappealing to legislators seeking re-election and hoping to provide visible benefits now.

In contrast, a defined-contribution plan cannot be legally underfunded, and any increase in the plan's benefits must essentially be paid for when the change is made. A defined-contribution plan thus reduces the political opportunities to defer funding of pension benefits to a future generation of taxpayers and avoids placing a questionable burden on taxpayers who may have been too young to vote when benefits were granted and funding was postponed. While it is difficult to quantify the savings from improved political incentives — the author offers no estimate — this category may be the single largest area of savings over time.

Thus, from fiscal 1997 through fiscal 2010, the MSERS defined-benefit plan is estimated to have saved state taxpayers \$167 million in pension normal costs, \$2.3 billion to \$4.3 billion in lower unfunded liabilities, and important but unquantifiable sums by improving the political incentives of pension funding. These considerable savings and the fact that the plan is predictable, affordable and current in its obligations make it a model for reform of other state government pension plans.

## Introduction

On March 31, 1997, Michigan took what is still considered a dramatic step towards reforming the state's public-sector “defined-benefit” pension system. This change required state hires who qualified for the Michigan State Employees' Retirement System from that day forward to enroll in a “defined-contribution” pension plan, rather than the existing defined-benefit pension plan.<sup>1</sup> This new policy was effected by legislation passed in December 1996 by Gov. John Engler and the Michigan Legislature. The same legislation provided continuing MSERS defined-benefit members a one-time chance to voluntarily switch to the new defined-contribution plan.<sup>2</sup>

The author describes the difference between the two types of retirement plans in a Mackinac Center Policy Brief published in October 2010:

In ... defined-benefit plans, the members' government employer assumes the responsibility of annually investing employer and employee pension contributions in amounts sufficient to finance a projected annual retirement income. These plans place all of the investment risk on the government employer — in this case, on the taxpayer.

... In [a defined-contribution] plan, the state makes ongoing contributions to a tax-favored account, with the employee able to contribute as well. The employee directs investment of the monies, and the accumulated capital is available to the individual at retirement. State government and state taxpayers do not assume investment risk, and the plan incurs no unfunded liability; the amount of money at retirement largely depends on investment returns over time.<sup>3</sup>

Informally, a defined-benefit plan is the kind common 20 years ago, where an employer promised to pay a “guaranteed” pension, while a defined-contribution plan is an individual account — often a 401(k) — in which an employer helps an employee save for retirement.

Michigan continues to maintain the MSERS defined-benefit plan for members hired prior to March 31, 1997.\* A separate statewide defined-benefit plan covering public school employees (“MPERS”) was unaffected by this 1997 change and remains in effect today.† As of September 30, 2010 (the most recent date for which full

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\* The MSERS defined-benefit plan is also referred to as the “MSERS Tier 1” plan, while the MSERS defined-contribution plan is referred to as “MSERS Tier 2.”

† MPERS stands for Michigan Public School Employees' Retirement System.

data are available), the significant unfunded liabilities of the MSERS and MPSERS defined-benefit plans — approximately \$4.1 billion and \$17.6 billion, respectively<sup>4</sup> — raise significant questions regarding sustainability and exactly how this can be viewed as a favorable incentive to live, work and invest in Michigan.

Given that approximately 14 years have passed since the adoption of the MSERS defined-contribution plan, it is possible to review the plan's current status to determine the financial impact of the 1997 change. Such a topic is difficult to analyze precisely, given that it effectively requires certain assumptions regarding the current status of the MSERS pension plan had this change not occurred. Nevertheless, because the MSERS defined-benefit plan still exists, one can develop reasonable estimates and general conclusions, presenting the results in terms of ranges where appropriate. This Policy Brief is intended to produce such estimates for policymakers to consider.

## Estimating the Financial Impact of Adopting the MSERS Defined-Contribution Plan

In the MSERS defined-contribution plan, the state employer contributes an amount equal to 4 percent of each employee's pay to the employee's retirement account. The employee also receives an additional 100 percent employer match on the next 3 percent of pay that he or she voluntarily contributes.\*

To address the question of whether this plan has saved taxpayers money, the brief analysis below falls into three categories:

- (1) Measuring the annual employer contributions to the MSERS defined-contribution plan vs. the defined-benefit "normal cost"
- (2) The potential impact on state government's unfunded liability
- (3) Potentially counterproductive political incentives in pension plans.

Each of these categories is examined in turn below. The analyses are based upon certain simplifying assumptions. Different assumptions could yield materially different results.

