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Alaska Alaska Municipal Bond Bank; Appropriations; General Obligation; Moral Obligation

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Credit Profile

US\$28.59 mil GO bnds, 2019 (Non-AMT) (Alaska) ser ONE due 05/01/2039

<i>Long Term Rating</i>	AA-/Stable	New
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US\$3.695 mil GO bnds, 2019 (Federally Taxable) (Alaska) ser TWO due 05/01/2039

<i>Long Term Rating</i>	AA-/Stable	New
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Rationale

S&P Global Ratings assigned its 'AA-' rating to Alaska Municipal Bond Bank's (AMBB) approximately \$32.8 million in 2005 master resolution general obligation (GO) bonds, series 2019 One (non-AMT) and Two (taxable). The bond bank is a public corporation of, and benefits from certain credit support by, the state of Alaska. The outlook is stable.

We also affirmed our 'AA' rating on the state of Alaska's GO debt outstanding, our 'AA-' rating on the state's lease appropriation-backed debt, our 'AA-' rating on AMBB debt secured through continuing appropriations and a moral obligation pledge from the state, and our 'A+' rating on bonds issued by the Alaska Energy Authority and backed by a moral obligation pledge from the state. The outlook on all ratings is stable.

The series 2019 One and Two bonds are rated one notch off the state of Alaska's general creditworthiness based on a standing appropriation to replenish the debt service reserve (DSR) to its required level if there is a draw because of a borrower default. Our rating reflects the strength of the appropriation pledge and the legislature's demonstrated commitment to include the appropriation in the state's annual operating budget. As it has each year since 2009, in fiscal 2019, the legislature included and the governor signed within the enacted operating budget an open-ended appropriation to AMBB's reserve in the event of a borrower default. The fiscal 2020 budget represents the 12th consecutive year the standing appropriation has been included in the state's operating budget to replenish the reserve should it be used and brought below the required level. However, the bonds are GOs of the AMBB, payable from sources pledged under the 2005 master resolution, which assigns borrower payments to the trustee for the repayment of the bonds. There has never been a borrower default in the history of the program or draw on the DSR.

In our opinion, the state's 2020 budgetary outlook has dimmed as price volatility returned to global oil markets. Over the past year, the state's economic performance stabilized following a lingering economic downturn that began in mid-2014. A changing economic outlook and a wide range of fiscal adjustments resulted in an easing of the negative pressure facing the state's budgetary outlook. However, recent declines in oil prices threaten to disrupt some of that stability.

The state is projecting to close a \$1.6 billion deficit for the upcoming fiscal year in the proposed 2020 budget. This deficit is net of including Permanent Fund (PF) Earnings Reserve Account (ERA) as general fund revenue for

operations, continuing the use of the investment earnings of the PF adopted in fiscal 2019. However, consistent with S&P Global Ratings' long-held view, outsized budget reserves have provided an effective fiscal cushion for the state as it contended with lower oil prices. While closing balances in the state's two reserve funds are unknown for fiscal 2019, we expect that even with recent shocks to global oil and equity markets, available reserves will remain around 3x expenditures.

Factors Affecting The State's General Creditworthiness

- A countercyclical economy that demonstrates above-average unemployment rates compared to the nation and a weak demographic profile characterized by an increasing aging population and overall population declines;
- Economic and budgetary dependence on oil-related revenues that pressure the state's ability maintain budgetary balance, while the governor's proposed 2020 budget reduced appropriations by 25% compared to the prior year to close an estimated \$1.6 billion deficit that would return a \$3,000 statutory dividend to residents;
- Demonstrated ability to reduce its operating budget, reduce the PF dividend from its statutory amount, and formalize use of its significant investment earnings as unrestricted general fund revenues to partially mitigate its structural budget deficit over the past five years.
- Proposed measures by the governor for voter approval of new or increased revenues, restrictive expenditure caps, and protecting the state's PF dividend payment to residents with a constitutional amendment that, if adopted, may limit budgetary flexibility and slightly weaken our view of revenue structure flexibility in the state's fiscal policy framework;
- Very strong reserve position of between Constitutional Budget Reserve Fund (CBRF) and PF Earnings Reserve Account (ERA) representing over 3x fiscal 2018 audited expenditures; and
- Strong debt and liability profile characterized by moderate debt levels and adequately funded pension and other postemployment benefit (OPEB) obligations.

