Enduring Challenges

Examining the Experiences of States that Closed Pension Plans

By Tyler Bond and Dan Doonan

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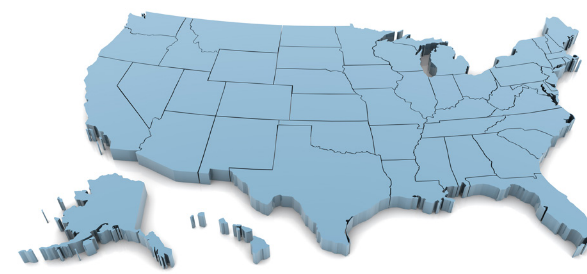

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EXECUTIVE SUMMARY

The overwhelming majority of state and local government employees continue to participate in defined benefit pension plans. A few states have closed their pension plans during the past couple of decades, placing their new hires in alternative plans like defined contribution or cash balance plans. This report features four case studies of states --Alaska, Kentucky, Michigan, and West Virginia-- that closed their pension plans in favor of an alternative plan design.

The key findings of this report are as follows:

- Switching from a defined benefit pension plan to a defined contribution or cash balance plan did not address existing pension underfunding as promised. Instead, costs for these states increased after closing the pension plan.
- Responsible funding of pension plans is key to managing legacy costs associated with these plans. The experience of these states shows that changing benefits for future hires does not address an existing funding shortfall.
- The change in plan design has resulted in greater retirement insecurity for employees. In West Virginia's case, this led the state to reopen the closed pension plan.
- Workforce challenges are emerging as a result of the benefit changes. Especially in Alaska, difficulties in recruiting and retaining public employees have increased since the pension plans were closed to new hires. The Alaska Department of Public Safety lists the ability to offer a defined benefit pension as a "critical need" for the department.

Each analysis examines the key issues and the impact of the plan change over time. Specific areas include: the impact on the overall demographics of the system membership; changes in the cost of providing benefits under the plan; the percent of the actuarially determined employer contribution made by the state and other public employers each year; the effect on the retirement security of workers impacted by the change; and the impact on the overall funding level of the plan over time. To the extent possible, the case studies also examine subsequent action taken by policymakers to address the results of the plan changes.

A note on terminology: throughout this report, we will use the term "Actuarially Determined Employer Contribution (ADEC)," instead of the term "Annual Required Contribution (ARC)." Some of the comprehensive annual financial reports cited in this report still use the term ARC, but for consistency, we will use the term ADEC.

CASE STUDY: ALASKA FACES MOUNTING CHALLENGES THIRTEEN YEARS AFTER CLOSING PENSION PLANS

Closing the Plans Did Not Help Bring Down Underfunding

In 2005, the Alaska legislature closed its two statewide defined benefit pension plans for teachers and public employees. All new hires since July 1, 2006 participate in a defined contribution retirement plan. Since that time, it's become clear that the move to a defined contribution plan did not improve the funded status of the pension plans. Furthermore, public employees are facing increasing retirement insecurity, and there is emerging evidence the state is finding it more difficult to retain a quality workforce following the benefit change.

When the legislature passed the law that closed the defined benefit plans and created the defined contribution plans, the governor claimed the legislation would "slow down the state's increasing liability."[1] Instead, the past thirteen years have revealed a much more complicated outcome for the state.

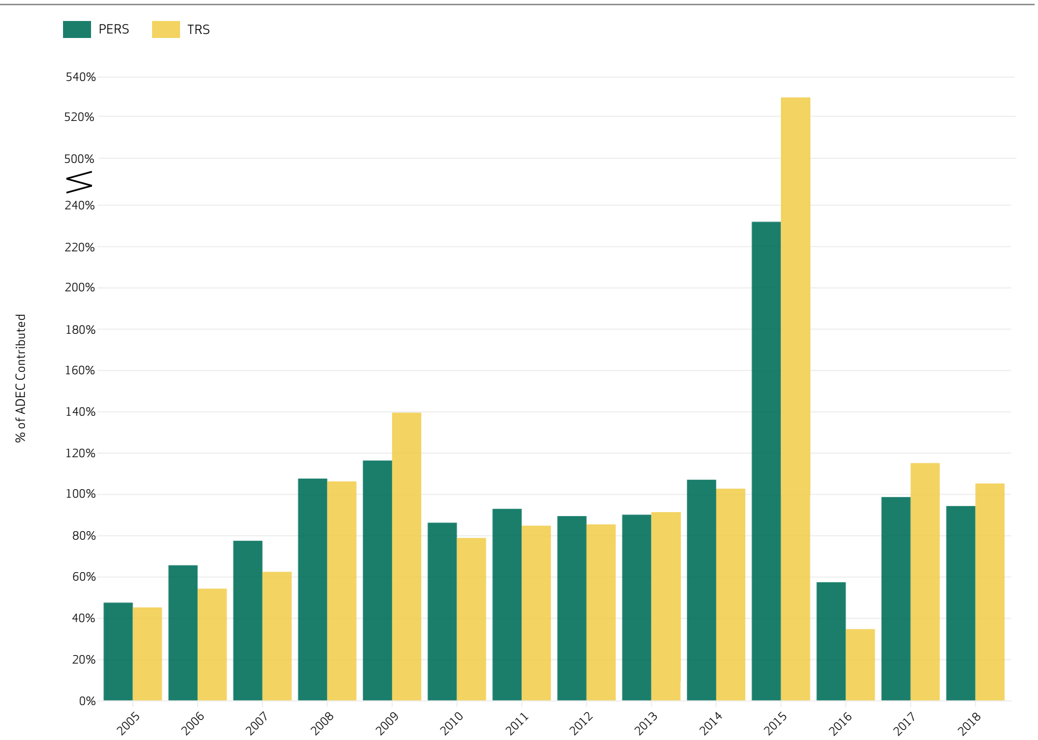
Much of the political momentum behind closing the pension plans was driven by the state's unfunded liability, including the liability related to post-employment healthcare. In 2005, the state faced a combined $4.1 billion unfunded liability for pension benefits in the Public Employees Retirement System (PERS) and the Teachers Retirement System (TRS). The underfunding of these plans was caused by a variety of factors, including poor funding decisions by elected officials, stock market declines, and significant actuarial errors.