\* "State of Michigan 401(K) & 457 Plans Key Features" (Michigan Office of Retirement Services), [https://stateofmi.ingplans.com/csinfo/pdfs/forms/michigan/640002/key\\_features.pdf](https://stateofmi.ingplans.com/csinfo/pdfs/forms/michigan/640002/key_features.pdf) (accessed September 23, 2009). An employee's maximum annual contribution is "[t]he lesser of \$16,500 or 100% of compensation." Ibid.

### (1) Annual "Normal Costs"

The "normal cost" of a defined-benefit plan is the annual employer cost of the future liability associated with the benefits earned in that particular year.<sup>†</sup> State government's normal cost for the MSERS defined-benefit plan in fiscal years 1997 through 2010 has averaged 8.1 percent of the previous year's payroll.<sup>‡</sup> This actuarially determined normal cost is based on a number of assumptions, including a projection of 8 percent annual returns on the plan's invested assets.<sup>§</sup> The defined-contribution plan has an annual employer cost of between 4 percent and 7 percent of the current year's payroll.<sup>§</sup>

To estimate the normal cost savings from placing new MSERS employees in a defined-contribution plan, the author compared the cost of pension benefits for employees under the MSERS defined-contribution plan to the normal cost of the benefits for employees remaining in the MSERS defined-benefits plan. To perform this calculation, the author used several sources of data.

Data for the MSERS defined-benefit system for fiscal years 1996 through 2010 was taken from a series of MSERS comprehensive annual financial reports.<sup>6</sup> The reports provided both the MSERS defined-benefit payroll figures and the MSERS defined-benefit normal costs.

Payroll data for MSERS defined-contribution employees for fiscal years 2000 through 2009 were provided by the Michigan Office of Retirement Services.<sup>7</sup> The ORS did not have this data for fiscal year 2010 at the time of this writing,<sup>8</sup> and the office is unable to provide the data for fiscal years 1997 through 1999.<sup>9</sup> The 2010 payroll figure was obtained from the Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report.<sup>10</sup> The defined-contribution payroll figures for fiscal years 1997 through 1999 were estimated as a linear increase

<sup>†</sup> This normal cost is distinct from payments made to address "unfunded liabilities" carried over from previous years. These liabilities are discussed in the next section.

<sup>‡</sup> Author's calculations based on figures from the comprehensive annual financial reports for the Michigan State Employees' Retirement System in fiscal years 1998, 2000, 2002, 2004, 2006, 2008 and 2010. See "State Employees Defined Benefit Plan: Comprehensive Annual Financial Reports (CAFRs)," (Department of Technology, Management & Budget, Office of Retirement Services, 2011), <http://goo.gl/AE6zU> (accessed May 10, 2011). Normal costs were calculated as a percentage of the previous year's payroll, as opposed to the current year's payroll, because this approach has been adopted in the comprehensive annual financial reports for the MSERS defined-benefit plan.

<sup>§</sup> The exact employer cost depends on how much personal money each employee chooses to contribute to the plan (see earlier discussion in main text). "State of Michigan 401(K) & 457 Plans Key Features," (Michigan Office of Retirement Services), [https://stateofmi.ingplans.com/csinfo/pdfs/forms/michigan/640002/key\\_features.pdf](https://stateofmi.ingplans.com/csinfo/pdfs/forms/michigan/640002/key_features.pdf) (accessed September 23, 2009).

from an MSERS defined-benefit payroll of \$0 in fiscal 1996 (before the MSERS reform) to the known value of \$531 million in fiscal 2000.

State government is unable to provide data for the state's defined-contribution payments for MSERS members for the fiscal years 1997 through 2010.<sup>11</sup> The Michigan Senate Fiscal Agency, however, was able to provide the state's defined-contribution payments and payroll for all employees in state-managed defined-contribution systems: MSERS, the Michigan Legislative Retirement System and the Michigan Judges' Retirement System.<sup>12</sup> In order to develop the estimate below, the author assumes that the MSERS defined-contribution payments as a percentage of MSERS defined-contribution payroll will be approximately the same as this same percentage for the three state systems

combined. Given that MSERS employees comprise the vast majority of employees in the three systems, this assumption seems reasonable.