Based on the analytic factors evaluated for Alaska, on a four-point scale of '1.0' (as the strongest) to '4.0' (as the weakest), S&P Global Ratings has assigned a composite score of '2.0' to the state, which is associated with an 'AA' indicative credit level.

Outlook

The stable outlook reflects Alaska's adopted structural reforms in fiscal 2019 allowing a planned use of its PF ERA to fund operating expenditures. Overall, the recognition of a percentage of market value of the PF as revenue eases the state's reliance on oil-related revenues and reduces its structural deficit. Even with significant use of reserves since 2015, the state maintains available reserve balances in excess of 3x expenditures, which provides rating stability. We do not expect to change our rating within the next two years.

While the state has made strides to improve its fiscal position in recent years, proposed measures by the current administration to limit budgetary flexibility may leave the state more vulnerable to fiscal stress when oil prices decline. The proposals would need voter approval and at the earliest, would not become effective until fiscal 2022. However, a

change in our opinion of the state's government framework would depend on if and when various proposed reforms would be adopted.

Upward movement on the rating will depend on the state's ability to grow and maintain its reserve levels while reducing its structural deficit. Despite the large reserve balances, Alaska is more sensitive to economic volatility than its peers due to its unique revenue structure, which requires it to maintain above-average reserve levels. The state's rating could further benefit from economic diversification and an improved demographic profile. However, should unanticipated economic shocks reduce budgetary flexibility or weaken its ability to further structurally align its budget, we may lower the rating.

The Series 2019 One And Two Bonds

The series 2019 One and Two bonds are the 42nd and 43rd series to be issued under the AMBB's 2005 master bond resolution, which includes the annual standing appropriation feature that we view as integral to the strength of the bond program. Each year, the AMBB is required to submit a budget request to the state for an appropriation to replenish the DSR to its required level if there is a draw because of borrower default. We have confirmed that the DSR balance required under the resolution is greater than any individual semiannual debt service payment. In recent years, the legislature has also appropriated any excess AMBB earnings to the AMBB rather than transfer the funds to the state's general fund as otherwise required by statute.

We understand that, in practice, AMBB requires borrower loan payments be made seven business days in advance of bond debt service, and in the event of a default by the borrower(s), it would coordinate with state administrative staff to implement the appropriation and would draw on the DSR as debt service was due, which would immediately be replenished by the state. And because the debt repayments by local governments occur on a rolling basis throughout the year, the standing appropriation allows the AMBB to replenish and maintain the DSR balance at its required level. Related to this credit strength, in our view, is the diversity of the pool provided by the 38 borrowers under the 2005 bond bank program.

In addition to the appropriation, AMBB also has additional statutory authority to borrow funds from Alaska's general fund at the discretion of the commissioner of the Department of Revenue (DOR).

Series 2019 One and Two proceeds provide new-money loans toward four communities and refunding of a portion of the Southeast Alaska Power Agency's series 2009 electric revenue refunding bonds. The projects of the four communities consist of:

- Fairbanks North Star Borough: Various school construction projects, capital projects, and the Juanita Helms Administration Center;
- City of Homer: Capital costs related to the acquisition and construction of a police station;
- Northwest Arctic Borough: Capital costs related to school construction projects; and
- City of Dillingham: Capital costs for road construction, and improvements to a fire station.

No additional reserve deposit will be required for the 2019 One and Two bonds as existing assets in the 2005 resolution reserve fund (including cash and DSR sureties) exceed the post-2019 One and Two requirement, which, according to the 2005 resolution, is required to equal the lowest of 10% of the principal amount of bonds outstanding, 125% of average annual debt service on all the bonds outstanding, or maximum annual debt service (MADS). The bonds are GOs of the AMBB, which receives revenue from a pool of loans to municipalities and investment earnings on assets.