Mercer Inc., the state's actuary, had made inaccurate actuarial projections and then attempted to hide them from the state. The firm had recommended the state contribute less to the plans than what was actually needed. This error alone contributed to $2.5 billion of the state's unfunded liabilities.[2] The state of Alaska sued in December 2007, seeking $2.8 billion in damages. Ultimately, Mercer and the State of Alaska settled for $500 million.[3]

By the time Alaska received the settlement in 2010, the damage had already been done. Governor Frank Murkowski had used the perceived crisis of the unfunded liability to push for the closing of the pension plans, and he had succeeded. The real problem Alaska faced in 2005 was a funding problem -- and closing the pension plans did not address that. In fact, in the years following the closing of the defined benefit plans, the Alaska legislature continued to underpay the actuarially determined employer contribution (ADEC).

Since the plans were closed in 2005, the state of Alaska has alternated between underpaying and overpaying the ADEC. As the chart below shows, Alaska underpaid the ADEC in PERS in 10 of the 14 years from 2005 through 2018, and in 8 of those years it underpaid the ADEC in TRS.[4] These poor funding practices belie the claim that the state acted in 2005 to address underfunding in the pension plans.

Figure 1. **Alaska ADEC Contributions by Plan**



Moreover, closing the pension plans made it more difficult for the state to manage the existing unfunded liability because new employees no longer pay into the system. As a result of the ongoing underfunding, the state decided to make a one-time $3 billion contribution to the closed pension plans in 2014.[5] Despite this significant infusion of the state's financial resources, the combined unfunded liability for pension benefits was higher in 2017 ($6.3 billion) than it was in 2005 ($4.1 billion). Closing the plans did not reduce the unfunded liability. Alaska has managed to improve the funded status of both plans modestly --from 65.7 percent to 66.7 percent in PERS and from 60.9 percent to 75.9 percent in TRS-- but this is due almost entirely to the $3 billion contribution. Meanwhile, the unfunded actuarial accrued liability for pension benefits has increased in both plans since 2005.

Closing the Plans Created Recruitment and Retention Challenges for the State

Closing the pension plans did have other repercussions. Since 2005, the state has experienced significant challenges recruiting and retaining public employees. Due to its unique and imposing geography, Alaska is already a difficult place to recruit public employees, especially teachers, who may spend months at a time in small, remote villages. While pay is generally higher than the national average in Alaska, the state also has a much higher cost of living, again, owing to its remoteness and unique geography. The lack of a defined benefit pension plan and competitive benefits in general is often directly cited as a major reason why Alaska struggles to recruit teachers, state troopers, and other public employees.

In April 2019, nine former Alaska Teachers of the Year wrote an op-ed attributing the state's challenges recruiting and retaining teachers to the lack of a defined benefit pension.[6] "There is not a single financial reason for a teacher to remain longer than five years on a defined-contribution retirement plan," they wrote.[7] (Teachers in Alaska's defined contribution plan vest in their retirement benefits after five years.) They point out that many teachers are incentivized to teach for a few years in Alaska and then move to another state where they will receive a defined benefit pension. And replacing these teachers is expensive: The Center for Alaska Education Policy Research determines that it costs $20,431 per teacher when totaling all turnover costs (separation, recruitment, hiring, and induction and training).[8] As a result, the state of Alaska loses $20 million each year due to teacher turnover.[9]

The Alaska Department of Public Safety has experienced similar challenges. In a report to the state legislature, DPS officials cited the lack of a defined benefit pension as one of the primary obstacles to recruiting and retaining new state troopers.[10] Over the six year period from 2011 through 2017, the Alaska DPS saw a noticeable increase in the number of non-retirement separations from service. Seventy-two percent of those who left went to work for a different public safety department often in a state that offers a pension.[11] Given that it costs $190,000 and takes 12-18 months to train and certify a new state trooper, Alaska has strong incentives to retain experienced officers. The department identified the ability to offer a defined benefit pension to law enforcement officers in Alaska as a "critical need."[12]

Closing the Plans Made Them More "Mature," Thereby Increasing Costs

Meanwhile, as new teachers and public employees have joined the defined contribution plan over the past thirteen years, the balance between active and retired employees in the closed defined benefit plans has worsened. As of June 30, 2017, there were 14,719 active members in the PERS DB plan, compared to 34,347 retired members. In TRS, the equivalent numbers were 4,772 active members to 12,983 retired members. This imbalance between active and retired members --along with the resulting shorter investment time horizon and negative cash flow associated with closing a plan and spending down assets-- will force the plan to either adopt more conservative investments or take on more risk, because eventually it will no longer be managing a plan with very long investment time horizons. More conservative investments mean a lower assumed rate of return on plan assets, which typically increases costs.

Table 1. **Active and Retired Members by Plan**

	DB Plan		DC Plan	
PERS	14,719 Active Members	34,347 Retired Members	19,171 Active Members	7 Retired Members*
TRS	4,772 Active Members	12,983 Retired Members	4,694 Active Members	4 Retired Members

*Plus 14 disabilitants and beneficiaries

If the defined benefit plans had remained open, the balance between active and retired members would be much better. If all the active members of the PERS DC plan were in the PERS DB plan, the balance between active and retired members would be 1:1. Under the same circumstances for TRS, the balance would be 2:3 rather than the current 1:3.[13]

The Employees in the Defined Contribution Plans Are Likely to Experience Greater Financial Insecurity in Retirement

Teachers and some public employees in Alaska do not participate in Social Security. In the PERS defined benefit plan, the average annual pension benefit is $21,398; for peace officers and firefighters it is $35,629.[14] In the TRS defined benefit plan, the average annual benefit is $35,084.[15] These are modest benefits for retirees in a high cost of living state, many of whom will not receive Social Security benefits.

Many of the employees participating in the defined contribution plan will not have a guaranteed monthly income in retirement. This places those employees in a particularly precarious financial situation. Without Social Security to rely on, it is critically important that these workers maintain their account balances and find a reasonable and efficient way to spend down their assets in retirement.

The state of Alaska does not report annual account balances for participants in the defined contribution plans; however, by looking at the comprehensive annual financial reports, we calculated that the average account balance for a participant in the PERS DC plan is about $50,660.[16] There is a lot this number does not tell us. It could very well be the case that a small number of high earners are distorting the average account balance number. A median account balance number, if it were available, would go a long way toward better assessing the retirement readiness of these workers. Also, the value of the account balance varies significantly depending on the individual's age. For example, $50,000 at age 25 would be a great start toward saving for retirement, but at age 60, that amount would provide only a small amount of lifetime income.

One way to think about the challenges facing public employees and teachers in the defined contribution plan is to do a projection of future account balances and what pay replacement ratio that could generate. This study calculates that for an Alaska teacher who begins teaching at age 25 and retires at age 60, the defined contribution plan would generate a pay replacement ratio of 39 percent of final pay using the four percent rule to convert to annual lifetime income. This compares to 76 percent of final pay for the pension plan. After factoring in projected health care costs for a couple, the pay replacement ratio drops to 23 percent.[17] For workers who earn less during their career, the pay replacement after taking health care costs into account are worse because health care costs are not a function of income.

