

State Notes

TOPICS OF LEGISLATIVE INTEREST

Fall 2012



Michigan Public Universities FY 2012-13 Performance Funding/Tuition Restraint By Bill Bowerman, Associate Director

Introduction

The fiscal year (FY) 2012-13 budget for Higher Education includes a \$36.2 million (3.0%) increase for university operations. The increase is entirely distributed based on performance measures and tuition restraint. The performance measures include metrics for critical skill undergraduate degrees and certificates, six-year graduation rates, total degrees and completions, institutional support as a percentage of core expenditures, and research and development expenditures. This article provides an overview of the process that led to the distribution formulas used for the FY 2012-13 Higher Education budget.

Background

In recent years, for the most part, increases and decreases in State funding for Higher Education have been allocated in an across-the-board manner. The FY 2011-12 budget included a 15.0% across-the-board reduction to university operations. From FY 2001-02 through FY 2011-12, overall State funding for university operations decreased by 25.0%. Table 1 provides a funding history for FY 2001-02 through FY 2011-12 by university.

In February 2011, Governor Snyder included boilerplate language in his budget recommendation for FY 2011-12, stating that beginning in FY 2012-13 university operations funding would be allocated to universities based on a formula developed by the State Budget Director, with advice of relevant stakeholders. The stated goal of the Governor was to encourage universities to provide educational opportunities that are accessible and affordable, and result in a highly educated workforce. In addition, the formula was to reward universities that contribute to the economic well-being of Michigan through research and commercialization of those research efforts.¹ The enacted version of this language differed, especially in respect to development of the formula. Section 266 of Public Act 62 of 2011 provided:

Sec. 266. It is the intent of the legislature that, in subsequent budget years, public university operations funding appropriated by the legislature shall be allocated to each university using a formula developed and enacted by the legislature. Such a formula shall incent universities to provide, in a cost-effective and timely manner, postsecondary opportunities for students that are both accessible and affordable and that result in a highly skilled workforce.

¹ FY 2011-12 Governor's budget Higher Education budget recommendation, Sec. 183b.

State Notes
TOPICS OF LEGISLATIVE INTEREST
 Fall 2012



Table 1: State Appropriations for University Operations

Universities	FY 2001-02	FY 2002-03	FY 2003-04	FY 2004-05	FY 2005-06	FY 2006-07
Central	\$90,003,800	\$88,353,522	\$79,910,900	\$79,910,900	\$80,061,900	\$80,994,600
Eastern	87,637,200	84,993,688	77,295,800	77,295,800	76,140,600	76,955,400
Ferris	55,520,300	53,937,221	48,968,800	48,968,800	48,634,700	49,201,300
Grand Valley	60,095,400	57,992,024	57,904,100	57,904,100	61,129,900	62,603,400
Lake Superior	14,268,700	14,047,630	12,392,400	12,685,000	12,506,300	12,675,900
Michigan State	325,982,300	315,469,556	287,516,000	287,516,000	283,730,300	287,127,000
Michigan Tech	55,241,600	53,667,742	48,723,000	48,723,000	48,018,800	48,501,100
Northern	52,012,900	50,545,612	45,173,100	45,775,200	45,051,600	45,593,100
Oakland	52,384,700	50,551,147	48,106,100	48,106,100	50,685,700	51,378,000
Saginaw Valley	27,393,300	26,434,503	26,140,200	26,140,200	27,499,800	28,052,100
U of M-Ann Arbor	363,562,700	351,809,191	320,662,000	320,662,000	316,368,500	320,156,000
U of M-Dearborn	27,993,300	27,319,061	24,690,000	24,690,000	24,739,200	25,027,400
U of M-Flint	24,068,100	23,523,479	21,228,000	21,228,000	20,903,100	21,151,100
Wayne State	253,644,700	245,520,223	223,714,300	218,108,400	214,666,300	216,822,300
Western	125,677,200	121,778,193	110,847,100	110,847,100	109,695,200	110,973,200
Total Universities	\$1,615,486,200	\$1,565,942,792	\$1,433,271,800	\$1,428,560,600	\$1,419,831,900	\$1,437,211,900
Ag Experiment (AES)	36,848,700	35,559,000	33,163,800	33,163,800	33,163,800	33,827,100
Coop Extension (CES)	31,782,600	30,670,200	28,604,300	28,604,300	28,604,300	29,176,400
Ag Exp & Coop Ext Activities						
Financial Aid	257,771,200	207,326,000	198,740,100	186,612,400	249,862,400	250,312,400
KCP/State/Regional	3,890,300	5,404,200	2,891,500	3,056,500	2,981,500	2,981,500
Total Higher Education	\$1,945,779,000	\$1,844,902,192	\$1,696,671,500	\$1,679,997,600	\$1,734,443,900	\$1,753,509,300
Funding Sources						
Federal	4,900,000	5,500,000	4,480,700	4,500,000	3,500,000	3,000,000
State Restricted	128,210,450	97,934,802	89,750,000	85,150,000	153,500,000	243,700,000
State General Fund	\$1,812,668,550	\$1,741,467,390	\$1,602,440,800	\$1,590,347,600	\$1,577,443,900	\$1,506,809,300
Note:	Amounts listed do not reflect FY 2003-04, FY 2004-05, FY 2006-07, and FY 2007-08 delayed payments or FY 2006-07 Michigan Public Schools Employees' Retirement System (MPSERS) adjustment.					

State Notes
TOPICS OF LEGISLATIVE INTEREST
 Fall 2012



Table 1: State Appropriations for University Operations (continued)

Universities	FY 2007-08	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY '11-12 % Chg to FY '10-11	FY '11-12 % Chg. to FY '01-02
Central	\$81,941,100	\$82,760,500	\$82,436,000	\$80,132,000	\$68,108,900	(15.0%)	(24.3%)
Eastern	77,774,100	78,551,800	78,212,100	76,026,200	64,619,100	(15.0)	(26.3)
Ferris	49,730,800	50,228,100	50,017,100	48,619,200	41,324,300	(15.0)	(25.6)
Grand Valley	63,387,500	64,021,400	63,758,300	61,976,400	52,677,400	(15.0)	(12.3)
Lake Superior	12,981,900	13,111,700	13,059,200	12,694,200	10,789,500	(15.0)	(24.4)
Michigan State	290,139,800	293,041,200	291,841,700	283,685,200	241,120,800	(15.0)	(26.0)
Michigan Tech	49,028,200	49,518,500	49,302,100	47,924,200	40,733,600	(15.0)	(26.3)
Northern	46,171,500	46,633,200	46,438,200	45,140,300	38,367,400	(15.0)	(26.2)
Oakland	51,932,900	52,452,200	52,220,800	50,761,300	43,145,000	(15.0)	(17.6)
Saginaw Valley	28,356,200	28,639,800	28,517,700	27,720,700	23,561,500	(15.0)	(14.0)
U of M-Ann Arbor	323,439,900	326,674,300	325,347,400	316,254,500	268,803,300	(15.0)	(26.1)
U of M-Dearborn	25,295,000	25,548,000	25,437,100	24,726,200	21,016,300	(15.0)	(24.9)
U of M-Flint	21,379,900	21,593,700	21,498,900	20,898,000	17,762,400	(15.0)	(26.2)
Wayne State	219,046,500	221,237,000	220,329,200	214,171,400	182,036,900	(15.0)	(28.2)
Western	112,122,000	113,243,200	112,766,800	109,615,100	93,168,300	(15.0)	(25.9)
Total Universities	\$1,452,727,300	\$1,467,254,600	\$1,461,182,600	\$1,420,344,900	\$1,207,234,700	(15.0%)	(25.3%)
Ag Experiment (AES)	33,996,200	34,336,200	34,198,900	33,243,100		(100.0)	(100.0)
Coop Extension (CES)	29,322,300	29,615,500	29,497,000	28,672,600		(100.0)	(100.0)
Ag Exp & Coop Ext Activities					52,625,800	---	---
Financial Aid	228,912,400	219,912,400	84,473,300	93,126,400	99,526,400	6.9	(61.4)
KCP/State/Regional	2,981,500	2,986,500	2,891,500	2,891,500	2,891,500	0.0	(25.7)
Total Higher Education	\$1,747,939,700	\$1,754,105,200	\$1,612,243,300	\$1,578,278,500	\$1,362,278,400	(13.7%)	(30.0%)
Funding Sources							
Federal	115,198,600	177,866,500	151,711,200	91,926,400	98,326,400	7.0	1,906.7
State Restricted	101,650,000	28,610,400	300,100	300,000	200,219,500	66,639.8	56.2
State General Fund	\$1,531,091,100	\$1,547,628,300	\$1,460,232,000	\$1,486,052,100	\$1,063,732,500	(28.4%)	(41.3%)
Note: Amounts listed do not reflect FY 2003-04, FY 2004-05, FY 2006-07, and FY 2007-08 delayed payments or FY 2006-07 MPSERS adjustment.							