It could be questionable, however, to compare this estimated percentage for the MSERS defined-contribution plan to the percentage obtained when the state's normal cost for the MSERS defined-benefit plan is expressed as a percent of the MSERS defined-benefit payroll. The author recognizes that closing the MSERS defined-benefit plan to new entrants in 1997 probably raised the plan's normal costs, since these costs tend to trend upward with an aging plan population.\*

\* With a defined-benefit plan using the "entry-age normal" cost method (the method used by MSERS defined-benefit plan), it is possible to argue that the

### Graphic 1: Estimated Total Normal Cost Savings From Shifting New MSERS Employees to a Defined-Contribution Pension Plan, 1997-2010

Fiscal Year Ending 9/30	Payroll for MSERS Defined-Contribution Employees <sup>a</sup>	State's Defined-Contribution Payments as Percent of Current Payroll (Estimated) <sup>b</sup>	Payroll for MSERS Defined-Benefit Employees	State's Defined-Benefit Normal Cost for MSERS	State's Defined-Benefit Normal Cost as Percent of Previous Year's Payroll	Adjusted Normal Cost as Percent of Previous Year's Payroll	Estimated Financial Savings From Lower Normal Cost of Defined-Benefit Plan
	(A)	(B)	(C)	(D)	(E) = (D)/(C) <sup>†</sup>	(F) = (E)-0.5%	(G) = ((F)-(B))•(A)
1996	\$0		\$2,515,000,000				
1997	\$133,000,000	5.1%	\$2,273,000,000	\$230,000,000	9.1%	8.6%	\$5,000,000
1998	\$265,000,000	6.0%	\$2,108,000,000	\$186,000,000	8.2%	7.7%	\$4,000,000
1999	\$398,000,000	6.2%	\$2,214,000,000	\$161,000,000	7.6%	7.1%	\$4,000,000
2000	\$531,000,000	6.1%	\$2,254,000,000	\$172,000,000	7.8%	7.3%	\$6,000,000
2001	\$641,000,000	6.1%	\$2,231,000,000	\$174,000,000	7.7%	7.2%	\$7,000,000
2002	\$682,000,000	6.1%	\$2,133,000,000	\$174,000,000	7.8%	7.3%	\$8,000,000
2003	\$798,000,000	6.0%	\$1,860,000,000	\$173,000,000	8.1%	7.6%	\$13,000,000
2004	\$909,000,000	6.1%	\$1,889,000,000	\$152,000,000	8.2%	7.7%	\$15,000,000
2005	\$991,000,000	6.2%	\$1,880,000,000	\$152,000,000	8.1%	7.6%	\$13,000,000
2006	\$1,053,000,000	6.3%	\$1,848,000,000	\$154,000,000	8.2%	7.7%	\$15,000,000
2007	\$1,147,000,000	6.1%	\$1,826,000,000	\$153,000,000	8.3%	7.8%	\$20,000,000
2008	\$1,235,000,000	6.4%	\$1,764,000,000	\$151,000,000	8.3%	7.8%	\$17,000,000
2009	\$1,380,000,000	6.3%	\$1,734,000,000	\$146,000,000	8.3%	7.8%	\$21,000,000
2010	\$1,316,000,000	6.3%	\$1,611,000,000 <sup>b</sup>	\$143,000,000	8.3%	7.8%	\$20,000,000
							<b>Total: \$167,000,000<sup>‡</sup></b>

Sources: Michigan Office of Retirement Services, Michigan Senate Fiscal Agency, MSERS comprehensive annual financial reports and Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report. All dollar figures were rounded to the nearest million, though precise figures were used in the calculations wherever state government has provided them for a particular data series.

<sup>a</sup>The figures for fiscal years 1997 through 1999 are not available. The figures provided for these years are linearly interpolated between the \$0 figure for fiscal 1996 and the \$531 million figure for fiscal 2000. The figure for fiscal 2010 was not available from the Office of Retirement Services at the time of this writing, so the figure provided was drawn from the Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report.

<sup>b</sup>The figures for the MSERS defined-contribution payments as a percentage of payroll are not available. The figures provided are based on the calendar-year defined-contribution payments and defined-contribution payroll for three combined state retirement systems: MSERS, the Michigan Legislative Retirement System and the Michigan Judges' Retirement System. The figure for 2010 was not available from the state at the time of this writing, so the value for 2010 was assumed to be the same as it was in 2009.

<sup>†</sup> Percentage calculated with normal cost for current year and payroll cost for previous year

<sup>b</sup> This value was taken from the Michigan State Employees' Retirement System 2010 Annual Actuarial Valuation Report, since 2010 payroll data was not available from the most recent MSERS comprehensive annual financial reports at the time of this writing.

<sup>‡</sup> Total may not reflect sum of figures above due to rounding.