The career teacher in the example above has the highest projected pay replacement ratio. For teachers with shorter careers or for education support professionals, who typically earn lower salaries than teachers, their projected pay replacement ratios are even lower and may be insufficient to cover projected health costs in retirement. The above projections also assume steady returns of six percent per year, and that there is no major downturn in the financial markets that wipes out a quarter of the value of the account (as happened to many in 2007-2008). It also assumes that the retired teacher draws down their resources according to the four percent rule, which is a rough rule of thumb for converting savings into retirement income.

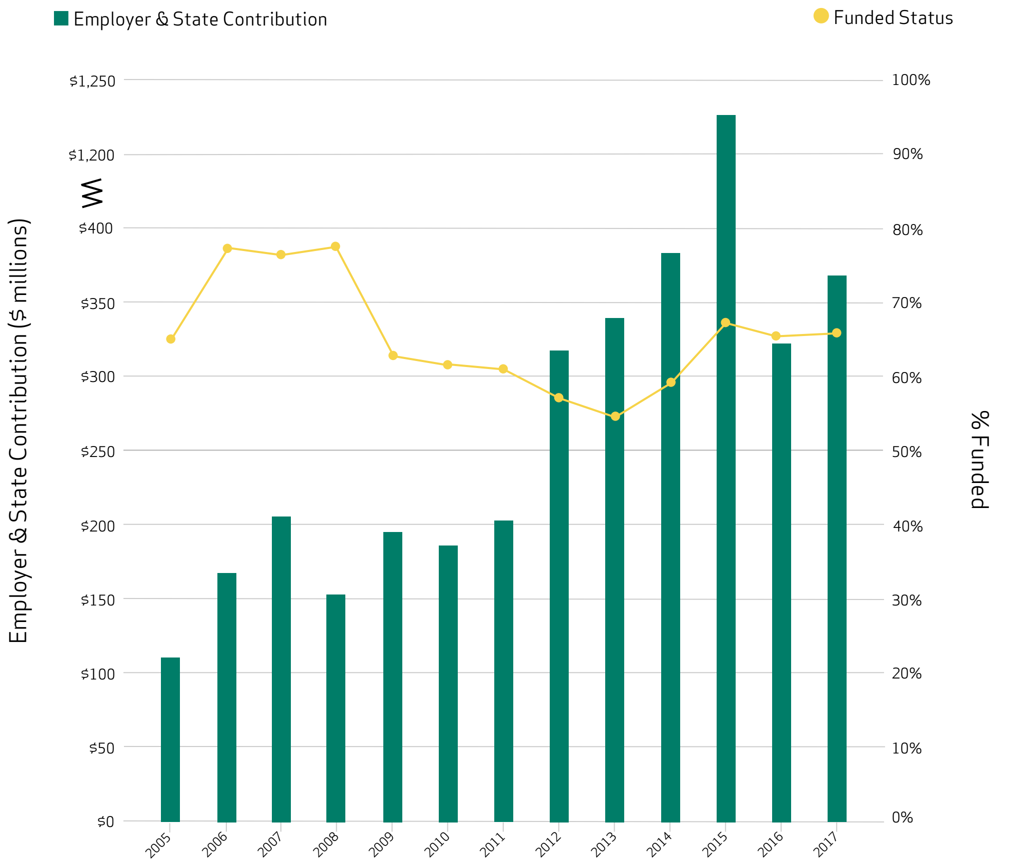
One challenge Alaska is already experiencing is teachers and public employees in the defined contribution plan taking their money and leaving the state as soon as they vest after five years. According to the Alaska Retirement Management Board, through the third quarter of fiscal year 2019, 1302 PERS DC employees and 236 TRS DC employees have taken full disbursements from the funds.[18] This represents 70 percent and 77 percent, respectively, of total full disbursements for those two plans.[19]

In the years since closing its pension plans, Alaska has been on a rollercoaster. It has experienced a yo-yo effect of underpaying and then dramatically overpaying its ADEC. It made a massive one-time contribution to the pension plans to improve the funded status. What has it gotten from that? An unfunded liability that has grown since 2005 and very serious recruitment and retention challenges. In fact, even groups that often advocate for closing traditional defined benefit plans for public sector workers, such as the American Legislative Exchange Council (ALEC)[20] and Bellwether Education Partners,[21] have put Alaska at the top of various lists depicting states facing the most dire financial circumstances on retirement.

For all the money the state has spent, it finds itself in a worse financial position than it was in thirteen years ago. This does not even consider where the state will be in the future once teachers and public employees in the defined contribution plan without Social Security begin to retire. As of June 30, 2017, only 10 employees had retired from the two defined contribution plans. As the number of these retirees increases significantly in the years ahead, the state is likely to face increasing challenges caring for a retired population ill prepared for retirement.

