

SECTOR IN-DEPTH

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State and local government – Mississippi

Smaller contributions raise governments' exposure to pension cash flow risks

Summary

Under recently passed legislation, the [State of Mississippi](#) (Aa2 stable) will offer less expensive, “hybrid” pension benefits to employees hired in March 2026 and later. This will prospectively lower liability accruals for the state and other governments that participate in the Public Employees' Retirement System of Mississippi (MS PERS). However, the state will also continue to override a [previous schedule of contribution increases](#) sought by MS PERS in order to produce near-term budget relief. This means annual funding of the system will continue to fall well short of actuarial targets, and unfunded liabilities will grow. Mississippi faces a challenging non-investment cash flow (NICF) position relative to its pension assets. As such, any adverse experience – such as investment losses – stands to put MS PERS on a trajectory of asset erosion unless offset by higher government contributions.

- » **The new hybrid retirement benefit tier will produce long-term risk-adjusted savings to the state and its local governments.** The state's move to combine a defined contribution benefit with a less generous defined benefit offering for newly hired employees means that it will guarantee materially less in pension benefits over time. Given the prospective nature of the state's change to benefits and its applicability solely to future employees, however, it will take decades for meaningful savings, and thus meaningful credit benefit, to materialize. Benefit outflows from MS PERS would reach about \$7 billion annually by the early 2060s without the new benefit tier in place, but will now peak at less than \$6 billion by around the mid 2050s.
- » **Mississippi's pullback on contribution increases will materially slow pension asset accumulation.** Under the state's schedule, and assuming a scenario with 7% annual investment returns, we project that MS PERS will reach about \$38 billion in assets 10 years from now, with asset/benefit coverage of around 7.5 years. By contrast, we project the contribution schedule previously set by MS PERS would show greater assets of around \$46 billion in 10 years and asset/benefit coverage of around 9 years.
- » **Investment volatility stands to raise Mississippi governments' pension cash flow risks.** If MS PERS suffers a near-term investment loss and the state and other participating governments do not materially increase contributions, the system will gradually move toward asset depletion. We project, for example, that MS PERS asset/benefit coverage would fall to less than 5 years in the 2030s in a scenario with one immediate 10% investment loss — even if it hits its 7% investment return target in all subsequent years.

The new hybrid retirement benefit tier will produce long-term risk-adjusted savings to the state and its local governments

As part of the same legislation that puts Mississippi on a path to reduce and eventually eliminate its state income tax, the state put in place a new set of pension benefits – called “Tier 5” – that will apply to the vast majority of state and local government employees hired on or after March 1, 2026. By lowering the magnitude of pension benefits that will be guaranteed to new hires, Tier 5 will provide material risk-adjusted savings to the state and other participating governments over time. Given the applicability of Tier 5 to future employees only, however, the credit benefit stemming from lower pension liability accruals on a prospective basis will take years to materialize.

Mississippi governments' exposure to pension risks is almost entirely concentrated in MS PERS. The bulk of the state's pension liabilities are attributable to its share of the system, similar to other local governments throughout the state such as cities, counties and K-12 school districts.

The retirement benefits offered under Tier 5 will shift from traditional pension benefits – a purely “defined benefit” structure – to a hybrid structure with a less generous defined benefit component plus a new defined contribution component. Like other employees, those in Tier 5 will contribute 9% of payroll (i.e., salaries) toward their retirement benefits. But under the Tier 5 hybrid structure, only 4% will go toward the defined benefit component of their retirement benefit, while 5% will go toward funding their defined contribution account.

Illustrating the savings offered by Tier 5 to the state and other governments that participate in MS PERS, the hybrid plan carries an estimated total normal cost amounting to 5.37% of payroll, compared to a systemwide total for MS PERS of 11.57%, as of its June 30, 2024 actuarial valuation. Normal cost – also referred to as “service cost” for accounting purposes – is the present value of defined benefit pension accruals in a given year. Normal cost will be lower for Tier 5 employees due to a comparatively less generous benefit multiplier, a longer “final average salary” formula and the lack of a guaranteed cost-of-living-adjustment (COLA) to their pensions in retirement (see Exhibit 1).