According to the bond bank, with the sale of the 2019 One and Two bonds, the 2005 reserve fund requirement is estimated at \$60.75 million. The bond bank has an amount sufficient to satisfy the reserve fund requirement, consisting of the following:

- \$37.8 million of cash contributions in the custodian account (where AMBB holds retained earnings, current-year investment earnings, or unrestricted funds appropriated to it by the state);
- \$6.2 million in reserve obligation proceeds of AMBB; and
- \$18 million from a surety policy provided by National Public Finance Guarantee.

On March 8, 2019, the AMBB used unrestricted funds to optionally redeem \$4.4 million of reserve obligations originally issued to fund the 2005 DSR fund. The AMBB plans to pay at maturity or optionally redeem the remaining 2005 DSR fund reserve obligations of \$2.32 million over the next four years.

In addition to the appropriation support, the bonds are backed by Alaska's moral obligation pledge to maintain a DSR for the bank's bonds and by state aid withholding provisions that, since June 1988, have applied to both GO and revenue bonds issued by the bank. The 2005 resolution establishes a common reserve fund to comply with a state statute requiring a reserve fund for any bond bank bond issues. Per state statute, on or before Jan. 30 of each year, the bond bank is required to deliver a statement to the governor and state legislature stating the amount, if any, necessary to replenish the reserve fund. If a draw on the reserve fund were to occur, the state legislature might--but is not required to--appropriate funds to replenish it to the required amount. However, we view this provision as having been strengthened by the state's standing appropriation to backfill the DSR in the event of a draw due to a borrower default.

In the event of a borrower default on a loan payment, the 2005 master resolution permits the AMBB to pursue an intercept of any grant aid from the state to the borrower. The grant intercept provision further strengthens the bonds' credit quality, in our view. The AMBB tracks the amount of state grants subject to intercept relative to the annual loan payment due by each borrower.

Budgetary Performance

The state's 2020 budgetary outlook has dimmed as price volatility returned to global oil markets. Over the past year, the state's economic performance stabilized following a lingering economic downturn that began in mid-2014. A changing economic outlook and a wide range of fiscal adjustments resulted in an easing of the negative pressure facing the state's budgetary outlook. However, recent declines in oil prices threaten to disrupt some of that stability.

In response to revised downward oil prices, the state is projecting to close a \$1.6 billion deficit for the upcoming fiscal

year if the state returns a \$3,000 statutory dividend to residents. This deficit is net of including PF ERA as general fund revenue for operations, continuing the use of the investment earnings of the PF adopted in fiscal 2019. However, consistent with S&P Global Ratings' long-held view, outsized budget reserves have provided an effective fiscal cushion for the state as it contended with lower oil prices. While closing balances in the state's two reserve funds are unknown for fiscal 2019, we expect that even with recent shocks to global oil and equity markets, available reserves will remain around 3x expenditures.

Fiscal 2018 results

Fiscal 2018 audited results showed total general fund revenues of \$3.0 billion compared to expenditures of \$6.0 billion (less federal resources). Net of transfers, the state ended the year with a \$2.3 billion GAAP deficit due in part to the continuing deficit from a reduction in global oil prices that began in mid-2014. For 2018, the enacted budget assumed an unrestricted general fund deficit of \$1.5 billion that would be mitigated through a use of its CBRF as the state has customarily done or any potential rebound in oil prices higher than estimated. During its spring 2018 forecast, the state estimated a \$256 million increase in unrestricted general fund revenue from the fall 2017 Revenue Sources Book forecast. This was due to upward revised price assumption changes for Alaska North Slope (ANS) oil.

The state also had a moderate difference between expenditures in the original and final amended budgets of a \$445.4 million (2.5%) increase in appropriation, most of which was related to health and human services.