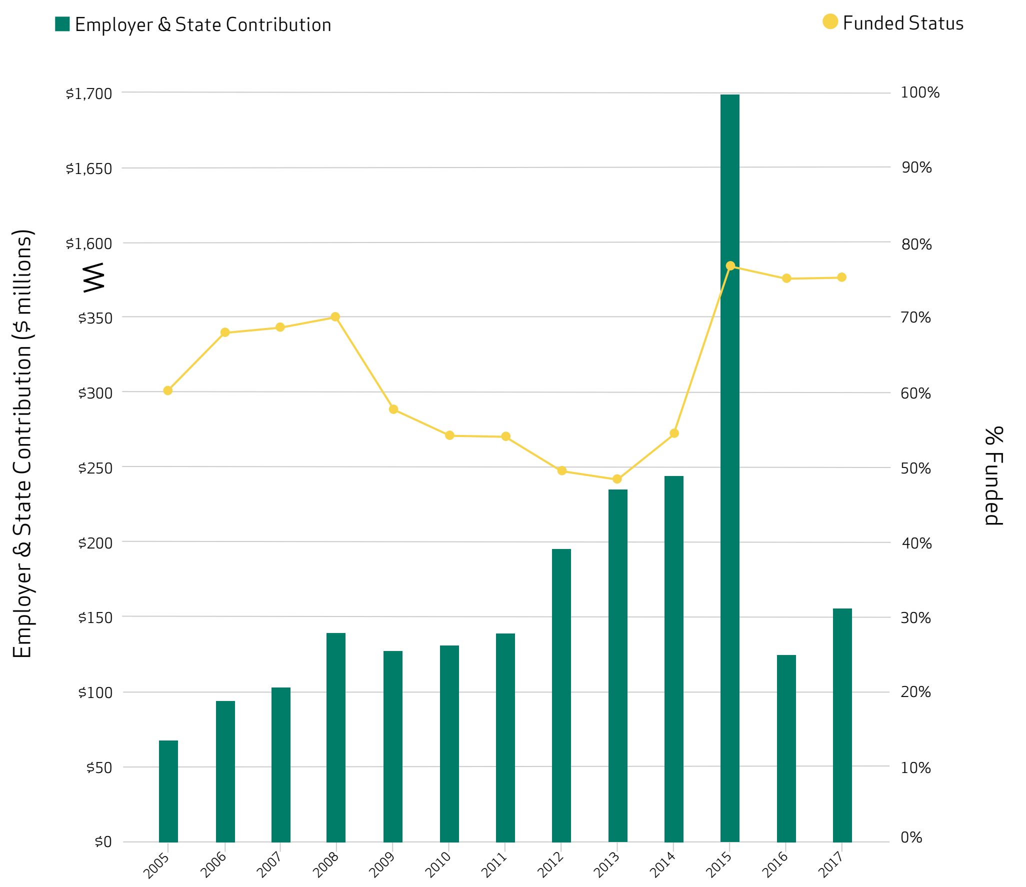
Perhaps it is time that Alaska consider reopening the defined benefit plan to active employees, as the state of West Virginia did in 2005, after 14 unsuccessful years in a defined contribution plan. Such a move would create greater financial security for Alaska's public sector workers, would help the state recruit and retain a quality workforce, and would likely help TRS and PERS dig out from their chronic underfunding.

Figure 2. **Alaska PERS Employer & State Contribution and Funded Status**



*Funded status reflects pension benefits only, not post-employment healthcare

Figure 3. **Alaska TRS Employer & State Contribution and Funded Status**



*Funded status reflects pension benefits only, not post-employment healthcare

CASE STUDY: SWITCH TO CASH BALANCE PLAN DID NOT ADDRESS THE TRUE CAUSE OF SEVERE UNDERFUNDING IN KENTUCKY PENSION PLAN

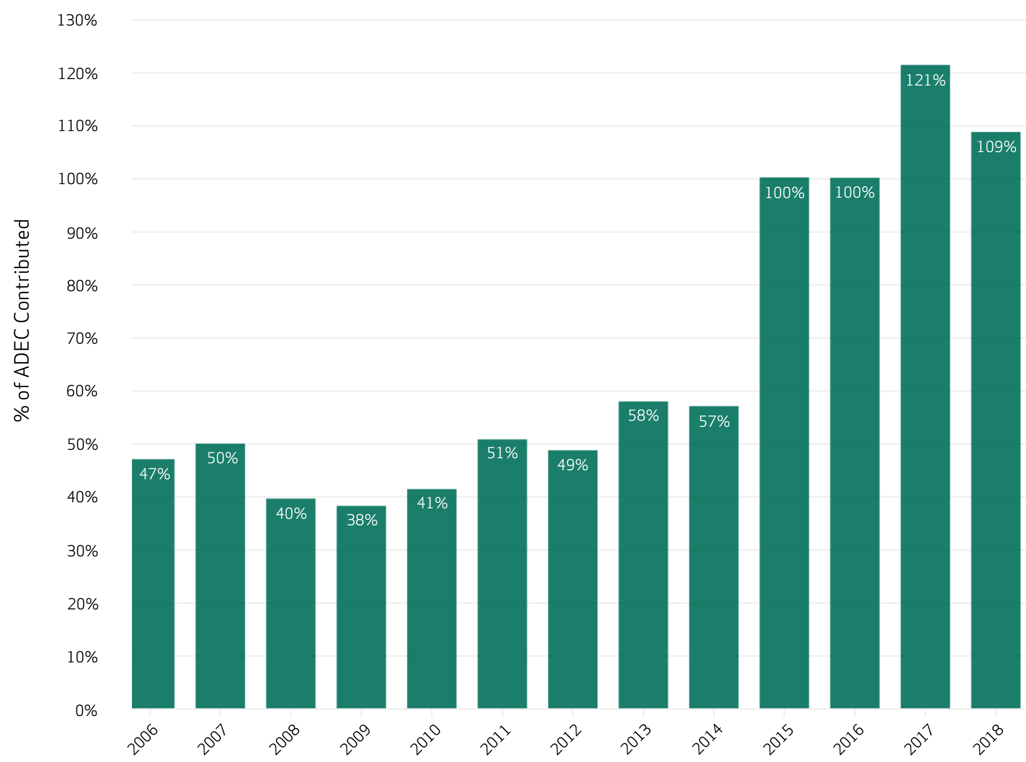
In March 2013, the Kentucky General Assembly passed Senate Bill 2, which established a new tier of benefits for plans in the Kentucky Retirement Systems (KRS). Public employees hired since January 1, 2014 participate in a cash balance hybrid plan instead of the defined benefit pension plan that public employees used to join. The move to a cash balance hybrid plan was sold as part of an overall push to improve the funding of KRS. Instead, as has been the case in other states that changed plan design, the switch did little to improve the funding level of KRS. The adoption of the cash balance hybrid plan was a distraction from the real issue in a state that has a history of underfunding its pension plans.

KRS consists of five different pension plans: Kentucky Employees Retirement System (KERS) Non-Hazardous; KERS Hazardous; County Employees Retirement System (CERS) Non-Hazardous; CERS Hazardous; and the State Police Retirement System (SPRS). While they all fall under the umbrella of KRS, each of these plans serves different groups of public employees. All of these plans suffer from low funding levels, but this case study will focus on KERS Non-Hazardous (KERS NH), as it has been an even more exceptionally underfunded plan.

Funding was Already an Issue Before New Tier was Created

On June 30, 2013, just a few months after SB 2 passed, KERS NH had a funded ratio of 23.15 percent.[22] It is no wonder, then, that the General Assembly was concerned about the funded status of the plan. But the cause of the underfunding was hardly a mystery. From fiscal year 2006 through fiscal year 2014, KERS NH employers contributed roughly half or less of the actuarially determined employer contribution (ADEC).[23] This chronic underfunding, coupled with the crippling effects of the financial crisis, gutted the funded status of KERS NH.

