S&P Global
Ratings

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Indiana
Indiana Bond Bank; Appropriations; General Obligation; Moral Obligation

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Credit Profile		
US$10.9 mil spl prog rfdg bnds (Indiana) ser 2019 A-1 due 02/01/2030		
Long Term Rating	AA/Stable	New
US$0.16 mil taxable spl prog rfdg bnds (Indiana) ser 2019 A-2 due 02/01/2024		
Long Term Rating	AA/Stable	New
Indiana ICR		
Long Term Rating	AAA/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA' rating to the Indiana Bond Bank (IBB) series 2019A-1 special program refunding bonds and series 2019A-2 special program refunding bonds (taxable). At the same, we affirmed our 'AAA' issuer credit rating (ICR) on Indiana, our 'AA+' rating on the state's appropriation debt, our 'AA' rating on the Indiana Bond Bank's (IBB) moral obligation debt, and our 'A-1+' short-term rating on the state's 2008A lease revenue bonds (stadium project) based on Indiana's self-liquidity. The outlook on all long-term ratings is stable.

The ICR reflects our opinion of the state's:

- Sustained economic growth across sectors, albeit at a modestly slower pace than the nation as a whole;
- Maintenance of strong budgetary reserves, which have grown in each of the last two fiscal years;
- Active budget management, with practices that have been consistently applied to maintain sound reserve levels, including the administration's willingness to use its power to align appropriations with conservative revenue estimates and implement a lower cost structure; and
- Low overall debt levels, but with significant contingent liabilities tied to infrastructure investment projects that could result in higher debt levels if toll revenues fall short of expectations

Bond proceeds will be used to refund outstanding IBB bonds for debt service savings. The bonds are rated two notches lower than the general creditworthiness of the state, reflecting our assessment of the state's moral obligation. In our view, the obligation maintains a moderate relationship between the state, through IBB, and the projects that were originally financed as they were used for local infrastructure development projects. We view the intended payment sources as weak, as revenue from entities is locally derived with the state's only intent being to satisfy reserve fund deficiencies through the appropriation process. In our opinion, there is no unusual political, timing, or administrative risk related to the debt payment.

We rate Indiana's appropriation debt one notch lower than the state's general creditworthiness to reflect the appropriation risk associated with the annual payment. In our view, these obligations provide funding for projects we believe are significantly important to the state. The state also has an established track record of appropriating for resources necessary to satisfy debt service. In our opinion, there is no unusual political, timing, or administrative risk related to the debt payment.

Overview

Following in step with the national economic expansion, Indiana's economy continued to grow at a healthy, albeit moderate pace, and is estimated to grow 1.7% (real gross state product [GSP]) by year's end, trailing the expected national level of 2.3%, according to IHS Markit. While manufacturing remains a staple of the state's employment base, accounting for roughly 17% of the state's employment, payroll growth has fallen following a relatively strong manufacturing sector for much of 2017 and 2018. Relative to year ago, the sector contracted a modest 0.1% in July (latest available information). Of note, IHS estimates manufacturing employment will contract 1.2%, 1.8%, and 1.1% in 2020, 2021, and 2022, respectively. As noted by S&P Global Ratings economists, the sectors' sluggishness has in part reflected weaker foreign demand growth and trade uncertainties (see "U.S. Biweekly Economic Roundup: Summer Swing," published Sept. 6, 2019, on Ratings Direct). Also showing a degree of weakness are the information, government, and financial activities sectors, which saw employment contractions of 5.1%, 1.3%, and 1.1%, respectively, year over year. However, the construction sector continues to realize strong gains which grew 5.3% relative to a year ago, followed by equally impressive employment gains of 4.3% in the educational and health services sector and 2% in professional and business services. Current softness in manufacturing notwithstanding, the state has nevertheless been responsive to changing economic trends, in our view, evidenced by continued growth in professional and business services, transportation and utilities, and education and health services. Overall, reflecting a maturing economic cycle, employment gains are estimated to remain relatively flat in 2019 (1.1% growth), followed by 0.8% in 2020 and 0.6% in 2021. The state's GSP is anticipated to slightly lag that of U.S. growth at 1.7% in 2020 and 1.7% in 2021. In our opinion, Indiana's relatively low cost of living and business-friendly legislation and regulatory practices continue to make the state an attractive target for firms looking to expand and relocate their operations. Furthermore, the state capital Indianapolis offers a highly diverse economy with several sectors that should see healthy growth in the near term.