State expenditures included a PF dividend of \$1,100 per qualifying Alaskan resident for a total of \$698.0 million from the ERA. The dividend remained below the statutory level, allowing for retained earnings in the ERA.

At the end of fiscal 2018, there was a CBRF unassigned balance of \$3.1 billion, or 52% of 2018 audited general fund expenditures (less federal resources). The total amount assigned for future appropriations from the PF was \$16.1 billion, or 270% of expenditures. Combined, the CBRF and PF ERA represent over 3x fiscal 2018 audited expenditures. The total balances available in the CBRF and PF ERA are available reserves from year if approved by a majority of the legislature and enacted by the governor.

Fiscal 2019 projections

The legislature and governor agreed on a \$4.5 billion unrestricted general fund operating budget, a 5% increase over the fiscal 2018 management plan. For the first time, the budget included a portion of the PF ERA as unrestricted general fund revenue. Of the \$5.1 billion in enacted revenue assumptions, \$2.3 billion (44%) was oil-related, \$1.7 billion (33%) was from the PF ERA (\$1 billion of which is appropriated for the dividend payment), with other miscellaneous revenue adjustments of \$1 billion (20%). Despite the use of the PF ERA, the state continued to use reserves in the CBRF, albeit at a reduced amount compared to prior years, of \$666.5 million or 11.5% of enacted expenditures.

State expenditures included a PF dividend of \$1,600 per qualifying Alaskan resident for a total of \$1.0 billion from the ERA. The dividend remained below the statutory level, allowing for retained earnings in the ERA.

Despite the further CBRF draw, the ERA balance is expected to increase further at the end of fiscal 2019 due to investment returns exceeding the funds target of 6.5%. With the growth in the PF, the state's total reserves between the two funds should allow it to comfortably remain above 3x expenditures as it enters fiscal 2020.

The fall 2018 revenue forecast expects unrestricted general fund revenue of \$2.8 billion with an upward revision

reflecting a prolonged portion of the year with higher-than-expected ANS oil prices. However, during the final quarter of 2018, oil prices declined sharply, abruptly reversing their gains. Despite that trend, the state's finances are still positive for the fiscal year and are likely to mitigate some of its planned use of its CBRF for the year.

Fiscal 2020 proposed budget

The governor of Alaska's fiscal 2020 budget proposal, the first of his administration, closes an estimated \$1.6 billion deficit through expenditure cuts while limiting use of reserves. Compared to the fiscal 2019 management plan, expenditures would be reduced by approximately 25% to address the identified structural deficit. We note that revenue is expected to remain stable from the prior year, as the proposal continues using the state's vast PF ERA (\$16.1 billion as of June 30, 2018) as revenue. Unlike prior budgets, there is no planned use of the CBRF to mitigate the deficit.

The budget continues to use a portion of the PF ERA as general fund revenue agreed on for the first time in fiscal 2019. Proposed general fund revenue totals \$4.7 billion, which includes \$1.7 billion (36% of revenues) of petroleum-related revenues, withdrawal from the ERA of \$989 million (21%), restricted revenues of \$933 million (20%), and new revenue from eliminating a municipal tax credit on oil and gas properties of \$420 million (9%).

The proposed budget included reduced price per barrel (bbl) price assumptions to \$64.00 from \$68.00, which has contributed to the reduced revenue estimates from the prior year and the state's structural deficit. The West Texas Intermediate (WTI) price per barrel (bbl) averaged \$65.19 in 2018 compared with \$50.87 in 2017. Over the past year, prices increased steadily to \$76.41 in October before declining over the fourth quarter. The trend's reversal contributed to S&P Global Ratings lowering its average annual price assumptions for WTI crude oil for 2019 by \$10 per barrel (/bbl) and for 2020 by \$5/bbl to \$60 bbl. However, a recent improvement in oil prices during the first quarter of 2019 has led S&P Global Ratings to improve its price assumptions on Brent crude oil by \$5 bbl. (For more information, see our report "Brent Crude Price Assumption For 2019 And 2020 Raised To \$60 Per Barrel," published March 18, 2019, on RatingsDirect.)