To attempt to account for this fact and to help ensure that the normal costs savings of switching employees to a defined-contribution plan was not overstated, the author subtracted 0.5 percent from the state's defined-benefit normal cost as percentage of payroll before comparing that percentage to the annual payroll percentage cost of the MSERS defined-contribution plan. This reduction is simply meant as a general estimate, based on the author's experience, of the increase in the normal cost that may have occurred after closing the MSERS defined-benefit plan. This downward adjustment, together with the other data, produced a cumulative estimated savings of about \$167 million from fiscal 1997 through fiscal 2010 (see Graphic 1).

## (2) Unfunded Liability

By definition, defined-contribution plans have no unfunded liability. In a defined-contribution plan, the annual employer contribution is a final cost. In a defined-benefit plan, the annual employer cost is simply a deposit towards an ultimate liability at a future date.

In a perfect world, contributing the normal cost to a defined-benefit plan should be sufficient (when invested with the plan's accumulated assets) to cover the future pension liability. In practice, however, contributing the normal cost alone can fall short of the plan's needs for a variety of reasons, including lower-than-expected investment returns, unanticipated changes in members' retirement patterns, modified actuarial assumptions and funding methods, and plan amendments, such as retroactive increases in benefits.\* If the normal cost payments prove insufficient, then the annual employer contribution to a defined-benefit plan will require additional funding to reduce the unfunded liability.†

The MSERS defined-benefit plan currently carries a substantial unfunded liability. Had MSERS defined-

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normal costs would not materially increase when the plan is closed to new entrants. The author has chosen, however, to assume higher normal costs in part because of his own knowledge of these plans and in part to ensure that his estimate of any possible savings remains conservative.

\* Similarly, of course, normal cost contributions could ultimately exceed the funding requirements, perhaps because of higher-than-expected investment returns, plan-design amendments or favorable experience compared to the original assumptions. In such cases, the plan may show a surplus. This surplus may result in a future employer contribution that is less than the calculated normal cost.

† It should be noted that under the Michigan Constitution, these liabilities, which have already accrued, cannot be renounced. Michigan Constitution of 1963, Article 9, Section 24; see also, for instance, Patrick J. Wright, "MEA Lawsuit on Retiree Health Benefits Misguided," (Mackinac Center for Public Policy, Aug. 9, 2010), <http://www.mackinac.org/13341> (accessed May 8, 2011).

contribution members remained in the MSERS defined-benefit plan following 1997, it is reasonable to assume that they would have added to the unfunded liability as a result of the same unfavorable asset returns, adverse plan experience, failure to make the annual required contributions to the plan,‡ and other funding policies that have led to the unfunded liabilities for those members currently in the MSERS defined-benefit plan.§

Defined-benefit asset performance from 1997 to 2010 has lagged the actuarially assumed rate of 8 percent annual growth. The author estimates the actual annual performance has averaged about 5.5 percent.<sup>13,¶</sup> Therefore, had MSERS defined-contribution plan members remained in the MSERS defined-benefit plan, a contribution of the normal cost alone would not have been sufficient to cover the cost of the benefits.

To estimate the change in liability had the defined-benefit plan remained open to new hires, the author conducted a simplified analysis that prorated the unfunded liability in proportion to the hypothetically higher defined-benefit payroll.\*\* The author acknowledges that this method could possibly overstate the additional liability that might have

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‡ The Michigan Legislature has frequently failed to make the actuarially calculated annual required contribution to MSERS' and MPSERS' defined-benefit plans. From fiscal 2001 through fiscal 2010, the state exceeded the annual required contribution twice, met it once, and failed to meet it seven times.

§ It is possible that the directors of the MSERS defined-benefit plan would have made substantially different investment decisions if the plan had continued to receive new members. Such changes might have made the unfunded liability smaller, or they might have made it larger. Ultimately, any estimate of the change in liability produced by closing the defined-benefit plan depends on assumptions regarding the investment decisions or funding policies and actuarial methods that would have been in effect had the plan remained open. Here, the author assumes that the investment decisions would have produced roughly the same rates of return. This assumption seems reasonable, given that the MSERS defined-benefit plan appears to have been investing much like the MPSERS defined-benefit plan, which remains open to new hires.