FY 2012-13 Distributions

The development of a funding formula for State aid affects many parties and interest groups. Disagreement over the content of formulas and the resulting distributions can have a negative impact on the appropriations process. In the past, formulas have been successfully developed for community colleges through a task force process. Examples include the Gast-Mathieu Fairness in Funding Formula that was developed in the 1980s, and more recently the Performance Indicators Task Force. The Performance Indicators Task Force was created through appropriation bill boilerplate in 2005. The goal of the Task Force was to review, evaluate, discuss, and make recommendations regarding performance indicators to be used in future budget years to guide decisions regarding State funding to community colleges.² Members of the Task Force included legislators and representatives of Michigan public community colleges. By involving the Legislature and the affected community colleges in the process of developing a formula for distribution of State funds, the process achieved a consensus. The formula developed by the Task Force was first used for distribution of State funds in FY 2006-07, and a version of the formula was still in use for the FY 2012-13 Community College budget.

The legislative process for the FY 2012-13 Higher Education budget consisted of the Governor, Senate, and House each unilaterally proposing a new formula for Higher Education funding. The Governor recommended that funding increases be distributed based on three-year average growth of undergraduate degree completions, three-year average degree completions in critical skills areas (science, technology, engineering, mathematics, and health fields), three-year average number of undergraduate students receiving Pell Grants, and tuition restraint – holding resident undergraduate tuition/fee increases at or below 4.0%. Universities would be required to participate in the Michigan Transfer Network to receive an increase under the Governor's proposal.³

The Senate maintained the Governor's recommendation to allocate \$9,054,300 based on tuition restraint, but lowered the maximum tuition increase allowed to 3.5%. The Senate version distributed the remainder of the funding increase based on an \$18,108,400 allocation proportional to then-current appropriations and a \$9,054,300 allocation based on how universities performed relative to their Carnegie classifications for eight metrics. The metrics consisted of graduation rates, retention rates, total degrees and completions, total advanced degrees, institutional support as a percentage of core expenditures, research and development, cost of attendance, and undergraduate Pell grants. To qualify for funding under the Senate version, universities would be required to participate in the Michigan Transfer Network and comply with embryonic stem cell research reporting requirements.

The House version of the budget distributed increases based on undergraduate degrees/certificates, weighted for program length and critical skills areas. Universities would be required to comply with five requirements to receive a funding increase: tuition restraint (limit established on two-year dollar basis), embryonic stem cell research reporting, participation in at

² Section 242 of Public Act 154 of 2005, Part 2.

³ The Michigan Transfer network is a web-based system that allows a student who has completed a course at a Michigan college or university to find the equivalency for that course at any other Michigan college or university.



least three reverse transfer agreements⁴, dual enrollment policy that did not consider whether use of credits would be used toward high school graduation requirements, and certification that a university did not compel resident undergraduate students to carry health insurance.

The enacted Higher Education budget includes a \$36.2 million (3.0%) increase for university operations. Of that amount, \$27.2 million is allocated based on performance funding that is a compromise between the Senate and House performance funding models, and the balance is allocated through a tuition restraint formula. The performance funding includes the following components:

- \$6,036,167 is distributed based on critical skill area undergraduate degrees and certificates. Critical skills include accounting; agriculture, agriculture operations and related sciences; architecture; biological and biomedical sciences; communication technologies/tech and support services; computer and information sciences and support services; construction trades; engineering; engineering technologies and engineer-related fields; health professions and related sciences; mathematics and statistics; mechanic and repair technologies/technicians; multi/interdisciplinary studies (biological/physical sciences, math, computer science); natural resources and conservation; physical sciences; precision production; science technologies/technicians; and transportation and materials moving.
- \$6,036,167 is distributed based on the percentage of students graduating within six years. Institutions are scored compared to national Carnegie peers.
- \$6,036,167 is distributed based on total degrees and completions (including associate and advanced degrees). Institutions are scored compared to national Carnegie peers.
- \$6,036,167 is distributed based on institutional support as a percentage of core expenditures. Institutions are scored compared to national Carnegie peers.
- \$3,018,083 is distributed based on research and development expenditures.

For comparisons to national Carnegie peers, scoring was based on: improvement over three years = 3; top 20% = 2; above national median = 1.

Pursuant to Section 265a of the Higher Education budget, in order to qualify for performance funding, institutions were required to certify compliance with the following:

1. The university will be participating in reverse transfer agreements with at least three Michigan community colleges by January 3, 2013, or have made good-faith efforts to enter into reverse transfer agreements.
2. By January 3, 2013, the university will not consider whether dual enrollment credits earned by an incoming student were used toward his or her high school graduation requirements when the university decides whether the student may use those credits toward completion of a university degree or certificate program.

⁴ Reverse transfer agreements allow students to transfer university credits to a community college.



3. By August 31, 2012, the university participates in the Michigan Transfer Network created as part of the Michigan Association of Collegiate Registrars and Admissions Officers Transfer Agreement.

The enacted tuition restraint component of university funding is consistent with the Governor's recommendation. It allocates \$9,054,200 to universities based on tuition and fee increases being kept at or below a 4.0% increase. The amount each university receives is based on tuition increases for all 15 public universities. That formula resulted in each university receiving \$84,600 for each tenth of a percent that its tuition and fee increase was below 4.1%. Section 265 of Public Act 201 of 2012, included as an Appendix to this article, contains methodology details.

On September 5, 2012, the State Budget Director reported that all universities had certified their compliance with the above requirements. Table 2 provides details on performance funding and tuition restraint.

As shown in Table 2, the total increase in State funding for each university ranged from 0.75% to 11.65%. This is because performance funding and tuition restraint were not based on FY 2011-12 appropriations. While the varying increases represent the intent to measure and increase institutional effectiveness in certain areas, the increases in State funding need to be put in context with all funding sources for university operations. Along with providing information regarding tuition and fee increases for FY 2012-13, universities were required to submit information regarding all estimated revenue sources for FY 2012-13 university operations budgets. Table 3 summarizes that information. As shown, State funding for universities statewide represents an estimated 21.6% of university revenue sources for operations. Tuition and fee revenue accounts for an estimated 70.8% of operating revenue.

