Memorandum

Date: August 22, 2019

To: Michael DeVault, Superintendent, Macomb ISD

From: Brian R. Peterson, Consultant
Sarah Mixon, Senior Analyst

Re: Pension Obligation Bond Discussion and Scenario Analysis

Cc: Paul Bodiya, Chief Financial Officer, Macomb ISD

Purpose

Recently, Governor Gretchen Whitmer and leaders of the GOP-led Michigan House and Senate have considered proposals to postpone making required principal and interest payments on the unfunded accrued actuarial liability (UAAL) of the Michigan Public School Employee Retirement System (MPSERS). For all variations of this idea, the immediate results of such actions would be the following:

- increase the debt for which taxes must be imposed,
- increase the total amount of taxpayer-funded payments necessary to repay this debt, and
- reduce the payments made in the short-term.

Under these proposals, the reduction in payments during the next five years—which some policymakers refer to as "savings"—would be used for road funding.

The Macomb County superintendents commissioned Anderson Economic Group to analyze the risks and fiscal impact on taxpayers and school districts associated with two plans, the first involving a straightforward postponement of debt payments, and the second combining postponed debt payments with additional borrowing in the form of a pension obligation bond (POB).

Background

Public pensions are a major source of fiscal pressure for state and local governments in Michigan and across the country. In recent years, Michigan has enacted several reforms to reduce the cost of pension benefits for current employees and to more responsibly fund pensions going forward. Perhaps the most significant change came in 2010 when the State closed its legacy pension plans for school employees (Basic and MIP plans). These plans are responsible for all of the MPSERS unfunded liability.

Unfunded liabilities occur when pension funds do not hold enough assets to cover current and future benefit payments. As of 2018, the MPSERS system held only 61% of the assets needed to pay for current and future pension benefits. The system has a total unfunded liability of $39.8 billion.[1]

The State plans to pay off the MPSERS unfunded liability debt by 2038, and has made regular payments towards the debt for the last several years.[2] Under the current arrangement, school districts and the State make contributions to the unfunded liability. School districts contribute a maximum of 20.96% of their current active payroll toward the unfunded liability each year, and the State contributes any difference between the school districts' contributions and the required total payment through the School Aid Fund.[3]

Approach

We took the following approach to determine the impacts of extending the MPSERS debt payment schedule and issuing pension obligation bonds to pay down a portion of the MPSERS unfunded liability:

1. We began our analysis by reviewing the details of the proposed funding solutions.

2. We reviewed the relationship between the state's borrowing and credit rating and the costs of borrowing for local units of government. This included:
   - identifying state statutes that establish local borrowing under facilities established by the State, including the Michigan Finance Authority;
   - the total debt obligations and recent payments for that debt; and
   - evidence from credit rating agencies on the impact of a State's credit rating on local government borrowing costs.

3. We reviewed Michigan's Constitution and other statutes pertaining to debt repayment.

4. We collected data on the MPSERS system pension and other post-employment benefits (OPEB) unfunded liabilities from MPSERS Actuarial Valuation Reports and reports and presentations from the Michigan House and Senate Fiscal Agencies. We also collected data on interest rates for recent bonds issued by the State of Michigan.

5. We performed an actuarial analysis using a custom model that estimates the fiscal impact on Michigan of modifying the MPSERS unfunded liability payment schedule and issuing POBs. We used the model to estimate the impact of the scenarios described below:[4]
   - A "status quo" debt repayment schedule in which no new legislation is passed and the MPSERS unfunded liability is paid off by 2038;

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1. MPSERS Actuarial Valuation Report, 2018.
2. While there is currently no statutory requirement that the pension fund reach full funding by 2038, the legislature has in recent years reduced the amortization period by one year each year, effectively resulting in a fixed amortization period that would end in 2038 if carried out until its conclusion.
3. Public Act 300 of 2012 amended the public school employee retirement system statute. Section 41, subsection 2(f) limits the contribution rate to 20.96% of annual active payroll for public schools.
4. GOP leaders have also publicly debated changes to the sales tax on gasoline. This is a separate issue which we do not analyze in this memo.

- A scenario in which the MPSERS unfunded liability payment schedule is extended from 20 to 25 years or 30 years and is paid off in 2043 or 2048; and
- A scenario in which the MPSERS unfunded liability payment schedule is extended from 20 to 30 years, pension obligation bonds are issued, and proceeds from the bond issuance are used to pay down a portion of the MPSERS unfunded liability.

We analyzed the impact of the final scenario under a series of different market return rates in order to demonstrate the risks of issuing pension obligation bonds.