While the normal cost savings will be significant, the implementation of Tier 5 will not have a significant effect on MS PERS funding position or benefit outflows for many years due to its entirely prospective nature. The vast majority of MS PERS' actuarial accrued liability will remain comprised of benefits payable to current retirees and active employees for decades. Similarly, the vast majority of MS PERS benefit outflows will be associated with current retirees and active employees for many years. Based on projections from MS PERS' actuarial consultants, benefit outflows will not begin to meaningfully deviate from their prior trajectory as a result of Tier 5 until around the late 2040s (see Exhibit 2).

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Exhibit 1

Mississippi's Tier 5 hybrid will deliver risk-adjusted savings to the state and its local governments...
All values expressed as % of payroll

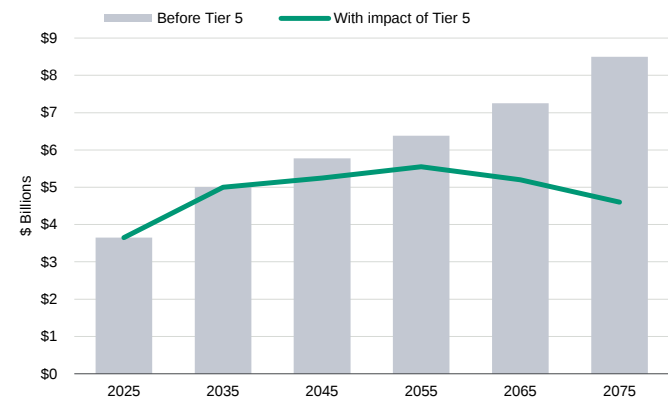
Defined benefit (DB) portion	Entire PERS System - 2024 valuation	PERS Tier 5
Total normal cost (7% discount rate)	11.57%	5.37%
Employee contribution	9.00%	4.00%
Employer normal cost	2.57%	1.37%
Statutory employer contribution target	19.90%	19.90%
Portion of employer contribution toward MS PERS unfunded liability	17.33%	18.53%
Combined employer and employee contributions to DB system	28.90%	23.90%
Defined contribution (DC) portion		
Employee contribution	0.00%	5.00%
Employer contribution	0.00%	0.00%

Note: Total normal cost in 2024 valuation column includes 0.26% for administrative expenses.

Sources: MS PERS and Moody's Ratings

Exhibit 2

...but will take years to meaningfully lower benefit outflows
Projected defined benefit payments from MS PERS



Tier 5 impact estimated by Moody's Ratings based on MS PERS projection presentation
Sources: MS PERS and Moody's Ratings

Mississippi's pullback on contribution increases will materially hamper pension asset accumulation

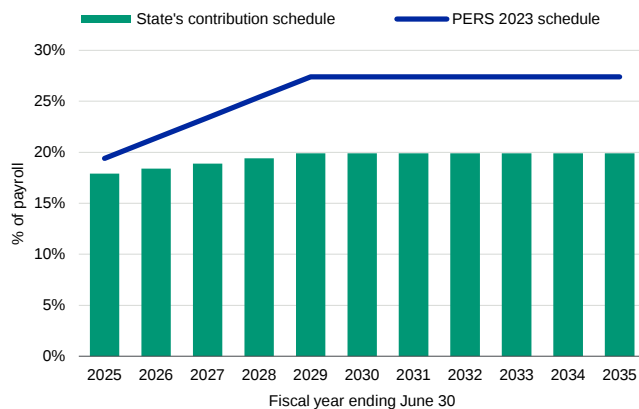
Despite the long-term reduction in liability accruals that Mississippi's new Tier 5 will produce, the state's planned pattern of pension contributions will nevertheless lead to slower asset accumulation relative to both the schedule set by MS PERS in late 2023, and also the system's more recent recommendation, which calls for the state and other participating governments to contribute the actuarially determined contribution (ADC). As currently scheduled, contributions to MS PERS by the state and other participating governments will continue to result in rising unfunded liabilities and a weakening of the retirement system's cash flow.