Conclusion

The use of performance funding and tuition restraint for the FY 2012-13 Higher Education budget resulted in a range of increases, when measured against FY 2011-12 base appropriations. It remains to be seen whether that distribution will actually have an impact on outcomes. As illustrated in this article, State funding for universities has substantially decreased over time, with State funding now representing a smaller share of total university operating revenue. Performance funding, tuition restraint, and the overall level of State support for university operations will certainly continue to be major issues in the development of future Higher Education budgets.

For more details regarding the FY 2012-13 Higher Education budget, see the FY 2012-13 House and Senate Fiscal Agency Higher Education Appropriations Report, <http://www.senate.michigan.gov/sfa/Departments/DepartmentPublications/HigherEdAppropsReport2013.pdf>.

State Notes

TOPICS OF LEGISLATIVE INTEREST

Fall 2012



Table 2: FY 2012-13 Appropriation Detail for University Operations¹⁾

University	FY 2012-13 Adjustments							
	FY 2011-12 Appropriation	Critical Skills Undergrad Degrees/Certif.	Scored Compared to National Carnegie Peers			Research & Development	Formula Total	Formula % Chg. to FY 2011-12 Y-T-D
			% Graduating within Six Years	Total Degrees & Completions	Inst. Supp. As % of Core Expenditures			
Central	\$68,108,900	\$301,803	\$464,321	\$326,279	\$355,069	\$18,953	\$1,466,400	2.15%
Eastern	64,619,100	286,885	0	326,279	1,065,206	0	1,678,400	2.60%
Ferris	41,324,300	471,152	696,481	489,419	0	0	1,657,100	4.01%
Grand Valley	52,677,400	524,073	696,481	489,419	710,137	0	2,420,100	4.59%
Lake Superior	10,789,500	78,046	0	163,140	0	0	241,200	2.24%
Michigan State	241,120,800	1,166,943	696,481	489,419	355,069	700,532	3,408,400	1.41%
Michigan Tech	40,733,600	369,215	696,481	489,419	0	121,217	1,676,300	4.12%
Northern	38,367,400	194,600	232,160	489,419	1,065,206	0	1,981,400	5.16%
Oakland	43,145,000	378,010	0	489,419	0	20,845	888,300	2.06%
Saginaw Valley	23,561,500	164,308	696,481	0	1,065,206	0	1,926,000	8.17%
UM-Ann Arbor	268,803,300	1,021,736	696,481	489,419	355,069	1,690,665	4,253,400	1.58%
UM-Dearborn	21,016,300	160,881	232,160	489,419	0	0	882,500	4.20%
UM-Flint	17,762,400	155,236	696,481	489,419	0	0	1,341,100	7.55%
Wayne State	182,036,900	313,698	0	489,419	0	389,125	1,192,200	0.65%
Western	93,168,300	449,580	232,160	326,279	1,065,206	76,747	2,150,000	2.31%
Total:	\$1,207,234,700	\$6,036,167	\$6,036,167	\$6,036,167	\$6,036,167	\$3,018,083	27,162,800	2.25%
Funding Per Unit/Point		\$403	\$232,160	\$163,140	\$355,069	\$0.0025		

University	FY 2012-13 Adjustments		Total FY 2012-13 Increase	FY 2012-13 Appropriation	% Change to FY 2011-12 Y-T-D
	Tuition Restraint % Change to				
	Tuition Restraint	FY 2011-12 Y-T-D			
Central	\$1,777,000	2.61%	\$3,243,400	\$71,352,300	4.76%
Eastern	169,200	0.26%	1,847,600	66,466,700	2.86%
Ferris	1,269,300	3.07%	2,926,400	44,250,700	7.08%
Grand Valley	338,500	0.64%	2,758,600	55,436,000	5.24%
Lake Superior	1,015,400	9.41%	1,256,600	12,046,100	11.65%
Michigan State	507,800	0.21%	3,916,200	245,037,000	1.62%
Michigan Tech	169,200	0.42%	1,845,500	42,579,100	4.53%
Northern	507,800	1.32%	2,489,200	40,856,600	6.49%
Oakland	930,800	2.16%	1,819,100	44,964,100	4.22%
Saginaw Valley	169,200	0.72%	2,095,200	25,656,700	8.89%
UM-Ann Arbor	1,100,000	0.41%	5,353,400	274,156,700	1.99%
UM-Dearborn	338,500	1.61%	1,221,000	22,237,300	5.81%
UM-Flint	423,100	2.38%	1,764,200	19,526,600	9.93%
Wayne State	169,200	0.09%	1,361,400	183,398,300	0.75%
Western	169,200	0.18%	2,319,200	95,487,500	2.49%
Total:	\$9,054,200	0.75%	\$36,217,000	\$1,243,451,700	3.00%

¹⁾ Does not include funding for MPSERS reimbursement.

State Notes
TOPICS OF LEGISLATIVE INTEREST
 Fall 2012



Table 3: FY 2012-13 University Budgets¹⁾

University	FY 2012-13 Initial State Appropriation	Budgeted Tuition/Fee Revenue	Other Revenue	FY 2012-13 Total Revenue	State Aid as % of Total
Central	\$69,575,300	\$255,039,469	\$20,832,221	\$345,446,990	20.1%
Eastern	66,297,500	209,600,000	14,702,500	290,600,000	22.8
Ferris	42,981,400	142,652,994	4,730,904	190,365,298	22.6
Grand Valley	55,097,500	260,471,939	3,317,067	318,886,506	17.3
Lake Superior	11,030,700	25,459,745	1,311,314	37,801,759	29.2
Michigan State	244,529,200	771,800,000	89,970,800	1,106,300,000	22.1
Michigan Tech	42,409,900	110,008,384	13,043,000	165,461,284	25.6
Northern	40,348,800	79,360,947	4,969,832	124,679,579	32.4
Oakland	44,033,300	191,980,253	1,332,267	237,345,820	18.6
Saginaw Valley	25,487,500	85,907,000	2,119,500	113,514,000	22.5
UM-Ann Arbor	273,056,700	1,156,646,746	219,436,080	1,649,139,526	16.6
UM-Dearborn	21,898,800	91,117,000	1,867,900	114,883,700	19.1
UM-Flint	19,103,500	78,742,000	550,000	98,395,500	19.4
Wayne State	183,229,100	334,405,409	49,171,617	566,806,126	32.3
Western	95,318,300	253,397,616	9,773,376	358,489,292	26.6
Total	\$1,234,397,500	\$4,046,589,502	\$437,128,378	\$5,718,115,380	21.6%

¹⁾ Based on reports submitted with FY 2012-13 Tuition and Fee increases. State appropriation amounts do not include tuition restraint and MPSERS funding.



Appendix: FY 2012-13 Boilerplate Sections in Public Act 201 of 2012

Sec. 265. (1) Payments from the amount appropriated in section 236(3) for public university tuition restraint incentives shall only be made to a public university that certifies to the state budget director by August 31, 2012 that its board did not adopt an increase in tuition and fee rates for resident undergraduate students after September 1, 2011 for the 2011-2012 academic year and that its board will not adopt an increase in tuition and fee rates for resident undergraduate students for the 2012-2013 academic year that is greater than 4.0%. As used in this subsection and subsection (2):

- (a) Subject to subdivision (c), "fee" means any board-authorized fee that will be paid by more than 1/2 of all resident undergraduate students at least once during their enrollment at a public university. A university increasing a fee that applies to a specific subset of students or courses shall provide sufficient information to prove that the increase applied to that subset will not cause the increase in the average amount of board-authorized total tuition and fees paid by resident undergraduate students in the 2012-2013 academic year to exceed the limit established in this subsection.
- (b) "Tuition and fee rate" means the average of full-time rates for all undergraduate classes, based on an average of the rates authorized by the university board and actually charged to students, deducting any uniformly-rebated or refunded amounts, for the 2 semesters with the highest levels of full-time equated resident undergraduate enrollment during the academic year.
- (c) For purposes of subdivision (a), for a public university that compels resident undergraduate students to be covered by health insurance as a condition to enroll at the university, "fee" includes the annual amount a student is charged for coverage by the university-affiliated group health insurance policy if he or she does not provide proof that he or she is otherwise covered by health insurance. This subdivision does not apply to limited subsets of resident undergraduate students to be covered by health insurance for specific reasons other than general enrollment at the university.