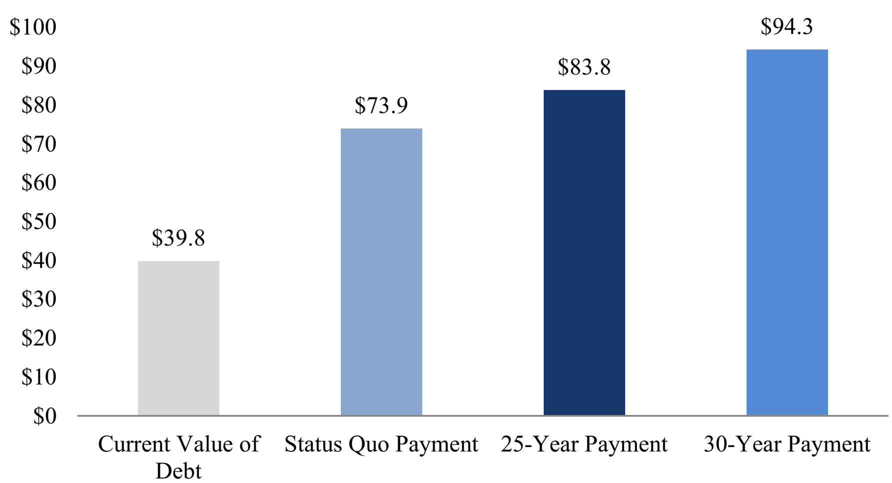
Findings

Findings 1-3 discuss the impacts of extending the MPSERS debt payment. Findings 4-6 discuss the impacts of extending the MPSERS debt payment and issuing pension obligation bonds. Our analysis led to the following findings:

1. The cost to taxpayers of extending the MPSERS debt payment schedule by five years would be $9.9 billion. The cost to taxpayers of extending the MPSERS debt payment schedule by ten years would be $20.4 billion.

Under the current payment schedule, the State and school districts will pay a total of $73.9 billion to eliminate the MPSERS unfunded liability debt by 2038. If the payment schedule were extended to 25 years, the State and school districts would pay $83.8 billion to eliminate the debt by 2043. If payments were extended to 30 years, the State and school districts would pay $94.3 billion to eliminate the debt by 2048, as shown in Figure 1.

Figure 1. Principal and Interest Costs to Pay off Current Total MPSERS Unfunded Liability (billions)
Current Schedule and Debt Postponement Scenarios



Note: Assumes rate of return of 6.8% used in 2018 Actuarial Valuation Report.
Source: MPSERS Actuarial Valuation Report, 2018.
Analysis: Anderson Economic Group.

2. Extending the MPSERS debt payment schedule by five years will result in a reduction of short-term annual payments of $360 million but increased long-term costs of $9.9 billion.

Under the status quo scenario, the State and school districts would pay $73.9 billion through 2038 to eliminate the unfunded liability debt. Under the 25-year scenario, the State and school districts would pay $66.7 billion through 2038—a reduction in annual payments of $360 million per year. However, under the 25-year scenario, the State and school districts would continue to make debt payments for an additional five years after 2038, incurring considerable costs to do so.

Under a 30-year scenario, short-term payments would be reduced by $580 million annually through 2038. After 2038, the State and school districts would continue to make payments for ten more years. We show the annual payment schedules under each scenario in Table 1.

Table 1. Annual Principal and Interest Cost to Pay off Current Total MPSERS Unfunded Liability (millions)
Current Schedule and Debt Postponement Schedule

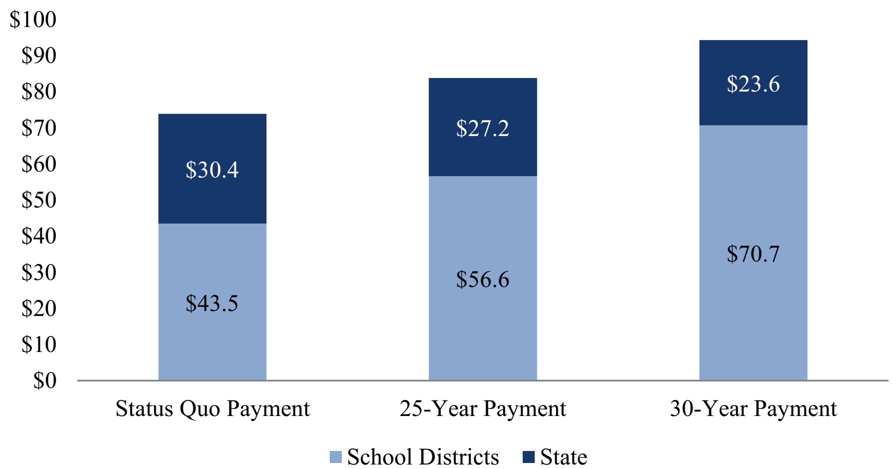
Year	Status Quo	25-Year	30-Year
2019	$3,300	$2,996	$2,812
2020	$3,416	$3,101	$2,910
2021	$3,407	$3,082	$2,885
2022	$3,527	$3,190	$2,985
2023	$3,633	$3,285	$3,075
2024	$3,614	$3,258	$3,042
2025	$3,686	$3,323	$3,103
2026	$3,741	$3,373	$3,150
2027	$3,779	$3,406	$3,181
2028	$3,797	$3,423	$3,197
2029-2038	$37,974	$34,235	$31,969
2039-2043	-	$17,117	$15,985
2044-2048	-	-	$15,985
Total Payments Through 2038	**$73,873**	**$66,673**	**$62,310**
Total Payments Over Amortization Lifetime	**$73,873**	**$83,790**	**$94,279**