¶ The rates of return can be, and have been, higher over different time periods. The most recent MSERS comprehensive annual financial report states, for instance: "For the fiscal year ended September 30, 2010, the total System's rate of return was 8.5% as compiled by State Street Investment Analytics. Annualized rates of return for the three, five, seven, and ten year periods ending September 30, 2010 were: (3.8)%, 3.3%, 5.9%, and 3.1% respectively." "Michigan State Employees' Retirement System: Comprehensive Annual Financial Report for the Fiscal Year Ended Sept. 30, 2010," (Michigan Office of Retirement Services, 2010), [http://www.michigan.gov/documents/orsstatedb/SERS\\_2010\\_Published\\_1-10-11\\_342741\\_7.pdf](http://www.michigan.gov/documents/orsstatedb/SERS_2010_Published_1-10-11_342741_7.pdf) (accessed March 17, 2011).

\*\* Providing a more sophisticated analysis would require, to begin with, complete demographics for the active members and retirees who belong to the plan. This data is not publicly available. Moreover, debatable assumptions would have to be made in an attempt to reconstruct a hypothetical past. In the end, a more precise and sophisticated analysis might prove no more persuasive or accurate than the simplified approach used above.

## Graphic 2: Estimated Additional Unfunded Liability of Leaving New MSERS Hires in the Defined-Benefit Pension Plan, Annual Estimates, 1997-2010

Fiscal Year Ending 9/30	Defined-Contribution Payroll <sup>a</sup>	Defined-Benefit Pension Payroll	Combined Payroll	Defined-Benefit Plan Actuarial Value of Assets	Defined-Benefit Plan Accrued Liabilities	Defined-Benefit Plan Unfunded Liability (Actual) (Annual Snapshot)	Estimated Additional Unfunded Liability (Annual Snapshot)
	(A)	(B)	(C) = (A)+(B)	(D)	(E)	(F) = (E)-(D)	(G) = ((C)/(B)-1)×(F)
1997	\$133,000,000	\$2,273,000,000	\$2,406,000,000	\$8,834,000,000	\$8,100,000,000	(\$734,000,000)	(\$43,000,000)
1998	\$265,000,000	\$2,108,000,000	\$2,373,000,000	\$9,109,000,000	\$8,497,000,000	(\$612,000,000)	(\$77,000,000)
1999	\$398,000,000	\$2,214,000,000	\$2,612,000,000	\$9,648,000,000	\$9,029,000,000	(\$619,000,000)	(\$111,000,000)
2000	\$531,000,000	\$2,254,000,000	\$2,785,000,000	\$10,337,000,000	\$9,474,000,000	(\$863,000,000)	(\$203,000,000)
2001	\$641,000,000	\$2,231,000,000	\$2,872,000,000	\$10,633,000,000	\$9,878,000,000	(\$755,000,000)	(\$217,000,000)
2002	\$682,000,000	\$2,133,000,000	\$2,815,000,000	\$10,616,000,000	\$10,753,000,000	\$137,000,000	\$44,000,000
2003	\$798,000,000	\$1,860,000,000	\$2,658,000,000	\$10,441,000,000	\$11,761,000,000	\$1,320,000,000	\$566,000,000
2004	\$909,000,000	\$1,889,000,000	\$2,798,000,000	\$10,149,000,000	\$12,004,000,000	\$1,855,000,000	\$893,000,000
2005	\$991,000,000	\$1,880,000,000	\$2,871,000,000	\$9,897,000,000	\$12,400,000,000	\$2,503,000,000	\$1,320,000,000
2006	\$1,053,000,000	\$1,848,000,000	\$2,901,000,000	\$10,890,000,000	\$12,799,000,000	\$1,909,000,000	\$1,088,000,000
2007	\$1,147,000,000	\$1,826,000,000	\$2,973,000,000	\$11,344,000,000	\$13,162,000,000	\$1,818,000,000	\$1,142,000,000
2008	\$1,235,000,000	\$1,764,000,000	\$2,999,000,000	\$11,403,000,000	\$13,766,000,000	\$2,363,000,000	\$1,654,000,000
2009	\$1,380,000,000	\$1,734,000,000	\$3,114,000,000	\$11,107,000,000	\$14,234,000,000	\$3,127,000,000	\$2,489,000,000
2010	\$1,316,000,000	\$1,611,000,000	\$2,927,000,000	\$10,782,000,000	\$14,860,000,000	\$4,078,000,000	\$3,332,000,000†

Sources: Michigan Office of Retirement Services, MSERS comprehensive annual financial reports and Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report. All dollar figures were rounded to the nearest million, though precise figures were used in the calculations wherever state government has provided them for a particular data series. Negative unfunded liabilities occur in years in which there were fund surpluses.

<sup>a</sup>The figures for fiscal years 1997 through 1999 are not available. The figures provided for these years are linearly interpolated between the \$0 figure for fiscal 1996 and the \$531 million figure for fiscal 2000. The figure for fiscal 2010 was not available from the Office of Retirement Services at the time of this writing, so the figure provided was drawn from the Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report.