The state's current schedule calls for participating governments to gradually increase contributions up to 19.9% of payroll, from the 17.9% of payroll in effect for this fiscal year. The schedule previously set by MS PERS, which the state has declined to implement, called for contribution rates to rise by 2% of payroll per year until reaching the actuarially determined contribution (ADC). Under that MS PERS schedule, we project the state's contributions would reach the ADC in fiscal year 2030, and that the system's unfunded liability would be around \$24 billion at the end of fiscal year 2035, down slightly from about \$27 billion as of June 30, 2024. In contrast, the state's current contribution schedule is not intended to reach the ADC, and we project MS PERS' unfunded liability at more than \$32 billion by end of 2035, again assuming 7% annual investment returns (see Exhibit 4). MS PERS subsequently updated its recommendation, and now calls for contributions that equal the ADC.

Exhibit 3

The state's current contribution schedule falls below the schedule set by MS PERS in 2023...

Government contribution rates to MS PERS as % of payroll



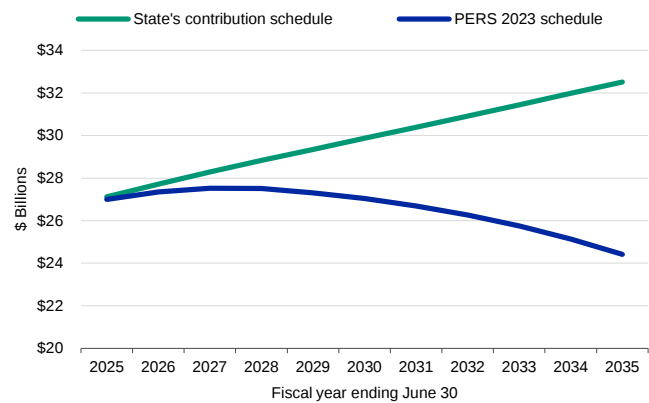
Compared to the 2023 recommendation, MS PERS now recommends that contributions equal the ADC.

Sources: MS PERS and Moody's Ratings

Exhibit 4

...and will increase unfunded liabilities for years

Projected MS PERS unfunded liability



Unfunded liability illustrated assumes 7% investment returns each year, and reflects the market value (as opposed to actuarial value) of assets. Compared to the 2023 recommendation, MS PERS now recommends that contributions equal the ADC.

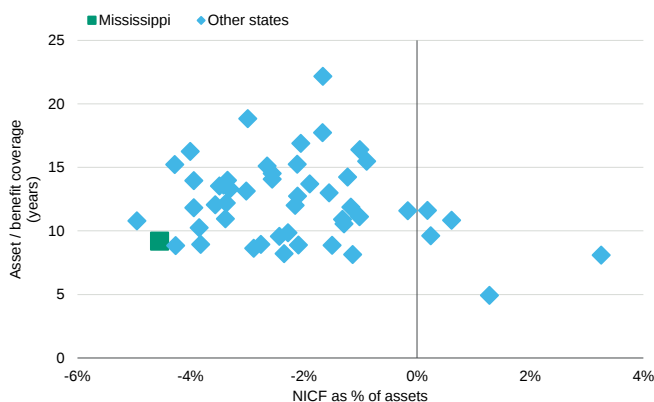
Sources: MS PERS and Moody's Ratings

Of the 50 states, Mississippi faces one of the most challenging combinations of pension asset/benefit coverage and non-investment cash flow (NICF)¹, meaning MS PERS' prospective asset accumulation is a pension risk driver for the state and other participating governments (see Exhibit 5).

If the state keeps its current contribution schedule and assuming that MS PERS meets its 7% investment return target each year, we project that MS PERS' asset/benefit coverage will drop to 7.5 years in 2035, compared to 9.2 years today, and that the retirement system's NICF will be -6.9% of assets by 2035, compared to -4.7% in 2025 (see Exhibit 6).

Exhibit 5

Mississippi has one of the riskiest combinations of asset/benefit coverage and NICF relative to assets...