In our opinion, proposed expenditure cuts to higher education, health care, and transportation, as well as a budgeted state-employee headcount reduction of approximately 6% could limit growth or have further negative economic effects. Notable proposed expenditure changes include the withdrawal of a \$154 million subsidy for the University of Alaska System, Medicaid cost-containment measures of \$225 million, \$101 million in reductions to various health and social service programs, and \$96 million of transportation-related cuts to the Alaska Marine Highway System.

A significant revenue measure is proposed to repeal a municipality's ability to tax oil and gas exploration properties. Instead, the state would use the revenue for general fund operations. The proposal would generate an estimated \$420 million for the state, but contribute to revenue reductions primarily for the municipalities of North Slope Borough and Valdez.

Unlike recent budgets, the proposal includes the full statutory payment of the PF dividend to residents of approximately \$3,000 with a total cost of approximately \$2 billion. In addition, the governor has introduced two other bills (SB 23 and SB 24) to repay residents for dividends that were reduced in the past three years. The administration estimates this would amount to a \$3,678 additional payments to eligible residents or \$2.3 billion in unpaid dividends. In our opinion, significant draws on the PF ERA without offsetting build-up of other reserves could diminish our view of the state's budgetary flexibility, particularly if this occurs during a time of negative economic headwinds that reduce

oil-related revenues or investment earnings.

We have assigned a score of '1.7' to Alaska's budgetary performance, where '1.0' is the strongest score and '4.0' the weakest.

Economy

The state continues to recover from a lingering recession that began in mid-2014 with the global rout in oil prices while the U.S. economy continues its expansion. The pace of the state's economic contraction has decelerated the past three years, but continues to rank among the slowest-growing states in the U.S. with real gross state product (GSP) contracting 1.94% compared to national growth of 2.19% over the preceding five years (2013-2017). This has also resulted in declining income levels with personal income per capita as a percentage of the U.S. falling over the past five years from 119% in 2012 to 111% in 2017.

Demographic trends are also not in the state's favor with anemic population growth averaging 0.26% over the past five years (2013-2017) compared to national growth of 0.71%. However, we note that over the past 10-years (2008-2017), Alaska's population grew 0.84% compared to the national 0.77% rate. However, as the state's population ages and population stagnates, the age dependency ratio (a measure of those typically not in the labor force) has increased over time faster than the nation from 52.8 in 2013 to 56.9 in 2017. The national age dependency ratio is 61.8 in 2017, up from 59.8 in 2013.

The state also has seen elevated unemployment levels at 6.6% for 2018 (down from 7.2% in 2017) compared to 3.9% nationally, remaining above the national level for the past five years and ranking as the highest nationally. However, it has typically shown countercyclical employment patterns compared to the nation. From 2009 to 2013, the state's unemployment rate averaged 1.2 percentage points above the national average. At the height of national unemployment in 2010, its unemployment was 7.9% compared to the nation's 9.6%. We expect Alaska will continue to significantly trail the national average for employment gains in the immediate future.

Alaska remains the country's third-largest oil producer. According to IHS, as the ailing energy markets begin to rebound, the state will return to more normal employment gains. As oil prices continue to rebound, the state's economic recovery continues. The state is forecast to build momentum, with projected economic growth of 1.4% by the end of 2019, according to IHS. Job gains will primarily be led by the manufacturing, natural resources and mining, and professional and business service sectors. The recovering natural resources and mining sector will lead growth over the next five years, posting average annual gains of 4.3%.

The state continues to rely heavily on oil production as part of its revenue profile. In 2016, Spanish oil company Repsol and its privately held U.S. partner Armstrong Energy announced 1.2 billion barrels of oil discovered in Alaska, marking the biggest onshore discovery in the U.S. in three decades. The company estimates production could begin as soon as 2021 and lead to as much as 120,000 barrels of output per day, providing a much-needed boost to state coffers.