Note: Assumes rate of return of 6.8% used in 2018 Actuarial Valuation Report.
Source: MPSERS Actuarial Valuation Report, 2018.
Analysis: Anderson Economic Group.

3. Extending the MPSERS debt payment schedule would result in reduced short-term annual payments for the State. School districts would realize no reduction in short-term annual payments and would see much higher long-term costs.

State law requires school districts to contribute 20.96% of their payroll, annually, to pay down the MPSERS unfunded liability. The State contributes the remaining balance for the year through the School Aid Fund. Under the proposal, most of the short-term reductions in costs from extending the debt payment schedule would accrue to the benefit of the State.[5] Local school districts would realize almost no short-term reduction in annual payments, and would pay significantly more over time to pay down the debt, as shown in Figure 2 below and in Figure 3 on page 6.

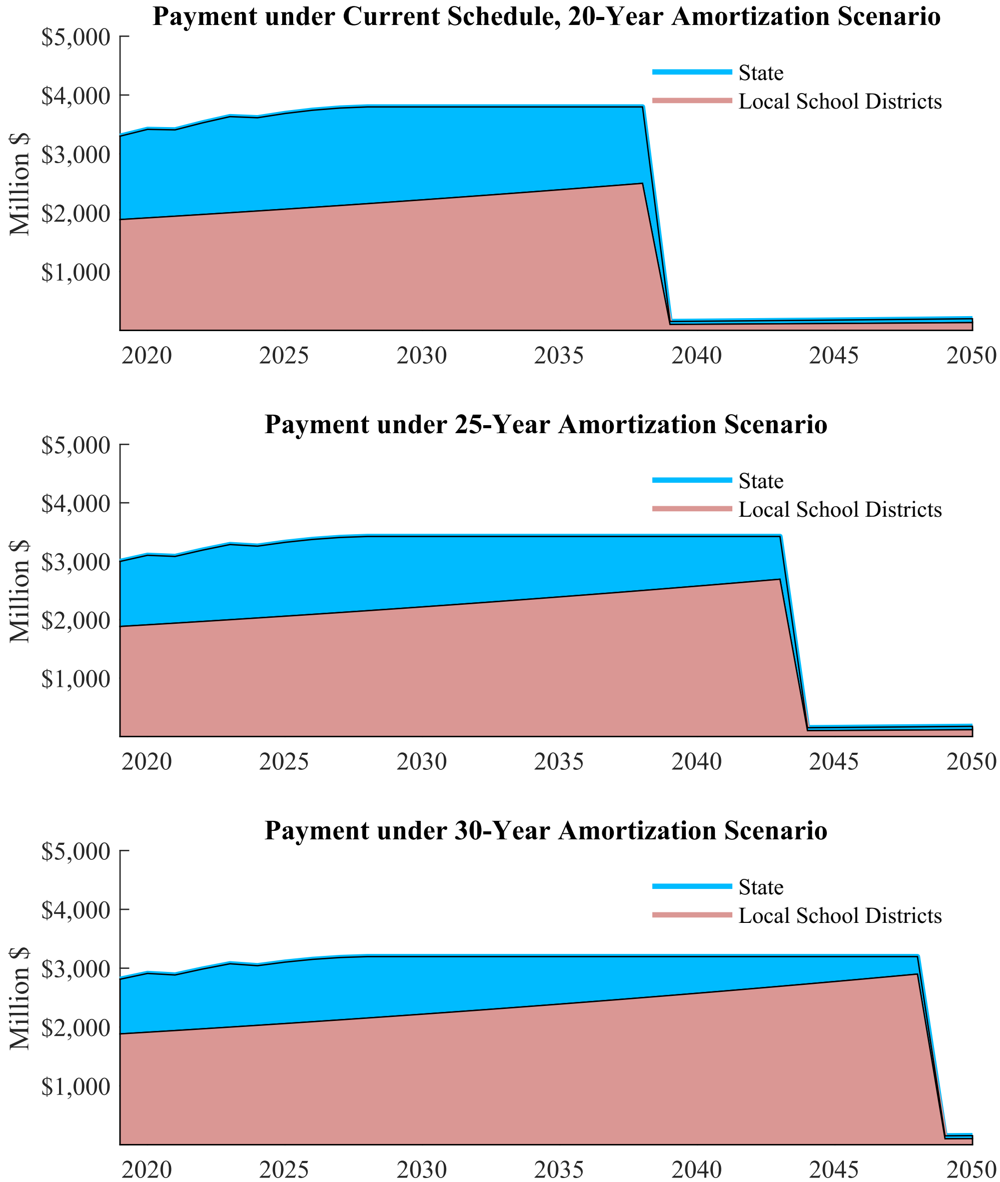
Figure 2. Principal and Interest Payments by State and School Districts to Current Total MPSERS Unfunded Liability (billions)
Current Schedule and Debt Postponement Scenarios