Budget update

On April. 17, 2019, the Revenue Forecast Technical Committee presented its general fund revenue forecast for fiscal years 2020 and 2021. The committee now estimates general fund revenues for fiscal 2020 will total $16.55 billion, or 2.6% more than fiscal 2019 (estimated year-end, at that point). Total general fund revenue is projected to grow 2.5% in 2021 to $16.97 billion. The state's principal revenue streams--sales and individual income taxes--are estimated to end fiscal 2020 up 2.7% and 3.6% compared to fiscal 2019, respectively. Corporate income taxes (CIT), which have fluctuated by wide margins in the last two fiscal years, are estimated to contract 2.3% in 2020 to $850.9 million and further slide 1.9% in 2021 to $834.3 million. Total general fund revenue for fiscal 2019 was up 5.4% relative to fiscal 2018, with sales and use taxes up 3.3% to $7.9 billion and individual income taxes up 4.1% to $6.1 billion. The state's general fund surplus statement reflects a $410.5 million operating surplus (unaudited). Including other expenditures and transfers and reversions, the state's general fund balance totaled $834.5 million, up from $366.4 million. The state's combined reserve balances totaled $2.27 billion or nearly 14% of total appropriations for the year.

The state's enacted 2020-2021 biennial general fund budget totaled $34.59 billion, composed of $17.1 billion and $17.49 billion in fiscal years 2020 and 2021, respectively. Appropriations for public education and health and human services account for a little over 86% of total general fund appropriations. The structurally balanced budget fully funds pension obligations and Medicaid growth. In our view, Indiana's commitment to maintaining structural balance while also addressing its long-term liabilities is a positive factor.

On a generally accepted accounting principles (GAAP) basis, Indiana's assigned and unassigned available general fund balance at fiscal year-end June 30, 2018, was approximately $3.3 billion, or approximately 21.5% of general fund expenditures and net transfers, up $36.64 million from the year before. In our view, Indiana's financial management practices are considered good under S&P Global Ratings' Financial Management Assessment (FMA). An FMA of good indicates that practices exist in most areas, although not all might be formalized or regularly monitored by governance officials.

The state constitution does not allow new debt except to meet casual deficits in revenue, pay interest on state debt, or provide funds for public defense. Therefore, Indiana has no general obligation (GO) or tax-supported revenue debt, but does have appropriation-backed debt. Its debt levels are low at roughly $280 per capita and 0.6% and 0.5% of personal income and GSP, respectively. Appropriation-backed debt service accounted for roughly 1.4% of the state's governmental fund expenditures (less federally funded expenditures) in the last three fiscal years (audited), which we consider low. Amortization is rapid, with more than 65% retired over 10 years. Tax-supported debt outstanding totals roughly $1.87 billion, which accounts for self-supported debt of approximately $900 million (IFA stadium and convention center). We currently do not include bond bank debt that is secured by the state's moral obligation pledge. Additionally, while Indiana has appropriated for the university fee replacement debt in the past, there is no appropriation pledge supporting the bonds and it is not obligated to appropriate for it in the future. Therefore, we do not include the university fee replacement debt in Indiana's debt calculation. Our calculated total includes the net present value of final acceptance payments of approximately $513 million related to the state's East End Crossing P3 project.