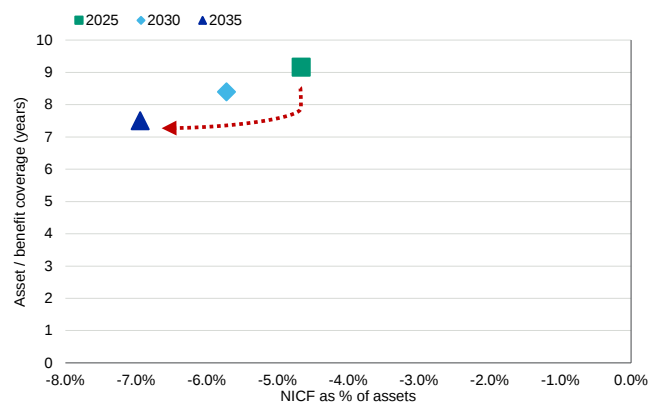
Data as of the most recent state audited financial reports in our database

Source: Moody's Ratings

Exhibit 6

...which we project will continue to worsen under the state's contribution schedule

Moody's Ratings projection of MS PERS' asset/benefit coverage and NICF as % of assets



Assumes 7% annual investment returns. Years refer to fiscal years ending June 30.

Source: Moody's Ratings

Investment volatility stands to raise Mississippi governments' pension cash flow risks

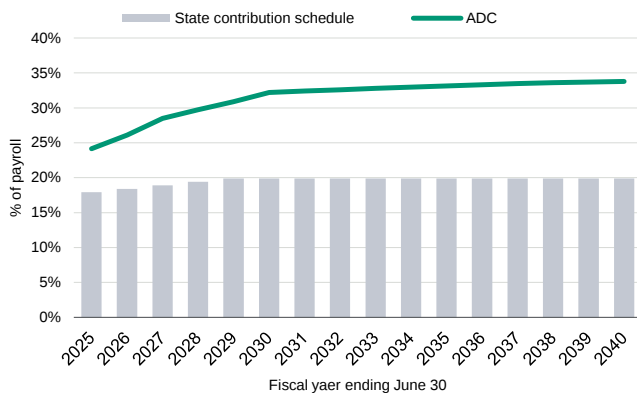
The susceptibility of MS PERS' asset base to investment return volatility points to a high likelihood that the state and other participating governments will need to contribute significantly more to MS PERS in coming years, either proactively with a more front-

loaded funding schedule or reactively due to pension asset erosion. So long as MS PERS's non-investment cash flow (NICF) relative to its asset base continues to be materially negative, any investment losses stand to put the retirement system on a trajectory of sharply falling asset/benefit coverage without an offsetting increase in government contributions.

As an illustrative example, we project that MS PERS' asset/benefit coverage would fall to less than five years in the 2030s in a scenario with just one immediate 10% investment loss and where the state's current contribution schedule continues – even if MS PERS hits its 7% investment return target in all subsequent years. By comparison, if the state were to contribute at the ADC, it would prevent MS PERS from continuing on a path of material asset erosion in the same scenario (see Exhibits 7 and 8).

Exhibit 7

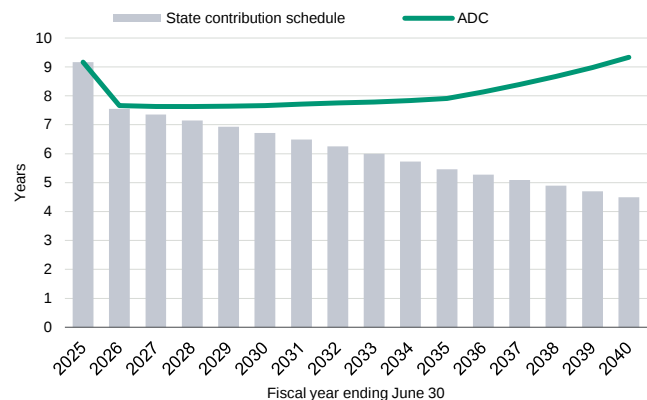
Mississippi's current pension contribution schedule is far less expensive for state and local government budgets than actuarial funding...



Scenario reflects -10% investment loss in 2025 followed by 7% returns in all other years
Sources: MS PERS and Moody's Ratings

Exhibit 8

...but will put MS PERS on a path of substantial asset erosion in the event of an investment loss
Projected asset/benefit coverage of MS PERS



Scenario reflects -10% investment loss in 2025 followed by 7% returns in all other years
Sources: MS PERS and Moody's Ratings

Endnotes

- 1 Asset/benefit coverage is a simplistic solvency measure for pension systems, representing the number of years of benefit payments that pension assets could cover, assuming no growth in annual outflows or further income from contributions and investment returns. The more negative NICF is relative to assets, the more that pension asset accumulation is hampered by investment return volatility.

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