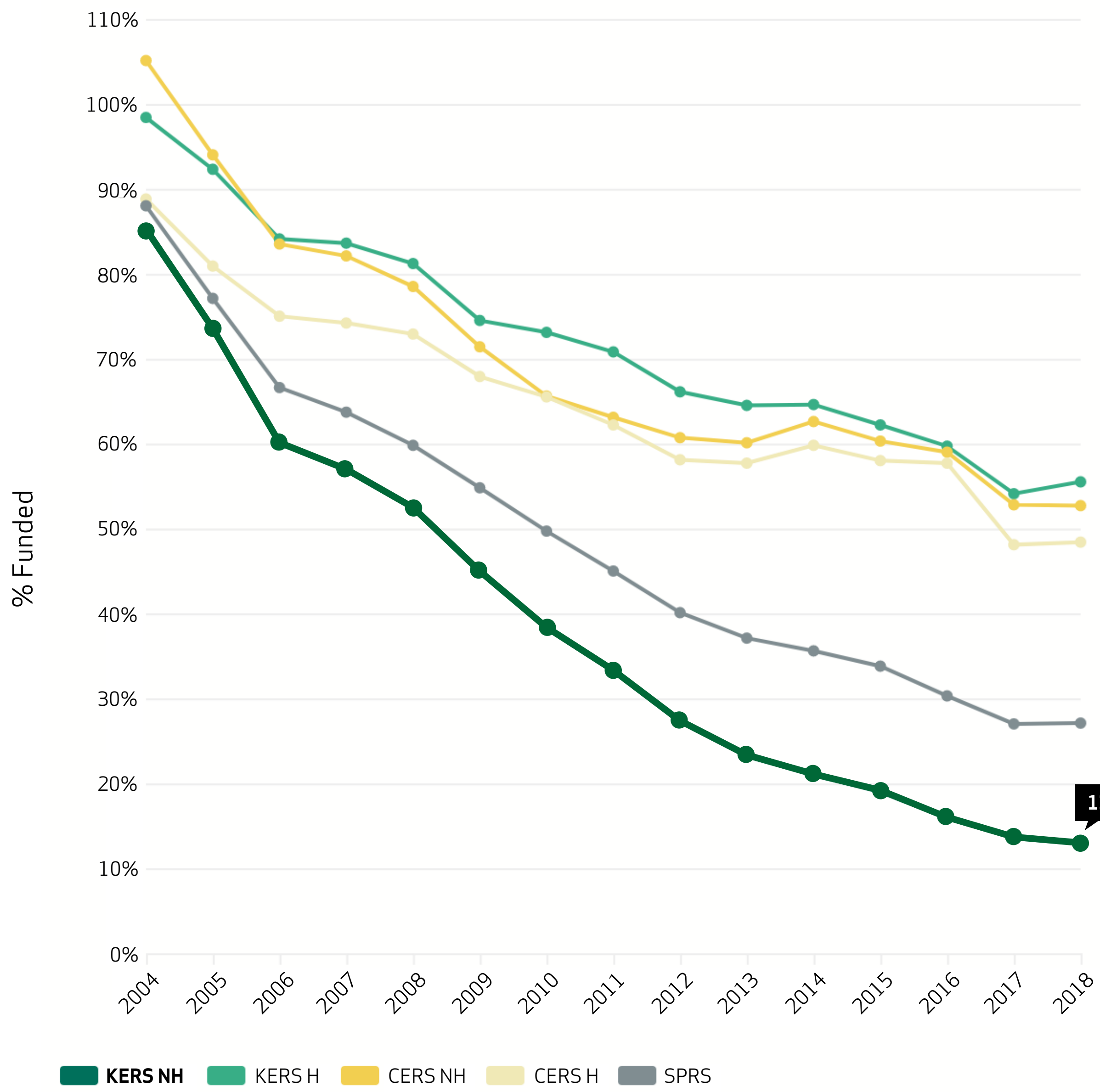
Figure 4. **ADEC Contributions to KERS NH**



The funded status of KERS NH has dropped every year for at least the past fifteen years. In fiscal year 2004, KERS NH was funded at 85.1 percent.[24] By fiscal year 2018, the funded status was down to 12.88 percent.[25]

While all KRS plans have seen a drastic decline in funding since the early 2000s, KERS NH has always had an even lower funded status than the other plans in KRS for all years in which data is available. In fiscal year 2004, KERS Hazardous was funded at 98.4 percent; CERS Non-Hazardous at 105.1 percent; CERS Hazardous at 88.8 percent; and SPRS at 88 percent.[26] By fiscal year 2018, these four plans had also seen their funded status drop: KERS H to 55.5 percent; CERS NH to 52.7 percent; CERS H to 48.4 percent; and SPRS to 27.1 percent.[27] A large part of the reason why these plans have maintained a higher funded status than KERS NH is that their employer contributions have been more consistent, although SPRS has also experienced deep underfunding by the state.

Figure 5. **Funded Status of KRS Plans**



Unfunded Liability Has Continued to Rise

As the funded status has declined, the unfunded liability has increased dramatically. In 2011, the unfunded liability in KERS NH was $7.5 billion. By 2018, that number had nearly doubled to $13.7 billion.[28] Interestingly, the actuarial accrued liability had only increased modestly over that time period, until the plan began to change assumptions in 2014. The significant increase in the accrued liability as of 2018 is due almost entirely to the decision by the KRS board to lower its discount rate (the assumed rate of return on investments) quite drastically over four years. The discount rate for KERS NH was reduced from 7.75 percent in 2014 to 7.5 percent in 2015, to 6.75 percent in 2016, and to 5.25 percent in 2017.[29] Given the way actuarial liabilities are calculated, lowering the discount rate will always increase a plan's liability. The reason for this change is that the plan adopted a more conservative investment strategy that recognized the need to reduce volatility and prioritize solvency given the funding levels.[30] (KRS does not use a discount rate this low for its three plans that are better funded.)

One of the main drivers of the increasing unfunded liability since 2011 has been a significant drop in the value of plan assets. KERS NH has been cash flow negative in six of the seven years from 2012 through 2018, meaning that the amount of benefits paid out each year has exceeded the amount of contributions made by members and employers.[31] An extremely low funded status coupled with a negative cash flow means that even a year of good investment returns will do little to improve the funded status of the plan. Negative cash flow, in and of itself, is not necessarily a problem. A well-funded plan can recover from a market crash more quickly when investment returns rebound because the plan has more money (relative to liabilities) to invest. However, KERS NH is not in this situation. The combination of a large negative cash flow and poor funding makes this a particular problem for a plan already struggling with solvency concerns.