Indiana's unfunded pension liability represents its proportionate share in several pension plans, of which the Teachers Retirement Fund (TRF Pre-1996) and the Public Employees Retirement Fund (PERF) are the largest. The Indiana State Teachers' Retirement Fund consists of the closed pre-1996 account and the new 1996 account. In 1996, Indiana closed the plan and moved new hires to actuarially sound plans. The new plan, which is the responsibility of school districts, includes transferred teachers from the state plan. The state funds the closed pre-1996 account on a pay-as-you-go basis and the fund was approximately 25.4% funded as of June 30, 2018, as expressed by the fiduciary net position as a percentage of the total pension liability. The total pension liability was $14.58 billion with a total fiduciary net position of $3.7 billion, leaving a net pension liability of $10.87 billion. The PERF's pension funded ratio was 78.9% with a net pension liability of approximately $3.4 billion, of which state's proportionate share was approximately $850 million. As part of its plan to address the significant unfunded liability, Indiana also adopted a 30-year amortization schedule and established a pension stabilization fund, which should limit the annual growth rate of general appropriations for the TRF to less-than-historical general revenue growth rates. The pension stabilization fund is a dedicated fund in the TRF, designed to accumulate a balance during a 12-year period. The fund is allowed to smooth out yearly general fund contribution growth to less than 3%; the original statute allowed use of the fund to start in

2007.

The overall average pension funded ratio over the previous three years was 57%, which we view as relatively low and far removed from what we consider good levels (80%). In our opinion, while our calculated pension funding ratio is relatively low, our holistic assessment captures the relative weight and risk associated with the state's pre-1996 plan. Given it is structured as a pay-as-you-go plan, as resources from the pensions stabilization fund are exhausted, appropriations will fund actuarially determined contributions (ADCs) in their entirety around fiscal 2025. To the extent that we believe the state will continue to support all its plans, the relative risk within the short-to-medium term is manageable, in our view. Our assessment also captures the relatively well-funded status of the state's other plans, which in aggregate are weighed down by the pre-1996 plan. The state has been contributing 100% of its ADCs to its systems and statutory (pay-as-you-go) requirement for the TRF Pre-1996 plan. The five-year average rate of return for PERF is 6.1%, which is below the assumed rate of return 6.75%, although not significantly so. On the whole, management factors and actuarial inputs do not significantly encumber or improve our view of the state's overall pension funding discipline.

In terms of other postemployment benefits (OPEBs), the unfunded actuarial accrued liability (UAAL) as of valuation date June 30, 2017, was a manageable $367 million, or roughly $55 per capita. The state is currently funding the OPEB liability on a pay-as-you-go basis.

Indiana's bonds are eligible to be rated above the sovereign because we believe the state can maintain better credit characteristics than the U.S. in a stress scenario. Under our criteria "Ratings Above The Sovereign: Corporate And Government Ratings—Methodology And Assumptions" (published Nov. 19, 2013), U.S. states are considered to have moderate sensitivity to country risk. State-derived revenues are the sole source of security on the bonds, and the institutional framework in the U.S. is predictable with significant state autonomy and flexibility.

Based on the analytic factors we evaluate for states, on a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a composite score of '1.6' to Indiana, which equates to an indicative rating score of 'AA+'; however, we have applied our one-notch up flexibility as per our state methodology criteria. The 'AAA' ICR on Indiana reflects our view of the state's proven commitment to and significant focus on strengthening the budget through extensive use of management controls that have led to maintenance of structural balance, growth in reserves, and continued funding of long-term liabilities.

Outlook

The stable outlook reflects our view of Indiana's strong financial position and management's commitment to maintaining structural balance and a high level of reserves. In addition, we expect the state to make adjustments as necessary to restore budgetary balance if revenues do not come in as forecast. We believe Indiana has demonstrated a strong commitment to strengthening budget and management controls and overall financial management, and base the stable outlook on our expectation that these practices will continue. Downside risks to the rating include the significant economic reliance on manufacturing and exports. If global economic conditions weakened and led to an appreciation of the dollar or if the manufacturing sector were to sharply decline within the medium term, it could weaken the state's economy, which could, in turn, weaken its credit profile if not actively managed. Additionally, while we believe the state's pension liabilities remain manageable within the short-to-medium term, its liability associated with its pay-as-you-go plan (Pre-1996) could add budgetary pressure as resources in its pension stabilization fund are exhausted and appropriations fund annual contributions in their entirety.