(2) For purposes of section 236(3), each public university's allocation for tuition restraint incentive shall be determined as follows:

- (a) Calculate an adjustment for each university by subtracting each university's reported percent change in tuition and fee rates for academic year 2012-2013 from 4.1%. If the result of the calculation in this subdivision is less than 0.1%, the university is not qualified to receive an allocation under this section. All calculations under this subdivision shall be rounded to the first decimal place.
- (b) For each qualified university, divide the university's adjustment as calculated under subdivision (a) by the sum of all adjustments for qualifying universities under subdivision (a) and then multiply the resulting calculation for each university by the total amount available for tuition restraint incentive funding, rounded to the nearest hundred dollars.

(3) The state budget director shall implement uniform reporting requirements to ensure that a public university receiving an appropriation under section 236(3) has satisfied the tuition restraint requirements of this section. The state budget director shall have the sole authority



to determine if a public university has met the requirements of this section. Information reported by a public university to the state budget director under this subsection shall also be reported to the house and senate appropriations subcommittees on higher education and the house and senate fiscal agencies.

(4) In conjunction with the uniform reporting requirements established under subsection (3), each public university shall also report the following information to the house and senate appropriations subcommittees on higher education, the house and senate fiscal agencies, and the state budget director by August 31, 2012:

- (a) Actual or estimated fiscal year 2011-2012 and budgeted fiscal year 2012-2013 total general fund tuition and fee revenue.
- (b) Actual or estimated fiscal year 2011-2012 and budgeted fiscal year 2012-2013 total general fund revenue.
- (c) Actual or estimated fiscal year 2011-2012 and budgeted fiscal year 2012-2013 general fund expenditures for student financial aid.
- (d) Actual or estimated fiscal year 2011-2012 and budgeted fiscal year 2012-2013 total general fund expenditures.
- (e) Actual or estimated fiscal year 2011-2012 and budgeted fiscal year 2012-2013 total fiscal year equated student enrollment.

Sec. 265a. (1) Appropriations to public universities in section 236 for performance funding shall be paid only to a public university that complies with all of the following requirements:

- (a) The university certifies to the state budget director, the house and senate appropriations subcommittees on higher education, and the house and senate fiscal agencies by August 31, 2012, that, by January 3, 2013, it will be participating in reverse transfer agreements described in section 286 with at least 3 Michigan community colleges or have made a good-faith effort to enter into reverse transfer agreements.
- (b) The university certifies to the state budget director, the house and senate appropriations subcommittees on higher education, and the house and senate fiscal agencies by August 31, 2012, that, by January 3, 2013, it will not consider whether dual enrollment credits earned by an incoming student were utilized towards his or her high school graduation requirements when making a determination as to whether those credits may be used by the student toward completion of a university degree or certificate program.
- (c) The university certifies to the state budget director, the house and senate appropriations subcommittees on higher education, and the house and senate fiscal agencies by August 31, 2012 that the university participates in the Michigan transfer network created as part of the Michigan association of collegiate registrars and admissions officers transfer agreement.

(2) Any performance funding amounts under section 236 that are not paid to a public university because it did not comply with 1 or more requirements under subsection (1) are unappropriated and reappropriated for tuition restraint funding described in section 265.



(3) The state budget director shall report to the house and senate appropriations subcommittees on higher education and the house and senate fiscal agencies by September 17, 2012, regarding any performance funding amounts not paid to a public university because it did not comply with 1 or more requirements under subsection (1) and any reappropriation of funds under subsection (2).

(4) A university that has not implemented the policies required under subsection (1)(a) and (b) by August 31, 2012, but certifies that it will implement those policies by January 3, 2013, shall recertify to the state budget director, the house and senate appropriations subcommittees on higher education, and the house and senate fiscal agencies by January 3, 2013, that the policies have been fully implemented. For a university that does not recertify that the policies have been fully implemented, the performance funding appropriated to that university in section 236 shall be retroactively withheld and unappropriated and reappropriated under subsection (2).

State Notes



TOPICS OF LEGISLATIVE INTEREST

Fall 2012

Update on Michigan School Employees' Retirement System By Kathryn Summers, Associate Director

On August 15, 2012, the Legislature sent Senate Bill 1040, a bill including numerous changes to the Michigan Public School Employees' Retirement System (MPERS), to Governor Snyder and on September 4, 2012, Governor Snyder signed the bill and it became Public Act 300 of 2012. Subsequently, a lawsuit was brought against parts of the legislation, and Judge Aquilina in Ingham County Circuit Court issued two temporary restraining orders (TROs) in response. This State Notes article will provide a look at the System in general, a brief summary of Public Act (PA) 300, a description of the TROs, and a discussion of the impact on schools and the State budget arising from those orders. The article also briefly discusses issues related to the 3.0% contribution for school retiree health care, required by legislation enacted in 2010.

The Michigan Public School Employees' Retirement System

The Michigan Public School Employees' Retirement System (MPERS) had 237,000 working members and 192,000 retired members as of September 30, 2011. Employers within MPERS include all local school districts, intermediate school districts, participating charter schools, participating libraries, all 28 community colleges, and, for remaining eligible employees, the seven universities that withdrew from MPERS for new hires in 1996. Before PA 300 of 2012 was enacted, the costs of providing pension and retiree health care benefits were borne entirely by employers (e.g., schools) and their employees and retirees; the State did not provide any direct support for the System.

The cost to employers in fiscal year (FY) 2011-12 was 24.46% of covered payroll for employees hired before July 1, 2010, and 23.23% of payroll for employees hired after July 1, 2010 (those employees in the hybrid plan, which provides a pension beginning at age 60 and a defined contribution savings account). The cost to covered employees ranged anywhere from 0%, up to 6.4% of pay above \$15,000, depending on hire date and pension plan, and a further 2.0% contribution to a defined contribution account by employees in the hybrid plan. During FY 2010-11, employers contributed a total of \$1.95 billion for pension and retiree health care benefits, and members (active and retired) contributed a combined \$717.2 million. The employer rate for FY 2012-13, in the absence of any legislation, was expected to increase to more than 27.0% of covered payroll, and the rate for FY 2013-14 was expected to increase to more than 31.0%.

Senate Bill 1040: Public Act 300 of 2012

The signing of Senate Bill 1040 enacted numerous changes to the Michigan Public School Employees' Retirement System. The principal changes found in the bill include the following, summarized briefly here:

- For existing members hired before July 1, 2010, a choice of 1) higher employee contributions to retain the 1.5% pension multiplier for future years of service, 2) the current contributions with a lower 1.25% multiplier for future years of service, or 3) a freeze on earned benefits and conversion to a defined contribution plan, rather than a defined benefit plan (options referred to below as "pension choice").
- For new members, a choice between the existing hybrid pension plan and a defined contribution plan.

State Notes



TOPICS OF LEGISLATIVE INTEREST

Fall 2012

- For new members, the elimination of retiree health care upon retirement; in its place, a 401k-style plan with matching employer contributions up to 2.0% of compensation.
- An 80/20 cost sharing plan for retiree health care for all current and future retirees (except retirees at least age 65 as of January 1, 2013, who are "grandfathered" at 90/10).
- Prefunding of retiree health care, instead of pay-as-you-go.
- A capping of school employer contributions into the System, with the State required to pay additional costs above the capped rate.