Despite diversification in recent years, the state is still highly dependent on oil production and its related exports. Business services, such as management and engineering, and even high-technology software and internet firms, make

up a strong and rapidly growing segment, especially in Anchorage. Tourism contributes roughly \$1.5 billion annually to the state's economy, according to IHS. The state's geographic location makes its business costs relatively high, mostly because of transportation costs and the distance to markets and suppliers.

On a four-point scale on which '1' is strongest, we have assigned a score of '2.1' to Alaska's economy. This is a change from our last review due to the state's weakening demographic profile.

Financial Management Assessment

We consider Alaska's formal management practices good under our Financial Management Assessment (FMA) methodology. An FMA of good indicates our view that the state maintains many best practices we consider critical to supporting credit quality, particularly in the finance department. These practices, however, may not be institutionalized or formalized in policy, may lack detail or long-term elements, or may have little recognition by decision-makers outside of the finance department.

The state has a statutory budget reserve in its general fund that, although not always funded, is available to provide liquidity. In addition, it has established the CBRF by constitutional amendment. Funds may be appropriated for certain purposes by a vote of three-fourths of each house of the legislature, but money can be used for interfund borrowing for general fund expenditures. All appropriations from the fund are recorded as a general fund liability. Per the state's constitution, this fund receives all oil and gas tax dispute settlements.

Alaska produces detailed revenue forecasts, with the focus being the price of oil and production. Other revenue sources are also included in the Revenue Source Book, which is released twice each year. The tax division of the Alaska DOR prepares the book, using numerous outside sources of information to help predict the price of oil.

In addition to the revenue forecast, the Office of Management and Budget (OMB) maintains a 10-year fiscal forecast, which is updated annually. Expenditure projections are less detailed, although the state accounts for some inflationary and caseload pressures on spending levels. Budget amendments can occur throughout the year.

The state's debt management policy is updated annually with the public debt report and debt affordability analysis as required by statute. The debt report describes the different types of debt that Alaska issues, mainly certificates of participation and GO bonds. For general fund-supported bonds, the state has a debt capacity that it historically determined, by policy, to be 8% of unrestricted revenue. However, with the increase of approximately 100% in unrestricted revenue for fiscal 2020 due to the structured draw on the Alaska PF, this percentage was diminished to 7% in the most recent state analysis.

Investment management is also covered by the investment policy statement, and the performance of the state's investment portfolio is monitored daily. Each year, the portfolio undergoes a fiduciary audit, which includes a review of legal and administrative constraints for each invested fund. The audit policy's stated goal is to keep Alaska's investment process intact during periods of market upheaval.

Alaska enacts an annual capital budget. Expenditure assumptions for the state's operating budget are adjusted as appropriate when capital projects begin. A transportation agency capital plan provides an annually prioritized plan

detailing three years of projects and funding sources.

In our opinion, Alaska's budgetary framework is adequate with established budget monitoring. While the state has substantially relied on the use of reserves in the past, the agreed-on ERA draw in SB 26 during fiscal 2019 allows the legislature to spend up to 5.25% of the PF's average balance at June 30 over the prior five years before dropping to 5% in 2021. The legislation provided needed guidance for how the state intends to fund its operating deficit. However, the current administration views use of the ERA under SB 26 as more limited than what was adopted in 2018. The fiscal 2019 budget included an appropriation for the PF dividend from the ERA and the full formulary amount to the general fund. The current legislature and administration considers only the full percent of market value (POMV) amount as available for appropriations, split between the PF dividend payment and the general fund. This view leaves fewer resources available for general fund operations. As a result, the state will need to reduce the state's operating budget, reduce the permanent fund dividend, make additional revenue and expenditures changes or use reserves to mitigate its structural deficit.

We have assigned a score of '2.5 ' out of '4.0' to the state of Alaska's financial management, where '1.0' is the strongest score and '4.0' the weakest.