Government Framework

Neither Indiana's constitution nor statutes require the state to initially approve or maintain a balanced budget throughout the year. On Nov. 6, 2018, the state's electorate supported a constitutional amendment requiring a balanced biennial budget. A suspension of the requirement would follow only by a supermajority (two-thirds) approval of both legislative chambers, respectively. In our view, the adoption of the balanced budget requirement strengthened Indiana's government framework. We continue to view the state's proactive mechanisms in place that provide it with the flexibility to adjust both revenues and expenditures if it believes it necessary, as a credit strength. For example, only a simple majority of the legislature is required to raise taxes, and there is no constitutional constraint on the amount of the increase. In addition, state statute provides that the state budget director, with the approval of the governor, can withhold allotments of appropriations to agencies if revenues are less than anticipated to prevent revenue and appropriation misalignments. Indiana has historically used its allotment authority to avoid deficits when revenues are falling short of targets. The statute provides a limited level of assistance to local governments, but fully funds local school general operations as a result of the property tax reform passed in 2008. In fiscal 2010, the administration used its allotment power and withheld funds from schools. Indiana also used its allotment power in 2013, 2014, and 2015. It is not a voter-initiative state, providing further flexibility.

Indiana's constitution does not allow new debt except to meet casual deficits in revenue, pay interest on state debt, or provide funds for public defense. As a result, the state has no GO or tax-supported revenue debt, but does have appropriation-backed debt. There is no limit on the amount of appropriation debt that it can issue, but the legislature must first authorize the debt amount. This requirement for legislative approval does not apply to availability payment agreements, which are approved under the state's Public-Private Partnership Agreement (Indiana Code 8-15.5) and only require approval from the budget committee, which, while including legislators, is not the full legislature, and the governor. In 2014, Indiana adopted a debt policy that limits total appropriation debt, including availability payments, to 15% of the previous year's revenues. As of the release of the fiscal 2018 comprehensive annual financial report (CAFR), this limitation would be approximately $5.1 billion based on fiscal 2018's total governmental revenue of $33.88 billion. Given that the state's debt is appropriation-backed debt, there is no legal priority for debt payments.

We have assigned a score of '1.1' out of '4.0' to Indiana's government framework, where a '1.0' is the strongest score and '4.0' the weakest.

Financial Management

Financial management assessment: Good

S&P Global Ratings considers Indiana's financial management practices good under its FMA. An FMA of good indicates that practices exist in most areas, although not all might be formalized or regularly monitored by governance officials.

Key aspects of the state's management techniques include the following:

- In terms of revenue assumptions and forecasts, the state convenes every December, with the Revenue Forecast Technical Committee consisting of members from the executive branch, House, and Senate, along with economists, to prepare the upcoming revenue forecast. The same group updates the revenue forecast in April of odd-numbered years and compares the budget to the April forecast. The forecast is presented every December and April of odd-numbered years to the state budget committee.
- The state has a biennium budget process. Its practice is not to amend the budget. If there is a recession, the budget director has the power to forego allotting appropriations.
- Indiana has a four-year revenue and expenditure forecast performed internally, but does not provide a formal long-term revenue forecast to the legislature.
- In terms of long-term capital planning, the state universities make 10-year plans, as does the Indiana Finance Authority (IFA) for lease transactions, but, like most states, Indiana does not yet have a formal capital improvement plan.
- The state has its own investment policy.
- Indiana's debt management policies are comprehensive and include a well-defined swap management policy. The state recently adopted a debt policy that limits appropriation debt, including to 15% of prior-year total revenues from its statement of governmental activities in the CAFR.
- In terms of liquidity and reserves, the state has an informal goal of maintaining 10%-12% of annual operating revenues in the general fund.

Budget management framework

Once the budget is approved, the state monitors revenue and expenditure performance monthly. With the approval of the governor, the state budget director can withhold allotments of appropriations to agencies if revenues are less than anticipated to prevent a deficit. Budget adjustments have historically been implemented regularly and on a timely basis.

We have assigned a score of '1.5' to Indiana's financial management, where '1.0' is the strongest score and '4.0' the weakest.