A detailed analysis of the changes contained within SB 1040 may be found at the following:

<http://www.legislature.mi.gov/documents/2011-2012/billanalysis/Senate/pdf/2011-SFA-1040-N.pdf>

The changes listed above, along with other smaller changes enacted in the bill, were expected to have significant fiscal impacts on the State and on local school employers. While prefunding retiree health care is expected to generate significant long-term savings, there are short-term costs of depositing more money into the System's portfolio to generate investment earnings down the road. The additional costs to schools of prefunding retiree health care in the System were to have been offset by increased employee pension contributions from the pension choice, the increased premium cost-sharing, and an appropriation from the School Aid budget. (That appropriation was expected to be around \$153.0 million in FY 2012-13. Although \$130.0 million already was appropriated for this purpose, the 90/10 "grandfather" clause for health care requires an additional \$23.0 million supplemental appropriation.) Table 1 illustrates how the employer contribution rate was expected to remain fairly flat in FY 2012-13, even with the additional costs of prefunding.

Table 1

Keeping the Employer Contribution Rate Relatively Flat in FY 2012-13 (Estimated before the TROs)	
FY 2012-13 Employer Rate without the Changes in Senate Bill 1040	27.37%
Positive health experience	-0.70%
80/20 retiree health care cost sharing	-0.79%
Use of 3% retiree health care contributions	-2.58%
Prefunding retiree health care (SB 1040)	6.13%
Pension choice (increased employee contributions to retain 1.5% multiplier, or same contributions but lower multiplier of 1.25%, on future years of service).....	-2.07%
Reamortization of early retirement incentive.....	-1.30%
School Aid Fund appropriation.....	-1.60% (about \$153.0 million)
New FY 2012-13 Employer Contribution Rate	24.46%

Source: May 4, 2012 State Budget Office document adjusted for estimated 90/10 "grandfather" clause in retiree health care for retirees age 65 and older as of January 1, 2013

Table 2 illustrates what had been expected in the absence of any legislation, and the anticipated impact on schools, on the unfunded accrued liabilities of the retirement system, and on the State from enactment of PA 300 of 2012, before the TROs were issued.

State Notes



TOPICS OF LEGISLATIVE INTEREST

Fall 2012

Table 2

Fiscal Impact of PA 300 of 2012 for FY 2012-13 (Estimated before the TROs)		
	Current Law (No Changes)	Senate Bill 1040 (PA 300 of 2012)
Employer contribution rates (as % of MPSERS payroll)....	27.37%	≈ 24.46%
Pension unfunded accrued liability	\$22.4 billion (from 2011 valuation)	\$20.8 billion
Retiree health unfunded accrued liability	\$25.9 billion (from 2011 valuation)	\$11.9 billion
Total Liability	\$48.3 billion	\$32.7 billion
Additional School Aid Fund necessary to keep employer rate flat at 24.46%	\$0	\$153.0 million

The issuance of the temporary restraining orders, however, has changed the fiscal landscape of MPSERS, at least for the time being.

Lawsuit, Temporary Restraining Orders, and Resulting Fiscal Impact

The Michigan Education Association (MEA) and the American Federation of Teachers (AFT) filed separate lawsuits in Ingham County Circuit Court alleging eight counts, including violation of contractual pension and retiree health care rights, violation of pension and retiree health care rights under the U.S. Constitution (impairment of contract and taking of private property) and the State Constitution (guarantee of an accrued financial benefit), and pension and retiree health care due process violations. On September 5, 2012, Judge Aquilina of the Ingham County Circuit Court issued two temporary restraining orders and consolidated the two lawsuits.

One of the TROs prohibits the State from enforcing the window during which employees were to choose between contributing higher amounts for their pensions in order to retain the 1.5% pension multiplier for future years of service, or accepting a lower multiplier but not facing an increase in contributions (pension choice). The second TRO provides that anyone who makes an election may withdraw that election if any portions of PA 300 are found to be unconstitutional. Because of the TROs, the Department of Technology, Management, and Budget (DTMB) issued a letter on September 21, 2012, stating that full implementation of PA 300 would not be possible, and the employer contribution rates could not be reduced as much as they would have been with full implementation of the legislation.

Instead of the anticipated 24.46% school contribution rate for FY 2012-13 and \$153.0 million State appropriation (as illustrated in [Table 1](#)), the DTMB indicated in the letter that, beginning October 1, 2012, and until further notice, schools will have to pay 25.36% of payroll for employees hired before July 1, 2010, and either 23.20% or 24.13% of payroll for employees in the hybrid plan, depending on hire date. In addition, the State will have to pay an additional \$106.0 million (on top of the previous \$153.0 million).

Both the increased school cost and the increased State cost are the result of the inability to fully implement PA 300 due to the TROs. The bolded item in [Table 1](#) ("pension choice") is the subject matter of the TROs, and is suspended until the TROs are lifted or a decision is made by the courts. Therefore, the 2.07% savings (about \$207.0 million) expected from "pension choice" are not

State Notes



TOPICS OF LEGISLATIVE INTEREST

Fall 2012

currently recognized, and those savings are made up for in roughly equal amounts, with schools paying about \$91.0 million and the State paying the extra \$106.0 million, as discussed above.

Since the remaining portion of the legislation is not suspended, implementation of all other portions of the Act is proceeding, including prefunding of retiree health care, until a decision is made on the entire Act. Table 3 illustrates the employer contribution rates in effect as of October 1, 2012, as published by the Department of Technology, Management, and Budget on September 21, 2012.

Table 3

FY 2012-13 Employer Contribution Rate Effective 10/1/12 (with TROs in Effect)					
	First Worked before 7/1/10^{a)}	First Worked on or after 7/1/10, through 9/3/12^{b)}	First Worked on or after 9/4/12 and Remain Pension Plus	First Worked on or after 9/4/12 and Elect DC	
Pension Normal Cost	3.47%	2.24%	2.24%	0.00%	The employer contribution rates for the members' health and/or pension elections will be provided after the TRO is lifted.
Pension UAL	11.42	11.42	11.42	11.42	
Pension Early					
Retirement Incentive	1.36	1.36	1.36	1.36	
Pension Total Rate	16.25%	15.02%	15.02%	12.78%	
Health Normal Cost	0.93	0.93	0.00	0.00	
Health UAL	8.18	8.18	8.18	8.18	
Health Total Rate	9.11%	9.11%	8.18%	8.18%	
TOTAL	25.36%	24.13%	23.20%	20.96%	
^{a)} Basic, MIP Fixed, MIP Graded, MIP Plus. ^{b)} Pension Plus.					

Source: September 21, 2012 DTMB letter

Next Steps and Options for the Legislature

Judge Aquilina has indicated that she will hear motions for summary disposition on November 28, 2012. The State filed an application for leave to appeal to the Court of Appeals (COA) and asked the COA to stay or lift the TROs. Although the COA granted the State's application for leave to appeal, it denied the request to stay the TROs. In light of that denial, the State filed an application for leave to appeal to the Michigan Supreme Court (MSC) and asked the Court to issue a ruling on or before October 19. Briefs have been filed but the MSC has yet to issue a decision.

In the meantime, the Legislature likely may need to decide whether to amend the MPERS Act if the pension choice savings remain unavailable due to the litigation. Since prefunding retiree health care is a large up-front cost, if prefunding continues but the State is not able to collect and use the pension choice savings for the cost of prefunding, then the State will need to contribute in FY 2012-13 another \$106.0 million in order to keep the employer rate capped as required under PA 300, unless the Act is amended.