Note: Assumes rate of return of 6.8% used in 2018 Actuarial Valuation Report.
Source: MPSERS Actuarial Valuation Report, 2018.
Analysis: Anderson Economic Group.

5. This presumes that the PA 300 mechanism remains in place and existing actuarial assumptions also remain the same. See discussion of PA 300 in “Background” on page 1 and see Appendix C for a full discussion of our actuarial assumptions.

Figure 3. State and School District Payments to MPSERS, 2019-2050
Current Schedule and Debt Postponement Scenarios



Source: Anderson Economic Group Projections based on House Fiscal Agency; GRS Retirement Consulting; MPSERS Annual Actuarial Valuation Report, Sep 30,2018

4. Pension obligation bonds are a risky financial instrument that can leave governments worse off financially than they were before issuing the bonds.

Michigan lawmakers are considering issuing a $10 billion pension obligation bond. A pension obligation bond is created when a municipal or state government issues bonds and transfers proceeds to pension fund(s) like any other contribution. The pension fund then invests and manages those contributions. Bond proceeds create a one-time pool of funds that can be used to increase the overall asset base of the pension system. The issuers must cover the debt service on the bonds and navigate a range of factors, including market conditions and credit ratings.

In extreme cases, issuing POBs might be justified as part of a larger pension reform effort designed to lower or eliminate long-term financial risks. More often, these bonds are used as a stand-alone tool when governments fail to make annual pension contributions on growing pension debts. Historically, these tend to be states and municipalities that are poorly equipped to shoulder the long-term risks associated with POBs.

One of the key risks that POBs pose comes from the implied pursuit of "interest arbitrage" when a government invests bond proceeds into a public pension plan in order to generate investment returns that exceed the rate of debt service payments on the POBs. There is considerable chance to generate a net loss and increase the budgetary burden in the long run if pension investment returns fall short of the POB borrowing rate.

Additional long-term risks associated with POBs include:

- Transfer of liability risks from public pension plans to bond issuers;
- Sharp increases in public debt that can trigger credit rating downgrades, increasing future borrowing costs; and
- No incentive to de-risk pension portfolio allocations, leading to a continual chase for higher yields and risking more volatile returns.[6]

These risks are illustrated in the experiences of cities and states that have issued pension obligation bonds in the past, including Detroit, Dallas, and Alaska. See "Appendix B. POB Experience in Cities and States" on page 15 for more information.

5. Issuing state pension obligation bonds could materially affect the cost of borrowing for local governments, universities, and hospitals.

The fiscal health of state governments have a direct impact on borrowing costs for local governments, and any risky borrowing on behalf of the state governments could negatively affect local governments. There are many institutions that are considered linked to the state government for the purpose of credit ratings and cost of borrowing.

In Michigan, local units of government are directly affected according to Article VII of the Constitution, which gives power to local governments to raise revenue, and also the State Credit Rating Act which provides the Michigan municipal bond authority the power to provide financing to local units of government. School districts would be directly affected according to Article IX,

6. Anil Niraula, "Governments Issuing Pension Obligation Bonds Risk Worsening, Not Improving, Their Financial Shape," http://reason.org/commentary/governments-issuing-pension-obligation-bonds-risk-worsening-not-improving-their-financial-shape/, accessed July 17, 2019.

section 16 of the Constitution, which provides the that State may borrow to make loans to school districts. These sections are excerpted in Appendix A.

Local units of government, school districts, hospitals, and higher education institutions could face higher costs of borrowing through various financing programs offered by the State.

The Michigan Finance Authority (MFA) issues bond and notes as a way of borrowing money using the State's credit rating and using the proceeds to lend to local governments. The MFA's programs assist school districts, cities and local governments, hospitals, and higher education institutions. The MFA issued bond and note deals totaling $2 billion in FY 2018:

- $418 million was issued through the Local Municipalities Subfund and Public School Academy Facilities Fund to assist school districts and public school academies with specialized financing needs for capital improvements and other projects;
- $522 million was issued through the Local Municipalities Subfund and the State Revolving Subfund to assist cities, townships, and local municipalities with specialized financing needs;
- $942 million was issued through the Healthcare Finance Fund to assist healthcare providers and facilities with financing for capital improvements;
- $66 million was issued through the Higher Education Facilities Fund to assist higher education institutions with financing for capital improvements; and
- $73 million was issued through the Student Loan Fund to increase access to higher education for students in Michigan.[7]

Bonds issued by the Michigan Finance Authority are typically rated by a nationally recognized agency, such as Fitch Ratings, S&P's Rating Services, or Moody's Investors Services.