Economy

In our view, Indiana's economy has continued to benefit from overall positive economic conditions across the country, but is showing signs of a slowdown. Following payroll growth of 1.1% year over year in 2017, 2018 saw relatively flat 1% growth and is expected to be roughly the same by year's end, according to IHS. Employment composition has remained stable with limited aggregate changes in 2018 (the latest completed calendar year) over 2017. Trade, transportation, and utilities accounted for roughly 19% of jobs, followed by manufacturing (17%), education and health services (15%), government (13.6%), and leisure and hospitality (9.6%). The manufacturing sector remains based on the automotive industry, which accounts for nearly one-quarter of manufacturing jobs, followed by fabricated metals

(11.3%), primary metals (8.5), and machinery (8.2%). The state's economy is more concentrated in the manufacturing sector than the U.S. as a whole, but depends less on manufacturing than it has in the past. Specifically, manufacturing concentration is slightly down, to 17% in 2018 from 19% in 2006; however, it remains almost twice the national average of 8.5%. As noted, automotive manufacturing continues to have a significant presence, and the role of foreign-owned automakers, in addition to American companies, adds a degree of stability to the economy. Besides the auto industry, pharmaceutical and durable household goods companies are also major employers.

To the extent recent national trade disputes, particularly with China and North American trading partners, seep into local supply changes, we would anticipate Indiana will see a pronounced effect relative to other states. While a framework for the U.S.-Mexico-Canada agreement is in place, it has yet to be ratified. Continuing trade tensions and tit-for-tat retaliatory tariffs between the U.S. and its major trading partners remain a key credit risk for Indiana as investment could stall and weaken its manufacturing base.

While key economic and demographic indicators have improved in the last five years, they continue to lag national averages. Population growth in the past decade was 0.41% (compound annual growth), compared with 0.73% for the U.S. In addition, Indiana's age dependency ratio is 63.8%, compared with 61.7% for the nation. In our view, weak population growth could somewhat limit employment growth in the long term. Indiana's GSP is below the U.S. average, but has continued to improve and was 87% of U.S. GDP in 2018. After trailing the U.S. level for years, state unemployment at 3.4% in 2018 was half a percentage point below the U.S. average. According to IHS, the unemployment decline reflects a growing labor force and employment, an important distinction that we view as positive. The state's unemployment rate has remained relatively state and stood at 3.4% in July according to the Bureau of Labor Statistics.

Indiana's relatively low cost of living and business-friendly legislation and regulatory practices continue to make it an attractive target for firms looking to expand and relocate their operations. Indiana Economic Development Corp. (IEDC) still leads the state's job creation efforts by trying to attract increased investment in several key areas, including advanced manufacturing, agriculture, life sciences, and defense and national security. IEDC recently announced that efforts in 2018 resulted in 320 commitments from national and international firms, which will result in approximately $7.3 billion in investments and more than 30,000 jobs. The state offers a series of tax credits and exemptions as a way to spur expansion and encourage companies to relocate there. Tax credits are available for alternative fuel vehicle manufacturers, headquarters relocation, research and development (R&D), and business investment, among others. Indiana also offers an R&D and patent income exemption. In addition, it continues to phase in its corporate income tax rate reduction to attract businesses. The current tax rate (fiscal 2020) of 5.5% will drop to 4.9% after June 30, 2021.

We have assigned a score of '2.4' to Indiana's economy, where '1.0' is the strongest score and '4.0' is the weakest.

Budgetary Performance

The state bases its biennium budgets on revenue projections created by the Revenue Forecast Technical Committee with economic variables provided by IHS. The revenue forecasts are performed once in December of even-numbered or nonbudget years and twice in odd-numbered years in April and December.

Indiana focused primarily on the expenditure side during the most recent recession and did not raise taxes to compensate for lower revenues. The combined budgetary balance of $2.27 billion includes reserves for fiscal 2019 of $834.5 million in the general fund, $577.6 million in the Medicaid reserve fund, $333.8 million in the tuition reserve fund, and $519.1 million in the rainy day fund.

The state has a statutory reserve cap of 12.5% of revenues as a percentage of the following year's appropriation. Any amounts in excess of that cap are equally divided among payments to pension funds and to an automatic taxpayer refund, except in 2016, where any balance in excess of 11.5% at the end of fiscal 2016 was used to fund transportation improvements. The reserves must exceed the cap by $50 million to trigger the transfer, which only occurs in budget years.