The Legislature could amend the Act to include a trigger on the matter of prefunding retiree health care, whereby prefunding would occur only if the pension choice savings were found constitutional and collectable (on top of a trigger added for the 3.0% contributions for retiree health care). If prefunding does not occur, then nearly \$11.0 billion of the \$14.8 billion reduction in health care unfunded accrued liability (illustrated in Table 2) will not materialize, and instead of being paid off in an estimated 26 years, the accrued liabilities for retiree health care will take approximately 60 years



to be paid off. Alternatively, the Legislature could remove the employer rate cap that was established in PA 300, which would mean the costs of prefunding retiree health care would be passed along to the local school employers. Finally, the Legislature could choose to retain prefunding and the employer rate cap, which, as already noted above, would require a new appropriation in FY 2012-13 of \$106.0 million to pay the additional costs. Each of these options presumes that the pension choice contributions, currently the subject of the TROs, remain frozen and uncollectable for the entire 2012-13 fiscal year.

If the Legislature were to choose the third option outlined above, the only available source of revenue in the School Aid budget that could be used to pay the \$106.0 million extra cost would be the MPSERS Reserve for Reforms, a categorical in the School Aid Act with \$174.0 million in the fund at this time. However, this would only pay the costs of prefunding for one year, and prefunding itself will cost additional funding over the next few years. Continued support of prefunding will require a monitoring of School Aid Fund revenue growth in the future, and a judgment through the appropriations process whether appropriating dollars to support prefunding and the employer rate cap outweighs the benefits of other educational programs funded at the State level.

Brief Discussion of 3% Retiree Health Care Lawsuit and Implications

Thus far, this Notes article has addressed only the TROs associated with the lawsuits brought by the MEA and the AFT related to Senate Bill 1040. However, there is continuing litigation related to the 3.0% contributions for *retiree health care*. Public Act 75 of 2010 established a 3.0% contribution for retiree health care; employees have been making these contributions since July 1, 2010, but because of litigation, the contributions have been escrowed and the escrow account currently contains roughly \$500.0 million. The Court of Appeals in August 2012 ruled that these contributions were unconstitutional, but the basis for the ruling was PA 75, and did not reflect the changes included in SB 1040 to address the constitutionality concerns. The State currently is appealing the COA's August 2012 ruling to the Michigan Supreme Court.

It should be noted that nearly half of the cost of prefunding retiree health care (2.58% out of 6.13%) is covered by using these 3.0% retiree health care contributions on an ongoing basis, as [Table 1](#) illustrates, and in order to have a structurally balanced School Aid budget (while paying for prefunding and capping the employer rate), the \$500.0 million in escrow also needs to be found constitutional (or another source of dedicated revenue will be required). Currently, schools are continuing to collect and remit the employee 3.0% contributions for retiree health, and, since October 1, 2012, and under the guidelines of SB 1040, the Office of Retirement Services has been using those 3.0% contributions for the cost of prefunding retiree health. According to the trigger in Senate Bill 1040, if a court of final jurisdiction finds the 3.0% contributions unconstitutional, then prefunding will cease and the money will be repaid. Clearly, then, in addition to the issues surrounding the TROs and the suspension of the "pension choice" contributions, resolution of this litigation likely will have an impact on the school employees' retirement system.

State Notes

TOPICS OF LEGISLATIVE INTEREST

Fall 2012



Apples or Oranges: Making the Right Pick for Pension Accounting **By David Zin, Chief Economist**

Introduction

Provisions for income during retirement have been a common news item for years, most recently covering a variety of issues, including: proposals to reform social security, the General Accounting Office's examination of why workers' access to private pension plans remains limited, the new accounting standards for private pension plans that were included in the transportation bill Congress passed this summer, the new rules issued by the Governmental Accounting Standards Board (GASB) this past summer, and the array of pension reforms adopted by state and local governments. Pension issues also have been an international topic, with 33 of the 34 countries studied by the Organization for Economic Cooperation and Development (OECD) adopting some level of pension reform (for public pensions, private pensions, or both) within the last five years.

The global financial collapse in 2008, and ensuing recession, added to the pressure on pension and retirement systems. Significant declines in the value of assets lowered the returns earned by pension and retirement systems, while growing numbers of retirees have added to system costs, which have been covered by smaller employee bases and lower business sales. While Federal laws largely govern how private pension systems must adapt to these pressures, most states manage their own public retirement systems. A March 2012 study from the Pew Center of the States estimated a \$1.4 trillion gap in fiscal year (FY) 2010 between states' assets and the obligations they face under the public sector retirement plans. In an attempt to address issues with their pension systems, 44 states have enacted pension reform legislation since 2009. Some of these changes have been major, others minor, but nearly all have reduced pension benefits and/or increased employee contributions.

The gap between assets and obligations calculated by the Pew Center used states' own actuarial assumptions, funding levels, and contribution policies as of FY 2010, although in some cases states have made subsequent legislative changes to their pension systems. However, as evidenced by the GASB standards released this past summer, there are also questions about the actuarial assumptions states have employed under their pension systems. This article will focus on two key assumptions in pension accounting: the rate of return earned on assets, and the rate used to discount the cost of future liabilities.

The Rate of Return on Assets

The two most significant rates associated with pension accounting are the rates used to discount the value of future liabilities (the discount rate) and the long-run rate of return on pension system assets. While neither assumption changes the market values of the assets or liabilities of the plan, the assumptions do make it possible to evaluate future values in terms of current values. Although primarily focused on reporting, the assumptions do play a role in evaluating whether a retirement system is likely to have enough assets to cover its liabilities.

The difference between the discount rate and the rate of return is important. Traditionally, the discount rate is intended to represent the rate at which pension benefit obligations would be



effectively settled: the rate implicit in current prices of annuity contracts that could be used to settle (i.e., terminate) the pension obligation. As a result, the discount rate is usually chosen at a rate reflecting the risk associated with the pension liabilities. On the other hand, the assumed rate of return is the long-term expectation of returns on current and future investments and represents the credit component when the net pension cost is computed.

Recent discussions in Michigan have focused on the assumed long-run rates of return used by the State, particularly those used by the Michigan Public School Employees' Retirement System (MPERS), and whether the assumed rates should be indexed to some external rate. The current hybrid MPERS retirement plan (for employees hired after July 1, 2010) assumes a long-run rate of return of 7.0%. According to data on public defined benefit retirement systems from Boston College's Center for Retirement Research, the median discount rate adopted during 2009 was 8.0%, with assumed returns ranging from 7.0% to 8.5%. Similarly, a study of Fortune 1000 firms by the actuarial firm Towers Watson indicated that in 2010 the median assumption for the long-run rate of return was 8.0% and that 62.0% of companies employed an assumption between 7.51% and 8.5%. Only 12.0% of companies assumed a long-run rate of return of 7.0% or lower. The survey indicated that 55.0% of companies maintained their 2009 long-run rate of return assumption in 2010 and that the average change in 2010 was a decline of six basis points, or 0.06%.

While private retirement plans do alter their long-run rate of return assumptions, the changes are often small and reflect changes in expectations over the long-run rather than changes in a current measure. Neither the academic or professional literature, nor actual practice, supports the concept of a varying, indexed long-run rate of return subject to substantial variations. Furthermore, assumptions regarding the long-run rate of return on assets do not differ substantially between private plans and public plans. The current rates of return employed by Michigan public retirement systems, including MPERS, are consistent with both private and public practice as well as the literature.