Moody's Investor Services's "Rating Action" reports for sub-national and sub-state entities frequently reference the governmental structure and economic health of superior entities. In an analysis from 2013, Moody's supported its decision to downgrade the credit rating and outlook for several Illinois-based entities (including the City of Chicago, Cook County, and the Chicago Board of Education) by noting, among other things, the "legislative paralysis" of the state legislature and strong constitutional protections for pension benefits.[8] The Rating Action for the City of Chicago notably states that, "[w]hile the onus is on the state to reduce the city's pension obligations, it is the purview of the city to increase revenues to support those obligations."

Beyond rating concerns, there are also reputation concerns that impact state and local governments. As Detroit entered bankruptcy in 2013, credit rating officials predicted a widespread impact on other entities, suggesting that investors, such as mutual funds or insurance companies, "might choose to stay away from Michigan on principle."[9]

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7. Michigan Finance Authority Comprehensive Annual Financial Report, 2018.
8. See Moody's Investor Service. "Rating Action: Moody's downgrades Chicago to A3 from Aa3, affecting $8.2 billion of GO and sales tax debt; outlook negative." July 17, 2013; "Rating Action: Moody's downgrades Cook County, IL to A1; outlook remains negative." August 16, 2013; "Rating Action: Moody's downgrades Chicago Board of Education to A3; outlook negative." July 24, 2013.
9. Lindsey Smith, "Will Detroit's bankruptcy affect your hometown?" *Michigan Radio*. August 2, 2013.

6. The actual asset returns over the 30-year debt payment period may fall short of the costs of borrowing through pension obligation bonds.

Policymakers are considering using the proceeds from a $10 billion pension obligation bond to pay down the MPSERS unfunded liability debt *and* pay back bond holders. This can only be achieved if the actual rate of return on the bond investment exceeds the borrowing costs. Borrowing money through a bond issue, and then investing the money in the stock market is an inherently risky exercise. If investment returns exceed the cost of borrowing, the State would use the additional returns to pay down the unfunded liability. If investment returns fall short of the cost of borrowing, the State would be required to make greater contributions than it would have been required to make had it not issued bonds.

We ran multiple simulations to estimate the total unfunded liability payments for a range of asset returns under a POB scenario. In Table 2, we show the projected likelihood that the total unfunded liability payment would exceed various amounts. We project that there is a 50% chance that the total unfunded liability payments under the POB scenario would be over $90 billion. There is also a 29% chance that the total costs would exceed $120 billion—significantly higher than the $94.3 billion total cost under a 30-year, no POB scenario.[10]

Table 2. MPSERS Projected Total Unfunded Liability Payment With Pension Obligation Bond

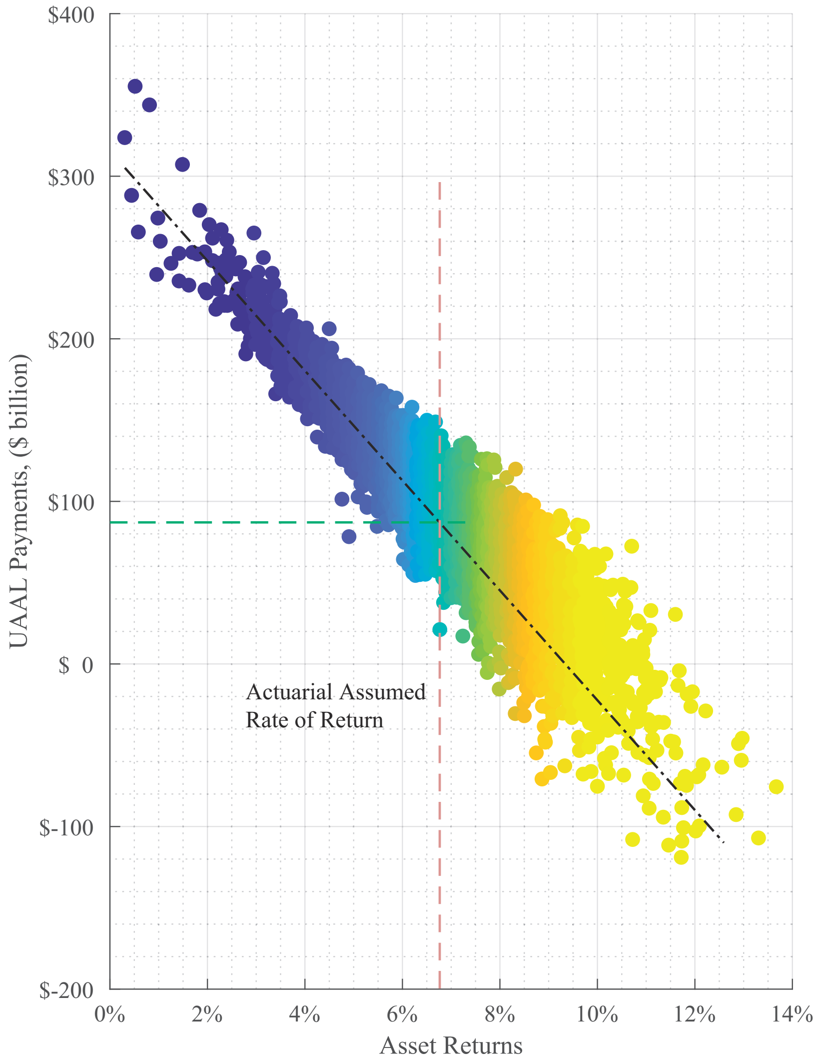
Total Payment Threshold	Likelihood that Total Payment Exceeds Threshold Amount
$30 billion	87%
$60 billion	72%
$90 billion	50%
$120 billion	29%
$150 billion	13%