Indiana has maintained sufficient liquidity to avoid cash-flow borrowing. It does not have a history of issuing short-term debt for cash-flow purposes.

Audited fiscal 2018 results

On a GAAP basis, Indiana's assigned and unassigned available general fund balance at fiscal year-end June 30, 2018, was approximately $3.3 billion, or approximately 21.5% of general fund expenditures and net transfers, up $36.64 million from the year before. The state had approximately $6.5 billion in unrestricted total governmental cash and cash equivalents, of which $1.95 billion was in the general fund.

We have assigned a score of '1.3' to the state's budgetary performance, where '1' is the strongest and '4' is the weakest.

Debt And Liability Profile

The state constitution does not allow new debt except to meet casual deficits in revenue, pay interest on state debt, or provide funds for public defense. Therefore, Indiana has no GO or tax-supported revenue debt, but does have appropriation-backed debt. Indiana's debt levels are low at roughly $280 per capita and 0.6% and 0.5% of personal income and GSP, respectively. Appropriation-backed debt service accounted for roughly 1.4% of the state's governmental fund expenditures (less federally funded expenditures) in the last three fiscal years (audited), which we consider low. Amortization is rapid, with more than 65% retired over 10 years. Tax-supported debt outstanding totals roughly $1.87 billion, which accounts for self-supported debt of approximately $900 million (IFA stadium and convention center). We currently do not include bond bank debt that is secured by the state's moral obligation pledge. Additionally, while Indiana has appropriated for the university fee replacement debt in the past, there is no appropriation pledge supporting the bonds and it is not obligated to appropriate for it in the future. Therefore, we do not include the university fee replacement debt in Indiana's debt calculation. Our calculated total includes the net present value of final acceptance payments of approximately $513 million related to the state's East End Crossing P3 project.

The Indiana Department of Transportation's (INDOT) ability to make milestone and use payments under its agreements with IFA is subject to appropriations by the state's legislature. IFA agrees to seek appropriations if INDOT fails to do so. The availability payments are initially payable to IFA from Indiana's portion of toll revenues received by INDOT and generated by the Ohio River Bridge Crossings Project; however, should these be insufficient, IFA would seek an appropriation from the General Assembly to make the payments. We have included present value of milestone payments in our debt analysis because these are, for the most part, due before any the net toll revenue being available to make debt service. Now completed and accepted, and tolls are being received, we will evaluate to what extent this project is self-supporting and, consistent with our criteria, include any portion that is not self-supporting in the state's debt statement.

Availability payments began in fiscal 2017, which each payment adjusted per a schedule that includes an inflation component and performance standards.

Of the approximately $1.0 billion in IFA stadium and convention center debt outstanding as of fiscal year-end 2018, approximately $460.83 million is variable-rate debt with liquidity provided under several standby bond purchase and direct-placement agreements. Under these agreements, there are events that allow for the banks to accelerate the bonds either immediately or on seven days' notice to the issuer. We believe that this contingent liquidity risk is mitigated by the finance authority's self-liquidity program, which we monitor monthly, and other alternate sources of liquidity available to the state to address, at least temporarily, a need for additional liquidity. Given Indiana's strong liquidity position, we believe there are enough funds on hand in the event of acceleration.

The state has entered into floating-to-fixed swaps for its variable-rate debt and has approximately $370 million (notional amount) outstanding as of fiscal 2018. Under the state's swap policy, the counterparty must be rated at least 'AA-' or is required to post collateral at certain rating levels to mitigate concerns over counterparty risk. Indiana manages its swap program with a swap policy that thoroughly addresses the risks associated with derivatives. Due to the low degree of termination risk, S&P Global Ratings is not factoring in the swaps' value at risk as contingent liabilities for the state.

Pensions and OPEB obligations

Pursuant to Internal Revenue Service Private Letter Rulings PLR-193-2016 and PLR-110249-18, funds which had been classified as annuity savings accounts and reported within the pensions system's defined-benefit funds were reclassified as separate defined-contribution funds. Effective Jan. 1, 2018, the re-categorization was recognized and accounted for in separate defined-contribution funds. While this accounting change and corresponding restatements alone do not materially change our overall holistic view of the state's pension management, it has resulted in a weakening of the state's debt and liability profile score. This partly reflects our revised calculation to assess funding discipline over the last three fiscal years (2016-2018) with total plan contributions no longer equaling or exceeding the aggregate of service costs, interest costs, and the amortization component.