It would be misleading to blame the underfunding on investment returns, however. As the financial markets recovered unevenly from the financial crisis, KRS and its plans experienced strong years as well as some years that fell short of expectations. KRS achieved investment returns of 15.55 percent for the year ending on June 30, 2014, but just two years later, the plan had a negative return of -0.52 percent and actually lost money through its investments.[32] Despite these ups and downs, the system has still managed to achieve investment returns at or above its assumed rate of return over the five year period ending on June 30, 2018.[33] Since the plan's inception, it has achieved returns above its assumed rate of return. However, with relatively few assets in the plan, investment returns can only go so far.

Changing Benefits for Future Hires Did Not Address Funding Issues

When the Kentucky General Assembly was debating and passing SB 2 in the spring of 2013, it had already received the comprehensive annual financial report for KRS for the year ending June 30, 2012. That report showed that KERS NH had 100 percent of accumulated active member contributions, but only 25.4 percent of assets needed to cover the benefits owed to current retired members and beneficiaries.[34] And, there was no money for the employer share of costs for the current workforce. In short, there were large legacy costs that required funding. This is why switching future hires to a cash balance plan did little to improve the plan's solvency challenges. In fact, future hires' benefits, which garnered so much of the attention throughout the legislative process that produced the cash balance plan, would not meaningfully impact the plan's benefit payments for decades.

Like most new tiers adopted in recent years, the cash balance plan reduced the employer contribution to future hires' benefits. However, at this point, the legacy cost problem that existed in 2013 continues to be a much bigger part of the story than the cost of benefits in the new tier. As of June 30, 2018, members participating in the cash balance plan represent about one-third of active members in KERS NH, while the future benefits owed to all current workers only account for 24 percent of the plan's overall liabilities.[35]

As an alternative strategy, the state might have been better served by incentivizing those near retirement to work a few additional years and to delay benefit payments from a solvency-challenged system, instead of focusing on policies that would take decades to impact plan cash flows.

KRS reported in its 2018 Summary Annual Financial Report that its normal cost rate (the cost of currently accruing benefits) for employees in the KERS NH cash balance plan was only 2.5 percent.[36] This may represent a meaningful future cost reduction for the state, but it comes at the cost of a less secure retirement benefit for employees.

The benefit earned through the cash balance plan is less secure than the benefit through the pension plan in several ways. The accumulated account balance in the cash balance hybrid plan is based upon four factors:

- An employer pay credit worth four percent of an employee's compensation,
- An employee contribution worth five percent of that employee's compensation,
- A base interest credit that represents a four percent interest rate, and an
- "Upside Sharing Interest" that is determined by a formula based on 75 percent of the plan's five year geometric investment return.

The Upside Sharing Interest is a variable benefit that changes from year to year. The cash balance hybrid plan also provides for a fixed life annuity at retirement based upon actuarial factors, but the plan itself notes that these actuarial factors could change in the future, making the annuity far less generous.[37] Unlike the defined benefit pension plan, where benefits are determined by an established formula, participants in the cash balance hybrid plan can have little certainty what their benefit will be at retirement. Also, the benefit is likely to be far lower than what the traditional designs used to provide, particularly for people hired mid-career that have not saved a lot before joining the system.

The State has Begun Contributing Full Amount in Recent Years

The real accomplishment of SB 2 was requiring full payment of the ADEC beginning in 2015. So far, Kentucky has stuck to this commitment and has been contributing the full ADEC each year since. If this funding commitment continues, KRS should expect to see improved funding in the future. By this point, though, the plan is so severely underfunded that the newfound commitment to sound funding could not prevent the plan from struggling with solvency concerns, which has forced the plan to adopt less efficient investment strategies out of caution.

As KRS' funded status has continued to decline in the six years since SB 2 was passed, the General Assembly has tried to pass legislation to further reduce benefits for active employees, and establish yet another tier of lower benefits that would be a pure defined contribution plan. However, as this case study has explained, reducing benefits for active employees did virtually nothing to improve the funded status of KRS. Thus, it would be imprudent to double down on the same strategy again - especially since it comes at the expense of financial security for workers.

With an employer cost of only 2.5 percent of pay for workers in the KERS NH cash balance plan, further reductions in benefits could eliminate any state contribution or even require those in the cash balance plan to contribute toward paying off the state's legacy costs (if the employee's contribution eventually exceeds the value of their benefit).

Any future improvement in the funded status of KERS NH depends upon the state continuing to meet its commitment to fully fund the ADEC each year. Should the state return to its former practice of underfunding the ADEC, then the plan could face a true solvency crisis.

The recent history of the Kentucky Employees Retirement System Non-Hazardous plan offers a number of important lessons about how (and how not) to manage a pension plan. It is a stark example of how important it is to contribute the full actuarially determined employer contribution each year. If those contributions are not made, then the plan will find itself falling deeper into a hole, as accrued benefits outpace assets to cover them. It also demonstrates that plan design changes do not solve a funding shortfall when the problem was not caused by plan design. Looking forward, Kentucky policymakers face a deep challenge in the years ahead as they work to improve the funded status of KERS NH.