Note: Assumes Bond Issue Costs of 4.2%.
Source: Anderson Economic Group analysis of base data from GRS Retirement Consulting Services, MPSERS Annual Actuarial Valuation Report, September, 2018.

We show total unfunded liability payments under a range of market return scenarios graphically in Figure 4 on page 10.

10. This is for the extended amortization scenario. Under the status quo, the total payments would be $73 billion. See Table 1 on page 4.

Figure 4. MPSERS Projected Total Unfunded Liability Payment Under Various Market Returns
POB Scenario



Source: Anderson Economic Group Analysis based on GRS Retirement Consulting; MPSERS Annual Actuarial Valuation Report, Sep 30,2018

7. Postponing debt payments while explicitly using the savings for other purposes may violate the Michigan Constitution's balanced budget, voter approval of debt, or pension funding provisions.

The 1963 Michigan Constitution contains strong provisions intended to safeguard the state's taxpayers and pensioners. These include the following:

- The requirement for voter approval of general obligation debt.
- The balanced budget requirement.
- The requirement that all pensions be funded, and the prohibition against impairing a pension obligation that has been incurred and funded.

These provisions are found in Article V, section 18 and Article IX, sections 15 and 24 of the Michigan Constitution, which are excerpted in Appendix A.

The clear purpose of this proposal is to use the State's ability to borrow long-term to finance short-term expenditures without the approval of voters. Because the constitution strictly requires voter approval for long-term debt carrying the full faith and credit of the State, the proposed plan is clearly contrary to the constitution's intent.

Furthermore, both the balanced budget and pension funding provisions would also be bruised, if not broken, by this kind of plan. Postponing debt payments, while spending money intended for that purpose on other things, would mean the State is incurring *de facto* deficits each year, but not fulfilling the requirement that this deficit be the first item in the following year's budget. The requirement to fund a pension obligation would be similarly bruised. The entire purpose of this plan is to take money intended to fund pension obligations and use it for something else, which is contrary to the intention of the constitution.

Finally, the State's Headlee revenue limit, at Article IX section 26, explicitly allows for taxes to be levied without limit to pay for long-term borrowing approved by the voters as required under Article IX section 15. The additional debt that would be run up by the State under a debt-postponement plan would exist in a grey area, as they were never approved by voters. Both lenders and taxpayers would have concerns about this situation.

We stop short of concluding that the proposed plan does violate the constitution, largely because there is not yet a formal law. However, as noted above, the intention and the effect of such a plan are clearly contrary to the explicit requirements of the Constitution.

About Anderson Economic Group

Founded in 1996, Anderson Economic Group is a boutique research and consulting firm, with offices in East Lansing, Michigan, and Chicago, Illinois. The experts at AEG have extensive experience in public policy and actuarial analysis, and have conducted analyses on pension reforms across the United States. Relevant publications from our firm include:

- “Impact of Postponing Michigan Public School Employee Retirement System Debt Payments: Costs to Taxpayers and Constitutional Considerations,” published in 2019.
- “The Fiscal Impact of Proposed Pension Reforms for Michigan Teachers,” published in 2017.
- “The Impacts of Consolidating Illinois’ Downstate Police and Fire Pension Funds and Easing Their Investment Restrictions,” published in 2018.
- “Oregon Public Sector Workforce Issues: The Cost of Employee Replacement and Evidence of a Labor Shortage,” published in 2018.
- “The Impact of Direct Infrastructure Transfer on Police and Fire Pension Funds,” published in 2017.
- “Proposed Reforms to Chicago Pensions: What’s at Stake and How Much will it Cost?” published in 2014.
- “The Impact of Reforms to the MPSERS System,” published in 2014.
- “State Business Tax Ranking,” published since 2007.