Government Framework

The DOR issues formal revenue forecasts twice a year, in the spring and fall. The forecast is based on consultation with an engineering firm and the state department of natural resources. As noted above, the methodology for forecasting oil production has been revised to incorporate the greater variability associated with production forecasts from some oil fields that are still under development or are in the evaluation phase of development. The net effect of these changes has been to increase the long-term rate of production decline. The revenue forecast has historically been used as presented for budget adoption and not been adjusted during the budget-adoption process.

Historically, Alaska has used existing high fund balances to carry deficits and is not legally required to make midyear budget adjustments if a midyear gap develops. The governor has the discretion to hold back spending in the middle of the fiscal year if a budget gap appears to be developing. Such adjustments were last made in fiscal 2009, during oil price fluctuations. The governor can unilaterally prioritize such holdbacks, but the holdbacks have no formal requirement or schedule.

The governor has advocated for several measures that, in our opinion, may limit budgetary flexibility. These initiatives include voter approval of new or increased revenues, restrictive expenditure caps, and protecting the state's PF dividend payment to residents with a constitutional amendment (currently in statute). If approved by legislatures and voters this year, the earliest fiscal year this could take effect is 2022. Nevertheless, if approved, a higher legislative hurdle to approve revenue increases or retain earnings in the ERA may slightly weaken our view of revenue structure flexibility in the state's fiscal policy framework.

We have assigned a score of '1.5' out of '4.0' to the state of Alaska's government framework, where '1.0' is the strongest score and '4.0' the weakest.

Debt And Liability Profile

Total tax-supported debt per capita is \$1,361 (as of fiscal 2018 audited financial and population figures) and tax-supported debt (GO and appropriation) to personal income is at 2.4%. Tax-supported debt service as a percentage of general fund spending was low, at about 1.4%, in fiscal 2018. Tax-supported debt as a percentage of GSP is 2.0%. The state's debt principal amortizing in 10 years is 86.0%.

At June 30, 2018, Alaska had about \$724.4 million of GO debt outstanding, \$282.5 million of appropriation-backed debt outstanding, and \$1.3 billion of moral obligation debt outstanding. Of the moral obligation debt, \$1.1 billion is related to the AMBB 2005, 2010, and 2016 general resolutions.

The state does not anticipate any additional bonding other than financing oil tax credits. However, it does have remaining authority for \$1.5 billion of pension obligation bonds, \$1 billion for tax credit certificates, and \$110 million of GO bonds. As of Dec. 31, 2017, the total balance of credit certificates for which purchase has been requested was \$806 million. Historically, the state had paid credits annually, but has been unable to do so since fiscal 2016 and has paid a statutory amount based on the oil price for the fiscal year. Under HB 331 (signed into law), the state would issue bonds to fund the requested credits pending current litigation. However, an incentive program would be offered for companies to receive a reduced credit amount--better than the statutory discount rate--and the state would use the discount to fund the cost of issuing the bonds. The bonds would have a 10-year term and back-loaded debt service to match the anticipated increase in state revenues over that period: two-year interest only, three-year increasing debt service, five-year flat. The program would finance the obligation of the state and, according to the state, allow its primary business enterprises the ability to reinvest the funds in Alaskan projects to provide an economic stimulus.

Pension and OPEB liabilities

In 2006, Alaska moved all new employees to a defined-contribution retirement plan from a defined-benefit plan, but employees hired before that continue under the state's defined-benefit pension plan. In addition, unlike those of most other states, Alaska's OPEBs are constitutionally protected. Also, unlike most states, however, the state has an OPEB trust fund and a track record of funding the liability on an actuarial basis. Thanks to a large, extraordinary \$3 billion contribution from the state's CBRF to its pension systems, its funded ratios--for both its defined-benefit pension and OPEB liabilities--improved markedly in fiscal 2015. The contribution was split between the Public Employees' Retirement System (PERS; \$1 billion) and the Teachers' Retirement System (TRS; \$2 billion).