Discount Rates

Governmental accounting standards currently allow public pension systems to use the assumed long-run rate of return as the discount rate. The rationale is that governments have the ability to meet pension needs through taxation, as opposed to private companies' needing to issue corporate bonds or generate additional sales or other business receipts, and the tax revenue can be invested to earn returns. Similarly, because public entities may use tax revenue to satisfy pension obligations, a government presumably could end its pension obligation without needing to purchase an annuity to satisfy the obligations. Private companies do not have access to this type of revenue stream to meet benefit obligations and thus are not allowed to use the rate of return to discount liabilities.

Private companies are allowed to select a discount rate from a variety of measures, although firms subject to certain requirements from the Pension Benefit Guaranty Corporation are subject to more limitations on the rates they select. Private companies typically select discount rates based on corporate bond yields, because this approach reflects an easily measurable cost of obtaining the revenue to meet obligations. Measuring the cost of alternative funding sources,



such as stock issues or residual profit revenue from firm revenue such as sales, is far less certain and far more difficult.

Various indices are available to guide private sector plans in choosing a discount rate. In a survey of discount rates employed by the pension systems at Fortune 1000 companies, the median discount rate in 2010 was 5.4% with individual plans exhibiting rates that varied from 3.6% to 6.5%. The survey indicated that 38.0% of Fortune 1000 firms adopted a discount rate between 5.26% and 5.5%. Only 10.0% of private sector companies adopted a discount rate of 5.0% or lower. In 2010, 97.0% of firms lowered their discount rate assumption, with 40.0% of firms lowering less than 50 basis points (0.5%) and 56.0% of firms lowering between 50 and 99 basis points (between 0.5% and 0.99%).

A study of public defined benefit retirement systems indicated that the median discount rate adopted during 2009 was 8.0%. In comparison, the average discount rate among Fortune 1000 firms was 5.39% in 2010, down from 5.84% in 2009. Part of the decline from 2009 in the rate used by private pension systems reflected legal requirements for private pension systems.

In July 2012, however, the Federal government enacted Public Law (P.L.) 112-141, making a number of changes to the laws governing private pensions. Among the provisions of P.L. 112-141, the averaging period used by private pension systems to compute a discount rate is increased from a 24-month average to a 25-year average. The change is estimated to result in higher allowed discount rates, with some estimates placing the increase at more than two percentage points, and thus allow private employers to reduce their pension contributions. As a result of the legislation, minimum contribution rates for private pensions are expected to decline, with contribution rates expected to fall approximately 43.0% in 2012. A Society of Actuaries' study of the legislation estimated that the gap between the median funding level under the previous law and the new legislation could exceed \$100.0 billion for the period from 2014 to 2019, and cautioned that even a small percentage of defaults could result in losses measured in billions.

Before P.L. 112-141 was enacted, significant differences existed between the discount rates employed by private pension systems and those employed by public pension systems. Using the long-run rate of return on assets as the discount rate, as allowed by governmental accounting rules, would place the discount rate for Michigan's traditional State Employees' Retirement System (SERS) and the pre-hybrid MPERS plan at 8.0%, and the rate for the hybrid MPERS plan adopted in 2010 at 7.0%, compared with a median discount rate of 5.4% for private pension plans. As private plans adjust to the provisions of P.L. 112-141, much of the gap between the discount rates used by private plans and those currently used by the State of Michigan, and other states, will be eliminated.

New Governmental Accounting Standards

Both the academic and the professional literature, as well as actual practice, indicate that reforms should focus more on the discount rate than on the long-run rate of return on assets. Furthermore, research over the last several decades suggests there may be sound reasons to reconsider the discount rates public pension systems are allowed to adopt. As a result, GASB issued new rules for public pension accounting this past summer. The most significant of these changes affect the way public pension plans will be required to compute the discount rate.



Under current law, a public pension plan's choice of both the discount rate and the long-run rate of return rates is largely arbitrary. Under the new accounting standards, however, the choice of a discount rate will be somewhat more limited and public pension systems will be required to adopt discount rates that generally will be lower than those currently employed. These lower rates will result in the calculated pension system liabilities' being larger than they are under current practice and will increase the degree by which public plans are underfunded. Furthermore, the new discount rates will be related to measures and circumstances that will vary over time.

The discount rate selected under the new accounting standards is a blended rate that incorporates aspects of the assumed long-run rate of return and a rate representing the yields on 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa (or equivalent). A discussion of how the actual rate is to be calculated is beyond the scope of this article. However, the choice of how to determine the bond yields under the calculation is relevant and could be specified by the Legislature or left to the actuaries working with the State's pension plans. Several indices are available, and the differences between them are not substantive from a conceptual basis. According to a 2009 article in the American Economic Review, "every available proxy has shortcomings relative to the theoretically ideal set of discount rates". In selecting the discount rate, the Pension Section Council of the Society of Actuaries argues that using a single index to set discount rates for measuring pension accounting liabilities does not represent best practice methodology. As a result, best practices would suggest that one measure should not be examined to the exclusion of other measures. Both references suggest that pension systems should look at a number of such rates and choose a way to balance the differences given individual preferences regarding the shortcomings of each individual measure.

An Illustrative Example

At the end of this article, Table 1 illustrates a simplified retirement system that does not have the resources to meet its obligations (is underfunded) in order to demonstrate the impact that varying the assumptions for long-run rates of return and discount rates would have on a retirement plan. The example uses an underfunded plan because the new GASB rules effectively do not affect the discount rate for a system that can show it is funded using the assumed long-run rate of return as a discount rate. The example assumes a system with \$1,000 in assets in Year 1. Assets are assumed to grow at the long-run rate of return and are supplemented by annual contributions. In Year 1, the contributions total \$50, and increase by 3.0% per year. Also in Year 1, the system is assumed to have expenses (liabilities) of \$200, which grow at a rate of 10% per year. Expenses are paid from assets. When values under the new GASB rules are computed, the table assumes that the rate representing yields on 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa equals 4.0%. The table presents values only for 10 years, while an actual accounting would cover at least 30 years or until all the obligations (liabilities) were paid. As a result, another way of considering the table would be to assume it represents a closed system that will have satisfied all its liabilities and will cease to make payments after 10 years.

The top part of the table illustrates the impact of different assumed long-run rates of return. At an 8.0% rate, the plan is able to maintain a positive balance through Year 6 and is able to meet



approximately half of the obligations in Year 7. In contrast, under a 4.0% rate of return, the plan's funds are exhausted more rapidly, reaching zero late in Year 6.

The balances shown in the top part of the table reflect the balance in the year they are listed. However, it is necessary to translate those values to current dollars in order to evaluate the extent to which the plan is underfunded. As indicated above, the discount rate is part of the calculation that translates the future values into their present values. In the section labeled "Present Value of Any Shortfall, Current Practice", Table 1 presents the current value of a shortfall when the discount rate equals the assumed long-run rate of return. For example, if the long-run rate of return is assumed to be 7.0%, the discount rate also will equal 7.0% and the current value of the shortfalls in Years 7, 8, 9, and 10 will total \$810. This section of Table 1 shows much higher unfunded liabilities with lower assumed rates of return.

The listed shortfalls reflect a combination of the impact of a lower assumed rate of return reducing interest revenue and the lower discount rate increasing the current value of future liabilities. For example, if the long-run rate of return is assumed to be 8.0% and the discount rate is 8.0%, the current value of the shortfall is \$709, as shown in the table. If both the rate of return and the discount rate are lowered to 4.0%, the current value of the shortfall totals \$1,208, as shown in the table, a \$499 increase in the shortfall. Determining how much of the impact is due to which change, however, depends on the order in which the calculation is decomposed.