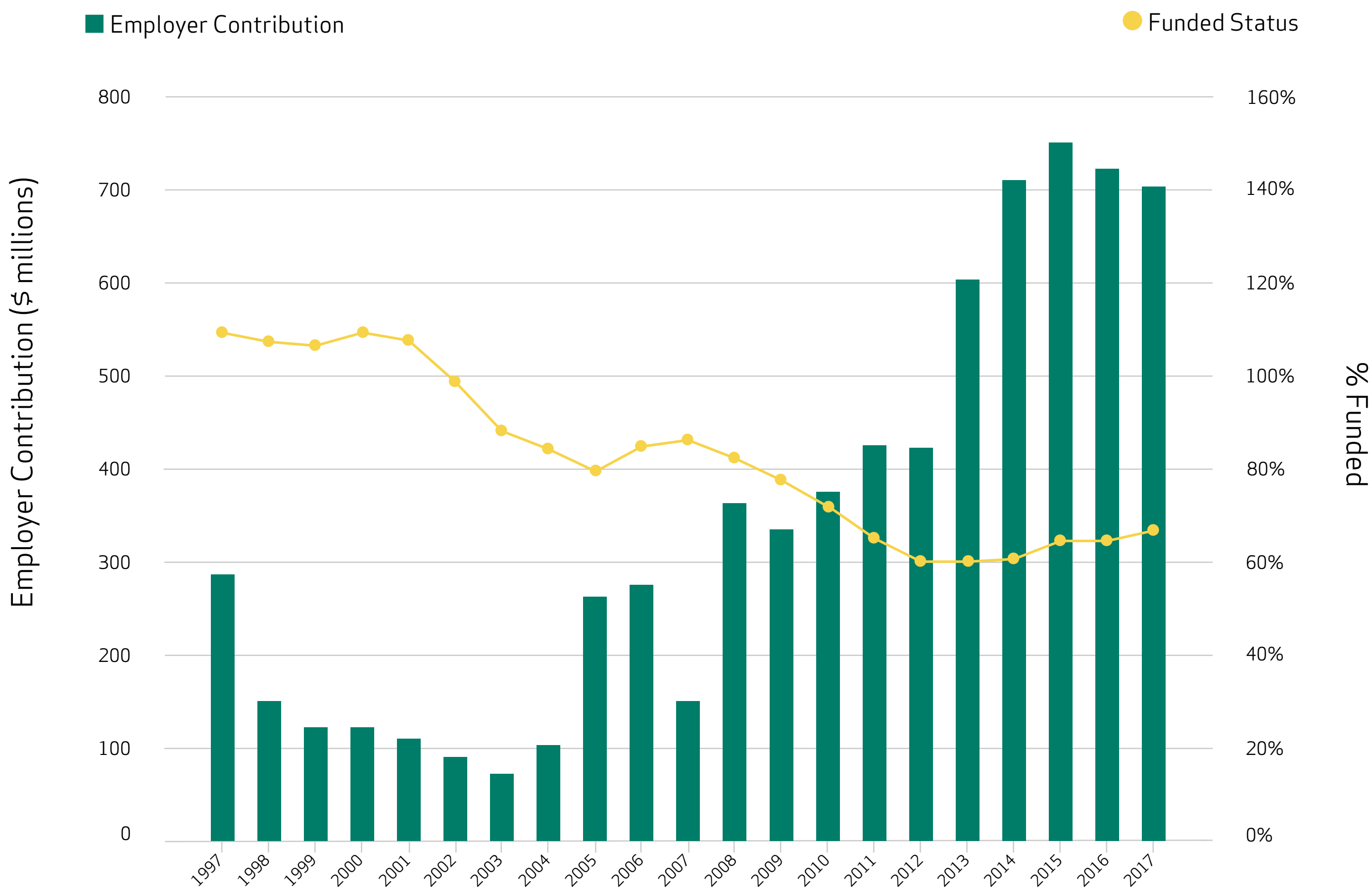
While the state has made a positive change by contributing the full ADEC in recent years, it is clear that policymakers must maintain this commitment if the plan is to achieve meaningful progress. The state cannot cut its way out of its funding problems by continuing to reduce retirement benefits for public employees.

APPENDIX ONE: AN UPDATE ON THE MICHIGAN STATE EMPLOYEES' RETIREMENT SYSTEM

The Michigan State Employees' Retirement System (SERS) pension plan has been closed for more than 22 years. All new hires since March 31, 1997 participate in a defined contribution plan rather than the SERS pension plan. However, there are still thousands of participating, active employees in the closed pension plan and tens of thousands of retirees collecting benefits from the plan. The closure of the defined benefit plan in Michigan SERS illustrates the long-term effects of closing a pension plan.

When the SERS defined benefit plan closed in 1997, the plan was actually overfunded with 109 percent of assets available to cover all liabilities ($734 million in excess assets, to be exact).[38] As of September 30, 2017, the plan was 66.5 percent funded and had an unfunded liability of $6 billion.[39] As the unfunded liability has grown, the assets available to cover the actuarial accrued liability (AAL) for retirees and beneficiaries has declined. SERS only had 82.5 percent of AAL covered by assets for retirees and beneficiaries in 2017. This is a decline from 100 percent covered as recently as 2010.[40]

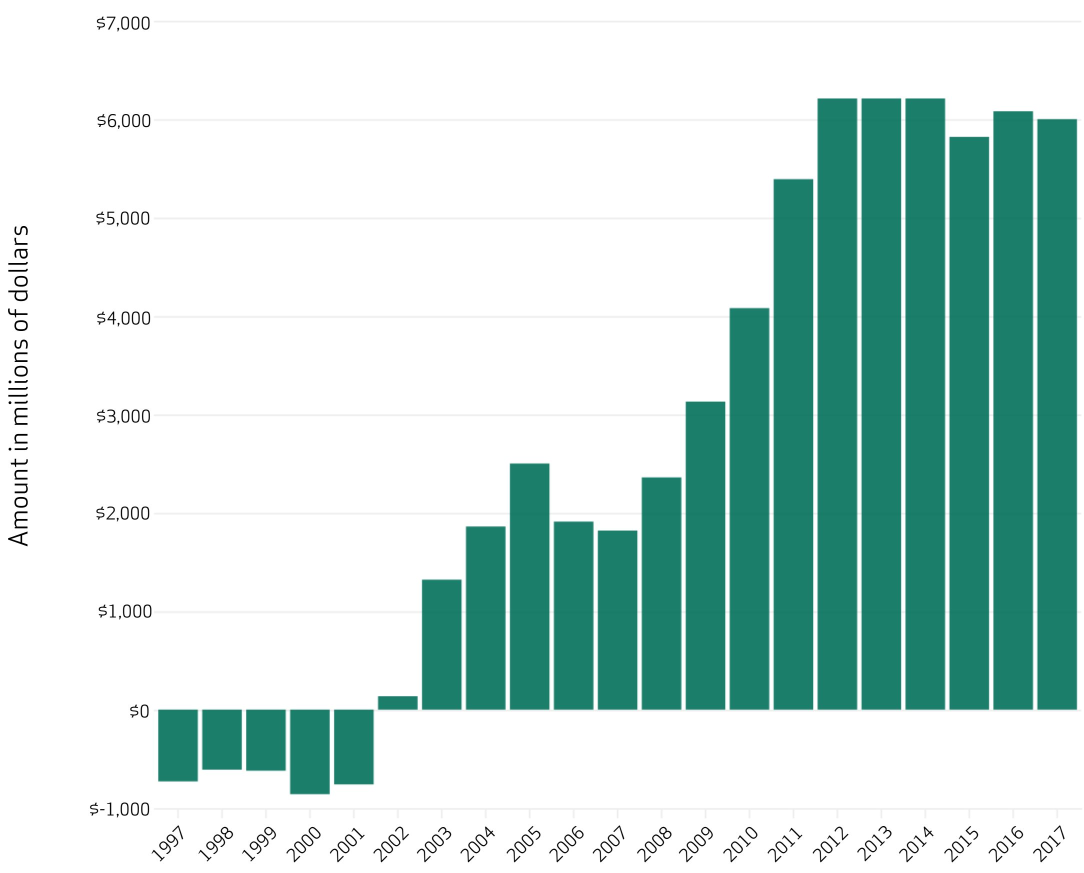
Figure 6. **Michigan SERS Employer Contributions and Funded Status**



The balance between active and retired members has shifted dramatically in the two decades since the plan has been closed. In 1997, there were 55,434 active members and 36,123 retirees and beneficiaries, or 1.5 active workers for each retiree.[41] By 2018, there were 9,473 active members compared to 60,010 retirees & beneficiaries.[42] This means there are now more than six retirees for every active worker - which can present challenges in managing a pension plan.