Indiana's unfunded pension liability represents its proportionate share in several pension plans, of which the Teachers Retirement Fund (TRF Pre-1996) and the Public Employees Retirement Fund (PERF) are the largest. The Indiana State Teachers' Retirement Fund consists of the closed pre-1996 account and the new 1996 account. In 1996, Indiana closed the plan and moved new hires to actuarially sound plans. The new plan, which is the responsibility of school districts, includes transferred teachers from the state plan. The state funds the closed pre-1996 account on a pay-as-you-go basis and the fund was approximately 25.4% funded as of June 30, 2018, as expressed by the fiduciary net position as a percentage of the total pension liability. The total pension liability was $14.58 billion with total fiduciary net position of $3.7 billion, leaving a net pension liability of $10.87 billion. The PERF's pension funded ratio was 78.9% with a net pension liability of approximately $3.4 billion, of which state's proportionate share was approximately $874.4 million. As part of its plan to address the significant unfunded liability, Indiana also adopted a 30-year amortization schedule and established a pension stabilization fund, which should limit the annual growth rate of general appropriations for the TRF to less-than-historical general revenue growth rates. The pension stabilization fund is a dedicated fund in the TRF, designed to accumulate a balance during a 12-year period. The fund is allowed to smooth out yearly general fund contribution growth to less than 3%; the original statute allowed use of the fund to start in 2007.

The overall average pension funded ratio over the previous three years was 57%, which we view as relatively low and far removed from what we consider good levels (80%). In our opinion, while our calculated pension funding ratio is relatively low, our holistic assessment captures the relative weight and risk associated with the state's pre-1996 plan. Given it is structured as a pay-as-you-go plan, as resources from the pensions stabilization fund are exhausted, appropriations will fund ARCs in their entirety around fiscal 2025. To the extent that we believe the state will continue to support all its plans, the relative risk within the short-to-medium term is manageable, in our view. Our assessment also captures the relatively well-funded status of the state's other plans, which in aggregate are weighed down by the pre-1996 plan.

The state has been contributing 100% of its ADCs to its systems and statutory (pay-as-you-go) requirement for the TRF Pre-1996 plan. The five-year average rate of return for PERF is 6.1%, which is below the assumed rate of return 6.75%, although not significantly so. On the whole, management factors and actuarial inputs do not significantly encumber or improve our view of the state's overall pension funding discipline. The PERS assumes a closed amortization schedule with 20-year amortization. The amortization method is based on a level dollar. The system ratio of active members to beneficiaries is 1.5, which we believe is sustainable. PERF incorporates experience trends and industry standards through experience studies produced every five years. Relative to total personal income, the state's share of the net pension liability was 4.1%, which we consider moderate.

The pension relief fund, a holding account administered by the Indiana Public Retirement System was created to support local governments with their legacy police and firefighter retirement plans. These pay-as-you-go plans include the 1925 Police Pension Fund, 1937 Police Pension Fund, and 1953 Pension Fund. While the liabilities belong to the local entities, the state has assumed 100% of the cost. Funding is provided through general fund appropriations, lottery proceeds, cigarette taxes, alcohol taxes, and investment income. Benefits are paid on a pay-as-you-go basis.

In terms of OPEBs, the UAAL as of valuation date June 30, 2017, was a manageable $367 million, or roughly $55 per capita. The state is currently funding the OPEB liability on a pay-as-you-go basis.

We have assigned a score of '1.9', reflecting a change from '1.4' to the state's debt and liability profile, where '1.0' is the strongest score and '4.0' the weakest.

Ratings Detail (As Of September 19, 2019)		
Indiana Bnd Bank spl prog rfdg bnds (Adams County Memorial Hospital Project)		
Long Term Rating	AA/Stable	Affirmed
Indiana Bnd Bank, Indiana		
Indiana		
Indiana Bnd Bank spl prog rfdg bnds (Indiana) (East Chicago Mun Bldg Corp Proj)		

Ratings Detail (As Of September 19, 2019) (cont.)