If the discount rate remains at 8.0% but the rate of return is lowered to 4.0%, the current value of the shortfall increases from \$709 to \$878 (not shown in the table), suggesting that roughly two-thirds of the \$499 increase in the current value of the shortfall is attributable to lowering the discount rate. However, if the return remains at 8.0% and the discount rate is moved to 4.0%, the current value of the shortfall increases from \$709 to \$990 (shown in Table 1, in the section labeled "Present Value of Any Shortfall, 4% Discount Rate"), indicating that approximately 56.3% of the \$499 increase in the shortfall reflects the impact of lowering the discount rate. Regardless of which way the change is decomposed, most of the impact of lowering both the rate of return and the discount rate, under current practice, is attributable to the change in the discount rate – highlighting the importance of the discount rate assumption.

The section labeled "Present Value of Any Shortfall, 4% Discount Rate" is presented to emphasize the significance of the discount rate on calculating the health of the retirement plan. As demonstrated in the preceding paragraph, the way in which changes are decomposed is important, and this section of Table 1 illustrates the approach that attributes the smaller portion of the impact to the discount rate. (The shortfall increases from \$709 to \$990, accounting for 56.3% of the \$499 increase from \$709 to \$1,208, if both rates are changed.) Despite taking this approach, Table 1 demonstrates that the discount rate is a more critical assumption than the long-run rate of return in calculating any unfunded liabilities – a conclusion consistent with the professional and academic literature. (Under this approach, changing the discount rate increases the shortfall by \$281, compared with a \$218 increase attributable to changing the rate of return. If the other approach, not illustrated in the table, were evaluated, the change in the discount rate would account for \$330 of the increased shortfall, compared with \$169 due to the change in the rate of return.) Lowering the discount substantially increases the magnitude of any funding shortfalls, much more than does lowering the assumed rate of return.



The bottom section of Table 1, labeled "Present Value of Any Shortfall, New GASB Approach", demonstrates the impact of the new GASB rules on calculating and reporting unfunded liabilities. The calculated discount rate also is shown under the varying long-run rate of return assumptions. As Table 1 illustrates, even significant changes in the assumed rate of return cause relatively small changes in the unfunded liability. For example, doubling the rate of return assumption, from 4.0% to 8.0%, reduces the unfunded liability only by 26.2% (from \$1,208 to \$891). A similar comparison for doubling the discount rate is not relevant because such a change is effectively not an administrative decision allowed under the new GASB rules. While not illustrated in the table, if the computations were extended for a longer period of time, the differences between the columns showing different assumed rates of returns would be even less. For example, if the table were extended for 30 years, doubling the rate of return assumption from 4.0% to 8.0% would reduce the unfunded liability only by 23.4%. As a result, under the new GASB rules, the choice of the assumed long-run rate of return exerts a minimal impact on the magnitude of any potential funding shortfalls in a retirement plan.

Conclusion

This article has discussed two key assumptions related to public pension accounting: the assumed rate of return on assets and the discount rate. Based on a review of actual rates of return used in both the public and private sectors, as well as the academic and professional literature, the long-run rates of return assumed by Michigan retirement systems such as SERS and MPSERS appear consistent with (and in the case of the hybrid MPSERS plan, slightly lower than) recommended levels and actual practice. As a result, substantive changes to the assumed long-run rate of return do not appear necessary. Furthermore, linking the long-run rate of return to a single index does not appear to be recommended by either practice or research.

Research suggests that the discount rate assumed by the State should not be the same as the long-run rate of return. Generally, the discount rates employed in private retirement plans differ from the assumed long-run rate of return. The academic and professional literature suggests that an appropriate discount rate should reflect the volatility associated with the expected liabilities of the plan. As a result, the discount rate should generally be lower than the rate of return. The literature also indicates that such a focus for the discount rate is more appropriate than considerations such as the ability of the government to raise capital. Given the circumstances of the State's expected liabilities, the research would suggest that appropriate rates would be less than those used currently.

The new accounting standards from GASB will likely result in lower discount rates, and thus increase reported pension liabilities and increase the degree by which plans are underfunded. These standards do not affect the actual liabilities the State's retirement plans face, or the value of current assets. The standards relate to the way future values should be adjusted to the present for reporting purposes, with the intent to provide a more accurate view of the health of pension systems. The changes recommended by GASB would also appear to address most of the issues raised with public pension system accounting, regardless of what assumptions pension plans make about the long-run rate of return on their assets.

State Notes
 TOPICS OF LEGISLATIVE INTEREST
 Fall 2012



Table 1

Example of the Impact of Varying Rate of Return and Discount Rate Assumptions																
Year	Expenses	Contributions	Assets, with Rate of Return at				Balance, with Rate of Return at									
			8.00%	7.00%	6.00%	4.00%	8.00%	7.00%	6.00%	4.00%						
0	---	---	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000						
1	\$200	\$50	1,134	1,124	1,113	1,092	934	924	913	892						
2	220	52	1,064	1,043	1,022	981	844	823	802	761						
3	242	53	969	938	907	847	727	696	665	605						
4	266	55	844	803	763	686	578	537	496	420						
5	293	56	685	634	586	495	392	342	293	202						
6	322	58	486	427	372	271	164	105	50	(52)						
7	354	60	242	177	116	8	(112)	(178)	(238)	(346)						
8	390	61	0	0	0	0	(390)	(390)	(390)	(390)						
9	429	63	0	0	0	0	(429)	(429)	(429)	(429)						
10	472	65	0	0	0	0	(472)	(472)	(472)	(472)						
Present Value of Any Shortfall, Current Practice: Discount Rate = Rate of Return																
Year	8.00%				7.00%				6.00%				4.00%			
0	\$0				\$0				\$0				\$0			
1	0				0				0				0			
2	0				0				0				0			
3	0				0				0				0			
4	0				0				0				0			
5	0				0				0				0			
6	0				0				0				(41)			
7	(66)				(111)				(158)				(263)			
8	(211)				(227)				(245)				(285)			
9	(214)				(233)				(254)				(301)			
10	(218)				(240)				(263)				(319)			
Total Shortfall (Unfunded Liability), Current Practice							(\$709)	(\$810)	(\$920)	(\$1,208)						
Present Value of Any Shortfall, 4.0% Discount Rate																
Year	8.00%				7.00%				6.00%				4.00%			
0	\$0				\$0				\$0				\$0			
1	0				0				0				0			
2	0				0				0				0			
3	0				0				0				0			
4	0				0				0				0			
5	0				0				0				0			
6	0				0				0				(41)			
7	(85)				(135)				(181)				(263)			
8	(285)				(285)				(285)				(285)			
9	(301)				(301)				(301)				(301)			
10	(319)				(319)				(319)				(319)			
Total Shortfall (Unfunded Liability), 4.0% Discount Rate							(\$990)	(\$1,040)	(\$1,086)	(\$1,208)						
Present Value of Any Shortfall, New GASB Approach																
Year	8.00%				7.00%				6.00%				4.00%			
0	\$0				\$0				\$0				\$0			
1	0				0				0				0			
2	0				0				0				0			
3	0				0				0				0			
4	0				0				0				0			
5	0				0				0				0			
6	0				0				0				(41)			
7	(79)				(127)				(173)				(263)			
8	(259)				(265)				(271)				(285)			
9	(271)				(278)				(285)				(301)			
10	(283)				(291)				(300)				(319)			
Total Shortfall (Unfunded Liability), New GASB Approach							(\$891)	(\$961)	(\$1,029)	(\$1,208)						
Discount Rate Under New GASB Approach							5.24%	4.94%	4.64%	4.00%						