†This calculation does not represent the author's final estimate; rather, it is used to produce an estimated range of savings of between \$2.3 billion and \$4.3 billion in unfunded liability.

accrued, but he also acknowledges that this method could understate the additional liability that might have accrued. As a result, the estimate of any savings in unfunded liability will ultimately be presented here as a range of values, rather than a specific dollar figure.\*

Using the prorated approach described, a policy decision to keep new MSERS members in a defined-benefit plan could have generated an additional unfunded liability of about \$3.3 billion in 2010 (see Graphic 2). Given the simplifying assumptions in such a calculation, however, the author believes it is more appropriate to place the estimated additional unfunded liability in 2010 in a range from \$2.3 billion to \$4.3 billion. Developing a more precise figure is beyond the scope of this Policy Brief.

\* As discussed under "(1) Annual 'Normal Costs'" above, the defined-contribution payroll data used in the calculations in Graphic 2 below were available from state government only for fiscal years 2000 through 2009. The 2010 figure was taken from the Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report, while the data for fiscal years 1997 through 1999 were interpolated between the known data for fiscal years 1996 and 2000.

### The Question of "Transition Costs"

Some contend that there is one other cost consideration related to MSERS' unfunded liability. Generally speaking, when a defined-benefit plan is closed to new entrants, as MSERS was in 1997, the Government Accounting Standards Board requires that contributions toward reducing the plan's unfunded liability be made on a level-dollar basis rather than a level percent of payroll. This results in higher initial contributions, which some have described as a "transition cost."

Arguably, these higher contribution levels are appropriate. Public-sector pension amortization periods are frequently too long, in addition to the contributions being backloaded. Higher initial contributions on the unfunded liabilities reduce the amount of intergenerational cost transfers — that is, current liabilities inappropriately being shifted to the next generation of taxpayers. To consider these funding reforms as "undesirable costs" — or incorrectly, as "new costs" — mistakenly implies that more-timely contribution schedules are fiscally inappropriate.

It is also difficult to argue that the shift to level-dollar payments constitutes an extra "cost" from the closing of the

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MSERS defined-benefit plan during the years being studied. The MSERS defined-benefit plan did not have an unfunded liability when it closed in 1997, and when an unfunded liability later developed, the state usually failed to make the required contributions on that liability. Also of note, the change from level-percent to level-dollar payments had no impact on the actual benefits ultimately to be paid.

### (3) Political Incentives

Defined-benefit plans, by definition, permit retroactive increases in benefits, with the necessary funding often being deferred. For example, legislators may increase the benefit formula “multiplier” (the fraction of a worker’s salary) used to determine the pension benefit payments, or they may provide additional, ad hoc cost-of-living adjustments to the post-retirement annual pension payments. In the MSERS defined-benefit plan, the comprehensive annual financial report indicates that the following changes were made to the plan’s post-retirement cost-of-living adjustments:

One-time upward adjustments have been made in 1972, 1974, 1976, 1977 and 1987. Beginning in 1983, some benefit recipients share in a distribution of a portion of investment income earned in excess of 8% annually (supplemental payment). Beginning in 1988, all benefit recipients are eligible for automatic 3% annual (non-compounded) benefit increases, with a maximum \$300 annual increase.\*

In many cases, the cost of these benefits will be borne by taxpayers years after the officeholders who approved the increase have left office. Some of these taxpayers may have been too young to vote at the time the benefit increase was approved. Moreover, there are inherent political pressures to maintain or increase benefit levels, even when they are extremely expensive. Similar pressures exist to underfund these plans. Properly funding the plans requires immediate spending whose benefits will not be realized for years. It may also mean contributing more money, perhaps in a tight budget year, by reprioritizing spending, cutting other programs or reducing pension benefits prospectively — options that are often unappealing to legislators, especially

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\* “Michigan State Employees’ Retirement System: Comprehensive Annual Financial Report for the Fiscal Year Ended Sept. 30, 2010,” (Michigan Office of Retirement Services, 2010), 77, [http://www.michigan.gov/documents/orsstatedb/SERS\\_2010\\_Published\\_1-10-11\\_342741\\_7.pdf](http://www.michigan.gov/documents/orsstatedb/SERS_2010_Published_1-10-11_342741_7.pdf) (accessed March 17, 2011). According to the comprehensive annual financial report, a member’s eligibility for these benefits depended on the date of retirement: “Retired before October 1, 1987[.] Greater of supplemental payment or the combination of the 1987 one-time adjustment and the automatic increases. Retired on or after October 1, 1987[.] Automatic increases only.” Ibid., 77.

when they are seeking re-election. In effect, properly funding these plans carries a low political rate-of-return.