Long Term Rating	AA/Stable	Affirmed
Indiana Bnd Bank (Indiana) moral oblig		
Long Term Rating	AA/Stable	Affirmed
Indiana Bnd Bank (Indiana) spl prog rfdg bnds (Columbus Learning Ctr Proj)		
Long Term Rating	AA/Stable	Affirmed
Indiana Bnd Bank (Indiana) spl prog (South Bend Tif Districts) (AGM)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Indiana Bnd Bank (Indiana) MORALOBLIG		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Indiana Bnd Bank (Indiana) MORALOBLIG		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Indiana Bnd Bank (Indiana) spl prog bnds ser 2001A		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Indiana Bnd Bank (Indiana) spl prog bnds (Hendricks Comnty Hosp Fing Prog) ser 2002D		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Indiana Bnd Bank (Indiana) spl prog bnds (Whiting Sanitary Dist) ser 2003C		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Indiana Fin Auth, Indiana		
Indiana		
Indiana Fin Auth (Indiana)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) fin rev rfdg bnds (New Castle Correctional Fac Proj)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) hwy APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) hwy APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) lse apporp rfdg bnds		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) lARS) (Indiana) (Stadium Proj) ser A-3		
Long Term Rating	AA+/A-1+/Stable	Affirmed
Unenhanced Rating	NR(SPUR)	
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/A-1+/Stable	Affirmed
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/Stable	Affirmed

Ratings Detail (As Of September 19, 2019) (cont.)

Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/A-1/Stable	Affirmed
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (ARS) (Indiana) (Stadium Proj) ser A-2		
Long Term Rating	AA+/A-1/Stable	Affirmed
Unenhanced Rating	NR(SPUR)/NR	
Indiana Fin Auth (Indiana) (Evansville State Hospital Facility Proj)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (Evanville State Hospital)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (Indiana State Museum Fac Proj)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (I-69 Section 5)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (Logansport State Hospital)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (Louisville-southern In Oh River Bridges Proj) EEC TIFIA Loan		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (Madison State Hospital)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) (Stad Proj) ser 2005 A-4		
Long Term Rating	AA+/Stable	Affirmed
Unenhanced Rating	NR(SPUR)	
Indiana Fin Auth (Indiana) (Stad Proj) ser 2005 A-5		
Long Term Rating	AA+/Stable	Affirmed
Unenhanced Rating	NR(SPUR)	
Indiana Fin Auth (Indiana) (St pk projs)		
Long Term Rating	AA+/Stable	Affirmed
Indiana Fin Auth (Indiana) hwy ser 2007A		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Indiana St Office Bldg Comm, Indiana		
Indiana		
Indiana St Office Bldg Comm (Indiana)		
Long Term Rating	AA+/Stable	Affirmed
Indiana St Office Bldg Comm facs rev bnds (Museum Fac) (Indiana) ser 2003A dtd 01/01/2003 due 07/01/2004-2020 2023		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Indiana St Office Bldg Comm (Indiana) fac rev rfdg bnds (Walbash Vy Corr Fac) & (Rockville Corr Fac) ser 2003C &		

Ratings Detail (As Of September 19, 2019) (cont.)

2003D dtd 12/04/2003 due 07/01/2020		
Unenhanced Rating	NR(SPUR)	
Indiana St Office Bldg Comm (Indiana) (Logansport State Hosp)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Indiana St Office Bldg Comm (Indiana) (Regl Treatment Ctr)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Indiana Transp Fin Auth, Indiana		
Indiana		
Indiana Transp Fin Auth (Indiana) hwy APPROP		
Long Term Rating	AA+/Stable	Affirmed
Indiana Transp Fin Auth (Indiana) hwy APPROP (wrap of insured) (FGIC & AGM) (SEC MKT)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Indiana Transp Fin Auth (Indiana) hwy APPROP (FGIC) (MBIA) (National)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Indiana Transp Fin Auth (Indiana) hwy APPROP (FGIC) (MBIA) (National)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.

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