In 1997, the actuarially determined employer contribution (ADEC) was about $230 million.[43] By 2018, the required contribution had grown to $627 million.[44] The state of Michigan has been contributing nearly the full ADEC amount in recent years. Over the past ten years, the state has contributed 99.6 percent of the ADEC on average.[45] While this commitment to full funding should be lauded, the worsening plan demographics mean costs will remain high for the state and taxpayers. The state also contributed another $196 million to the State of Michigan Defined Contribution 401(k) and 457 plans, along with employee contributions of $227 million.[46]

Figure 7. **Michigan SERS Unfunded Liability**



There are currently 52,778 state of Michigan active employees participating in the 401(k) plan.[47] The state of Michigan does not include account balances for participants in the 401(k) plan in its annual financial report. Using data from the "State of Michigan 401(k) Plan Financial Report", NIRS calculated an average account balance of $87,433 per participant. Following the four percent rule, this balance would generate annual lifetime income of approximately $3,500 per year, or less than $300 per month. This compares to an average monthly benefit of $1,859 under the closed pension plan.

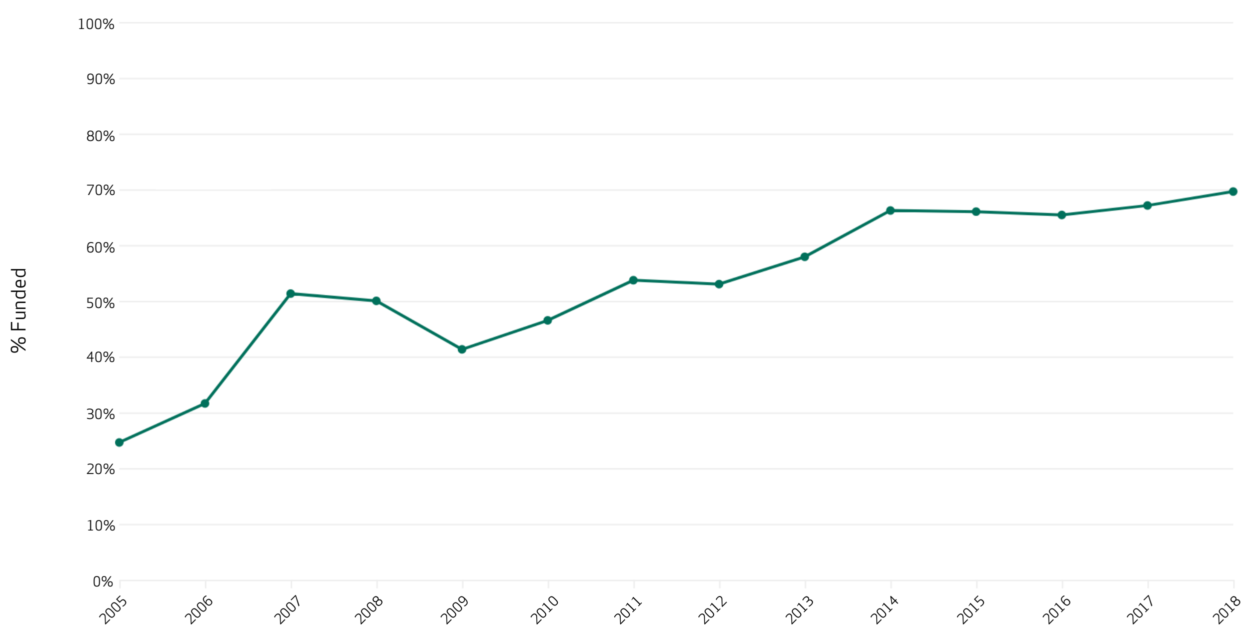
More than 20 years after closing the SERS pension plan, the state of Michigan has seen the unfunded liabilities in the plan increase. Meanwhile, the financial security of its public employees is at risk, as the defined contribution plan that replaced the SERS pension plan will provide far less income in retirement. Perhaps it is time that Michigan consider reopening the pension to active employees, as the state of West Virginia did in 2005, after 14 unsuccessful years in a defined contribution plan. Such a move would create greater financial security for Michigan's public sector workers and would likely help the SERS pension plan get back to full funding.

APPENDIX TWO: AN UPDATE ON THE WEST VIRGINIA TEACHERS' RETIREMENT SYSTEM

In 1991, West Virginia closed the Teachers' Retirement System (TRS), a defined benefit pension plan. In its place, new teachers began participating in a defined contribution plan. By the early 2000s, the state began studying the impact of this switch. The state found that if it returned to the defined benefit plan, it could provide equivalent benefits at half the cost of the defined contribution plan.[48] The state reopened the pension plan to new hires in 2005. Three years later, the state allowed teachers in the defined contribution plan to switch to the reopened pension plan; more than 78 percent did.[49]

When West Virginia reopened the pension plan in 2005, the funded status of the plan was just 25 percent.[50] The state has made steady and noticeable progress improving the funded status in the years since. After reopening the plan, the state made sizeable contributions to the plan in 2006 and 2007 in addition to its regular contributions. By 2008, the plan had already improved its funded status to 50 percent.[51] In 2018, the plan was 70 percent funded.[52]

Figure 8. **West Virginia TRS Funded Status**



West Virginia TRS offers a contrasting lesson to the states that closed their pension plans and have left them closed. Aside from a small dip during the financial crisis, West Virginia has been steadily reducing the unfunded liability in TRS each year. The unfunded liability has decreased from $4.1 billion on July 1, 2008 (just before the effects of the recession began) to $3.5 billion on July 1, 2017.[53] During this ten year period, the actuarial accrued liability has increased --because new members are joining the plan and earning benefits-- but the unfunded liability has decreased because the value of assets has increased at a faster rate than the accrued liability. The state has also contributed more than the actuarially determined employer contribution (ADEC) each year during this period.[54]

West Virginia TRS clearly demonstrates the importance of a sound funding policy. When evidence showed that the defined contribution plan was not working, the state followed the data and reopened the pension plan rather than pushing ahead with the defined contribution plan. Importantly, West Virginia committed to full funding after reopening the plan. That commitment, combined with the contributions of new members and positive investment returns, have allowed the plan to slash its unfunded liability.

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