In contrast, any improvements legislators make to the benefits of a defined-contribution plan, such as a larger employer match for any employee contribution, must, by their nature, be paid for in the same year they are made. Defined-contribution plans cannot be legally underfunded, as many defined-benefit plans are. Such factors reduce the uncertainty for taxpayers and the political pressure for unsustainable improvements in benefits. While this category of savings is the most subjective (no estimate is offered here), reducing politics in pension plans may be the most significant category of savings realized by switching employees from defined-benefit to defined-contribution plans.

### Final Thoughts

Designing employee pensions involves more than a traditional debate between defined-benefit and defined-contribution plans. Both types of plans have inherent advantages and disadvantages. For the record, defined-contribution plans have suffered asset downturns over the period studied as well. Any such losses are the responsibility of the individual participant, however, rather than current and future taxpayers as a group.

A complete analysis of the advantages and disadvantages of defined-benefit and defined-contribution plans in the public sector is beyond the scope of this brief. Nevertheless, it is reasonably certain that the MSERS defined-contribution plan has cost taxpayers less over the period studied than retaining this same group in the MSERS defined-benefit plan. The Legislature failed to make the annual required contributions to the defined-benefit plan even after the plan was closed, so it seems unlikely the Legislature would have made the larger annual required contributions necessary if the plan had continued to receive new entrants. Thus, continuing only with the defined-benefit plan would have likely placed that plan in worse financial condition than it exists in today; the truly debatable question is the magnitude of the additional unfunded liability.†

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† An analysis by the Michigan Senate Fiscal Agency, while recognizing the potential long-term financial benefit of transferring new public school employees to a defined-contribution plan, has nevertheless underestimated the total financial benefit that might be realized. Kathryn Summers-Coty, “Examining a Change from Defined Benefit to Defined Contribution for the Michigan Public School Employees’ Retirement System,” (Michigan Senate Fiscal Agency, 2009), <http://www.senate.michigan.gov/sfa/Publications/Notes/2009Notes/NotesMarApr09ks2.pdf> (accessed Aug. 24, 2010). The study focuses exclusively

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The calculations in this Policy Brief suggest that since the advent of the MSERS defined-contribution plan in 1997, Michigan taxpayers have saved approximately \$167 million in lower pension normal costs and between \$2.3 billion and \$4.3 billion in lower unfunded liabilities. An additional and important advantage, though difficult to quantify, is the reduced political temptation to provide benefits whose costs are largely deferred to future generations. In other words, a defined-contribution plan is less prone to potentially harmful political interventions.

Of significant note, MSERS' current and projected defined-benefit pension liabilities and related employer contributions are predicated on achieving an assumed 8 percent annual asset return over the long-term. The reasonableness of such an assumption could easily be debated and could well be the subject of a separate report. In fact, such an assumption was recently studied by Wilshire Associates, an independent international investment and consulting firm. The report, which studied 126 U.S. state pension plans (including MSERS, MPSERS and two other major Michigan government pension plans), concludes:

Using [our] return forecasts, none of the 126 state retirement systems are expected to earn long-term asset returns that equal or exceed their actuarial interest rate assumption.<sup>14</sup>

Wilshire further concludes that the median long-term asset return for the 126 state pension plans would be approximately 6.5 percent — 1.5 percentage points less than Michigan's 8 percent return assumption.

The key point is this: If MSERS' current actuarial valuations were to be recalculated using lower investment return assumptions, then the unfunded liability and annual required contributions for the MSERS defined-benefit plan would be higher. Thus, the cost savings calculated in this

Policy Brief for switching new employees to the MSERS defined-contribution plan could be materially higher. The magnitude of the increase, of course, would depend on the precise return assumption used.

The nature and amounts of any future savings will depend on actual investment experience and other factors, including funding policies. Regardless, common sense and the calculations in this Policy Brief suggest that Michigan government should follow the demonstrated best practices of the private sector with regard to employee pensions. In the private sector, pension costs are now designed to be current, with no unfunded liability; predictable, with easily computed expenditures for coming years; and affordable, with annual costs between 5 percent and 7 percent of payroll.\* The MSERS defined-contribution plan achieves these objectives and can thus serve as a model for reforming other government pension systems.