For more information about Anderson Economic Group, please visit AndersonEconomicGroup.com.

About the Authors

Brian R. Peterson. Mr. Peterson is a consultant and director of public policy and economic analysis with Anderson Economic Group. His work focuses on economic and fiscal impact modeling, actuarial analysis, and environmental economics.Prior to joining AEG, Mr. Peterson worked as a policy analyst in regional economic development and transportation planning in the Chicago region.

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Patrick Anderson. Mr. Anderson founded Anderson Economic Group in 1996, and serves as the company’s principal and CEO. A nationally-recognized expert in business economics and a sought-after speaker, Mr. Anderson has led several major public policy initiatives in his home state. He was awarded both the Michigan Chamber of Commerce’s *Leadership Michigan* award and the University of Michigan’s *Neal Staebler* award for civic leadership. His writing has earned four prestigious awards from the National Association of Business Economics.

Appendix A. Relevant Provisions of the Michigan Constitution

Article V

§ 18 Budget; general and deficiency appropriation bills.

Sec. 18.

The governor shall submit to the legislature at a time fixed by law, a budget for the ensuing fiscal period setting forth in detail, for all operating funds, the proposed expenditures and estimated revenue of the state. Proposed expenditures from any fund shall not exceed the estimated revenue thereof. On the same date, the governor shall submit to the legislature general appropriation bills to embody the proposed expenditures and any necessary bill or bills to provide new or additional revenues to meet proposed expenditures. The amount of any surplus created or deficit incurred in any fund during the last preceding fiscal period shall be entered as an item in the budget and in one of the appropriation bills. The governor may submit amendments to appropriation bills to be offered in either house during consideration of the bill by that house, and shall submit bills to meet deficiencies in current appropriations.

...

Article IX

§ 12 Evidence of state indebtedness.

Sec. 12.

No evidence of state indebtedness shall be issued except for debts authorized pursuant to this constitution.

...

§ 15 Long term borrowing by state.

Sec. 15.

The state may borrow money for specific purposes in amounts as may be provided by acts of the legislature adopted by a vote of two-thirds of the members elected to and serving in each house, and approved by a majority of the electors voting thereon at any general election. The question submitted to the electors shall state the amount to be borrowed, the specific purpose to which the funds shall be devoted, and the method of repayment.

...

§ 16 State loans to school districts.

Sec. 16.

The state, in addition to any other borrowing power, may borrow from time to time such amounts as shall be required, pledge its faith and credit and issue its notes or bonds therefor, for the purpose of making loans to school districts as provided in this section.

...

§ 24 Public pension plans and retirement systems, obligation.

Sec. 24.

The accrued financial benefits of each pension plan and retirement system of the state and its political subdivisions shall be a contractual obligation thereof which shall not be diminished or impaired thereby.

Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities.

...

Sec. 26

§ 26 Limitation on taxes; revenue limit; refunding or transferring excess revenues; exceptions to revenue limitation; adjustment of state revenue and spending limits.

Sec. 26. [“Headlee”]

There is hereby established a limit on the total amount of taxes which may be imposed by the legislature in any fiscal year on the taxpayers of this state.

...

The revenue limitation established in this section shall not apply to taxes imposed for the payment of principal and interest on bonds, approved by the voters and authorized under Section 15 of this Article, and loans to school districts authorized under Section 16 of this Article.

Appendix B. POB Experience in Cities and States

Detroit. In 2005, Detroit issued $1.4 in billion pension obligation bonds at the height of the market in order to eliminate the City's unfunded pension liabilities. The City sold the bonds to creditors at a variable interest rate that rose above the interest rate the investment was earning. The POB deal was widely considered to have played a key role in the City's decision to file for bankruptcy.

Dallas. In 2005, Dallas issued $500 million in pension obligation bonds to pay the City's unfunded pension liabilities.[11] The City's former leadership invested more than half of the bond proceeds into high-risk real estate that yielded lower returns than predicted. The plan has suffered large investment losses and more than $180 million in write-downs, primarily because of the over-valuations in its real-estate portfolio.[12]

Alaska. In 2016, Governor Bill Walker directed officials to pursue a plan in which the State would issue $3.3 billion in pension obligation bonds.[13] Money derived from the sale would fund Alaska's Public Employees' Retirement System and the Teachers' Retirement System, with State officials estimating that the sale would make the pension funds 90% funded. Governor Walker's plan targeted borrowing at a fixed rate of four percent with an assumed rate of return of eight percent. If those targets proved accurate, the bonds would have saved the State between $150 and $400 million per year in pension fund payments.[14] State legislators pushed back on the proposal, with some analysts noting that the pension funds' combined rate of return was just 6.9% over the past 25 years.[15] Governor Walker ultimately decided to halt the plan to issue pension obligation bonds.