Based on the plan, June 30, 2018 CAFRs and GASB 67 reporting requirements for pension plans only, the Alaska PERS multiple-employer plan had a 65.2% funded ratio (not including OPEBs). The separate TRS had a 74.1% pension funded ratio as of fiscal year-end 2018. Both PERS and TRS employ an 8.0% assumed rate of return on invested assets. For the year, the state's proportionate share of the PERS pension plan was 50.6% and 0.67% for the TRS pension plan.

Combined with the liabilities associated with much smaller pension systems for judicial officials and retired National Guard and naval militia members with that of PERS and TRS, the state's net pension liability was \$4.7 billion as of June 30, 2017. The net pension liability on this basis remains high, in our view, at \$6,375 per capita and 11.2% of total state personal income. The state's three-year funding average is 66% and has increased from 60.2% in 2014.

Annual employer contributions to PERS and TRS have been set as a percentage of payroll at 22% for PERS and 12.56% for TRS. However, on July 1 of each year or as soon as funds are available thereafter, the state is required by statute to contribute sufficient additional funds to bring the total pension contribution for the prior fiscal year to the actuarially determined level, which we view favorably.

Both PERS and TRS use an optimistic 8.0% discount rate and fund the plans on a level percentage of payroll over a closed 25-year period (effective June 30, 2014). The closed plans leaves the system with a weak ratio of active members to beneficiaries of 0.39 for PERS and 0.34 for TRS, well below the national average of 1.5.

For fiscal 2018, the state reported its OPEB liability in conformance with GASB statement no. 74. For PERS, the plan's funded ratio was 88.1% and 90.2% for TRS. The OPEB liability also includes those of other participating local governments. The state is required by statute to fund the annual contributions to the pension system at the actuarially recommended level. We view the state's commitment to pre-funding its OPEB obligation positively. In practice, it combines pension and OPEB assets in PERS and TRS, respectively, using an 8.0% discount rate for its OPEB plan. For the year, the state's proportionate share of PERS OPEBs was 50.6% and 0.67% for the TRS OPEB plan.

In addition to the state's direct debt, since 1970, Alaska has supported the bonds issued by prequalified school districts, with the legislature able to reimburse municipalities for 60% to 100% of debt service costs. The actual program funding depends on annual legislative appropriations. We note the state debt service reimbursement program for school districts has been suspended Jan. 1, 2015 through Jan. 1, 2020. The state has partially funded this program in past years, most recently in fiscal year 2017, when approximately 25% of the funding was vetoed by the governor. The governor's current proposal would eliminate the debt reimbursement program entirely.

We have assigned a score of '2.2' out of '4.0' to the state of Alaska's debt and liability profile, where '1.0' is the strongest score and '4.0' the weakest.

Ratings Detail (As Of April 2, 2019)		
Alaska approp		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Alaska GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Alaska GO		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Alaska Energy Auth, Alaska		
Alaska		
Alaska Energy Auth (Alaska) (Bradley Lake Hydroelec Proj) MORALOB		
<i>Long Term Rating</i>	A+/Stable	Affirmed
Alaska Mun Bnd Bank, Alaska		
Alaska		
Alaska Mun Bnd Bank (Alaska) APPROP		

Ratings Detail (As Of April 2, 2019) (cont.)		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP FOUR		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP FOUR		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP ONE		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP THREE		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP THREE		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP THREE		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP TWO		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) APPROP (AMBAC)		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) GO (AMT)		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) (Master Resolution) APPROP		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank (Alaska) (Master Resolution) GO		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Alaska Mun Bnd Bank GO		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed
Matanuska-Susitna Boro, Alaska		
Alaska		
Matanuska-Susitna Boro (Alaska) APPROP		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
<i>Preliminary Rating</i>	NR(prelim)	
Matanuska-Susitna Boro (Alaska) APPROP		
<i>Long Term Rating</i>	AA-/Stable	Affirmed
Matanuska-Susitna Boro (Alaska) APPROP (ASSURED GTY)		
<i>Unenhanced Rating</i>	AA-(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.

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