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\* See Dreyfuss, "Michigan's Public-Employee Retirement Benefits: Benchmarking and Managing Benefits and Costs," (Mackinac Center for Public Policy, Oct. 25, 2010), 8-11, <http://www.mackinac.org/archives/2010/S2010-05.pdf> (accessed March 28, 2011).

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on comparing the employer contribution for a hypothetical MPSERS defined-contribution plan to the normal cost of the existing MPSERS defined-benefit plan, noting that the difference between the two is not particularly large. But as the author noted in an earlier Mackinac Center Policy Brief:

In fact, the normal cost of the program is only part of the annual cost; another portion is the annual payment on the unfunded liability. Hence, the normal cost does not represent the full cost of the plan. Indeed, if the normal cost were considered an absolute measure of the true cost of the MPSERS defined-benefit pension plan, the plan would not have an accrued unfunded liability of nearly \$12 billion [now \$17.6 billion].

See Richard C. Dreyfuss, "Michigan's Public-Employee Retirement Benefits: Benchmarking and Managing Benefits and Costs," (Mackinac Center for Public Policy, Oct. 25, 2010), 13-14, <http://www.mackinac.org/archives/2010/S2010-05.pdf> (accessed April 16, 2011).

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## Endnotes

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- 2 Ibid.
- 3 Richard C. Dreyfuss, "Michigan's Public-Employee Retirement Benefits: Benchmarking and Managing Benefits and Costs," (Mackinac Center for Public Policy, Oct. 25, 2010), 1, <http://www.mackinac.org/archives/2010/S2010-05.pdf> (accessed March 28, 2011).
- 4 "Michigan State Employees' Retirement System 2010 Annual Actuarial Valuation Report," (Gabriel Roeder Smith & Company, 2011), A-1; "Michigan Public School Employees' Retirement System 2010 Annual Actuarial Valuation Report," (Gabriel Roeder Smith & Company, 2011), A-1.
- 5 "Michigan State Employees' Retirement System: Comprehensive Annual Financial Report for the Fiscal Year Ended Sept. 30, 2010," (Michigan Office of Retirement Services, 2010), 70, [http://www.michigan.gov/documents/orsstatedb/SERS\\_2010\\_Published\\_1-10-11\\_342741\\_7.pdf](http://www.michigan.gov/documents/orsstatedb/SERS_2010_Published_1-10-11_342741_7.pdf) (accessed March 17, 2011).
- 6 Specifically, data were taken from the comprehensive annual financial reports for the Michigan State Employees' Retirement System in fiscal years 1998, 2000, 2002, 2004, 2006, 2008 and 2010. See "State Employees Defined Benefit Plan: Comprehensive Annual Financial Reports (CAFRs)," (Department of Technology, Management & Budget, Office of Retirement Services, 2011), <http://goo.gl/AE6zU> (accessed May 10, 2011).
- 7 James Hohman, Mackinac Center for Public Policy, e-mail from Kerrie Vanden Bosch, Michigan Office of Retirement Services, May 10, 2011.
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- 10 "Michigan State Employees' Retiree Health Benefits 2010 Annual Actuarial Valuation Report," (Gabriel Roeder Smith & Company, 2011), D-1.
- 11 James Hohman, Mackinac Center for Public Policy, various communications by phone and by e-mail with officials with the Michigan Office of Retirement Services, the Michigan Senate Fiscal Agency, the Michigan Department of Civil Service, the Michigan State Office of the Auditor General and representatives of the state's third-party administrator of the defined-contribution programs, May 4-June 10, 2011.
- 12 James Hohman, Mackinac Center for Public Policy, e-mail from Kathryn Summers, Michigan Senate Fiscal Agency, March 7, 2011.
- 13 Author's estimate based on "Michigan State Employees' Retirement System: Comprehensive Annual Financial Report for the Fiscal Year Ended Sept. 30, 2010," (Michigan Office of Retirement Services, 2010), 53, [http://www.michigan.gov/documents/orsstatedb/SERS\\_2010\\_Published\\_1-10-11\\_342741\\_7.pdf](http://www.michigan.gov/documents/orsstatedb/SERS_2010_Published_1-10-11_342741_7.pdf) (accessed March 17, 2011); "Michigan State Employees' Retirement System: Comprehensive Annual Financial Report for the Fiscal Year Ended Sept. 30, 2000," (Michigan Office of Retirement Services, 2001), 38, [http://www.michigan.gov/documents/sers2000cafr\\_115296\\_7.pdf](http://www.michigan.gov/documents/sers2000cafr_115296_7.pdf) (accessed April 20, 2011).
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