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11. Eric Boehm, "Nightmare in Deep Ellum: How Pension Obligation Bonds Ruined Dallas Employees' Retirement Dreams." Reason.com. October 2016. Accessed July 19, 2019. reason.com/2016/10/28/nightmare-in-deep-ellum-how-pension-obli/.
12. Josh B. McGee, Laura, McGee, Greg Abbott, Manhattan Institute, John Arnold Foundation, and Texas Pension Review Board. "The Time to Fix Texas's Public Pensions Is Now." City Journal. May 21, 2018. Accessed July 19, 2019. www.city-journal.org/html/time-fix-texas-public-pensions-now-14732.html.
13. Elwood Brehmer, "State Seeks to Sell Billions in Pension Bonds," Alaska Journal of Commerce, October 5, 2016.
14. Ibid.
15. Anthony Randazzo, "Alaska Backs Down from Pension Obligation Bond Issuance," Reason Foundation, October 26, 2016.

Appendix C. Methodology for Actuarial Projections

Our analysis follows the methods and assumptions required by State law and implemented by the State's actuary. This includes the following assumptions:

- For the purposes of amortizing the unfunded liability, we reduced the payroll growth assumption from 3.5% to 3.0% for the 2019 valuation, and then by 0.5 percentage points for each subsequent year until the payroll growth assumption reaches 0.0%.[16]
- We assumed that school districts would continue to make unfunded liability contributions using the existing capped district rate of 20.96%. We assumed that school district payroll growth for the purpose of calculating the capped contribution rate, would be 1.5% annually.
- We assumed a 6.8% rate of return in our analysis.

We used a deterministic model to estimate individual payments by the State and school districts for three scenarios with varying amortization periods of 20, 25, and 30 years.

To calculate the reduced short-term annual payments of extending the debt payment schedule, as discussed in Finding 2, we estimated the average annual payment under each scenario for the years 2019-2038. Reduced annual payments are defined as the differences between the average annual payments for the status quo and each scenario, as shown in Table 3 below. Note that the payments calculated here are only for the 2019-2038 period. See Table 1 on page 4 for the entire time period.

Table 3. Difference in Payments to Total MPSERS Unfunded Liability, 2019-2038
Current Schedule and Debt Postponement Schedule

	Status Quo	25-Year	30-Year
Payment, 2019-2038 (millions)	$73,873	$66,673	$62,310
Average annual payment, 2019-2038 (millions)	$3,694	$3,334	$3,116
Difference from Status Quo (millions)	-	$360	$578

Note: Numbers have been rounded.
Source: MPSERS Actuarial Valuation Report, 2018.
Analysis: Anderson Economic Group.

We used a probabilistic model to understand the impact of different asset returns when issuing POBs. For this analysis, we generated a random distribution of asset returns over the debt payment period with a mean of 6.8% and a standard deviation of 10%. We assumed a 4.2% interest rate on the pension obligation bonds and a one percent underwriting commission on the face value.

Like any other actuarial analysis, it involved prediction of future events that cannot be known at this time. We use, wherever possible, identical assumptions, to allow for comparison of the effects of the proposed policy. See the State's actuarial report for a discussion of the limitations of our analysis and theirs.

16. In 2018, the MPSERS Retirement Board adopted a 2.75% payroll growth assumption after reviewing recommendations from a MPSERS experience study. The Office of Retirement Services continues to use a 3.5% payroll growth assumption, and does not plan on lowing the payroll growth assumption until 2022, in accordance with Public Act 181 of 2018. Policymakers have asked for clarification from the state's attorney general on this matter. The attorney general has not responded to this request as of August 2019.

Sources Consulted

Michigan Constitution, Art. V, sec. 18 and Art. IX, sec. 12, 15, 16, 24, 26.

Public Act 300 of 2012.

Public Act 181 of 2018.

Michigan Finance Authority Comprehensive Financial Report, 2018.

Michigan Public School Employee Retirement System Annual Report, 2018.

PricewaterhouseCoopers LLP, "Fund Teacher Pensions, Pay off debt, Fix the roads," commissioned by the West Michigan Policy Forum, June 2019.

GRS Retirement Consulting, "Michigan Public Schools Employees' Retirement System Annual Actuarial Valuation Report," September 30, 2018.

Kathryn Summers, "House Bill 5355 Bill Analysis," Michigan Senate Fiscal Agency, May, 2018.

Jason Horwitz, "Fiscal Impact of SB 102, SB 1177, and SB 1178," Anderson Economic Group memo to Macomb ISD, May, 2017.

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