S&P Global Ratings

RatingsDirect®

State of Washington; Appropriations; General Obligation

Primary Credit Analyst:
Sussan S Corson, New York (1) 212-438-2014; sussan.corson@spglobal.com

Secondary Contact:
Misty L Newland, San Francisco (1) 415-371-5073; misty.newland@spglobal.com

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Credit Profile		
US$262.915 mil various purp GO bnds ser 2019A due 08/01/2043		
Long Term Rating	AA+/Stable	New
US$145.78 mil GO bnds (taxable) ser 2019T due 08/01/2031		
Long Term Rating	AA+/Stable	New
US$93.435 mil motor veh fuel tax GO bnds ser 2019B due 06/01/2043		
Long Term Rating	AA+/Stable	New
Washington GO		
Long Term Rating	AA+/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA+' long-term rating to the State of Washington's series 2019A various purpose general obligation (GO) bonds, series 2019B motor vehicle fuel tax GO bonds, and series 2019T taxable various purpose GO bonds.

At the same time, S&P Global Ratings affirmed its 'AA+' long-term and underlying ratings on the state's various purpose and motor vehicle fuel tax GO debt outstanding, and its 'AA' rating on the state's appropriation-backed debt outstanding based on the application of "Issue Credit Ratings Linked to U.S. Public Finance Obligors' Creditworthiness" criteria (published Jan. 22, 2018, on RatingsDirect). We rate these obligations one notch lower than our rating on the state based on our view of Washington's general creditworthiness and to reflect the service contract and lease payments appropriated by the state legislature for the bonds. We view these bonds as having a strong relationship to the obligor since they provide funding for projects we believe are significantly important to Washington. In our opinion, there is no unusual political, timing, or administrative risk related to the debt payment. The outlook on all ratings is stable.

The ratings reflect our view of Washington's:

- Relatively well-educated workforce and good income indicators;
- Good recent economic growth relative to that of the nation and a sales tax-based revenue structure that has demonstrated less sensitivity to economic cycles than income tax-reliant states;
- High cost of housing, especially in key economic centers that could impede long-term growth prospects;
- Good internal access to sources of liquidity in the treasury and treasurer trust funds;
- Strong financial policies and practices, including statutory provisions requiring that the state's biennial budget and projected subsequent two fiscal years' spending plans be balanced, which is key given increasing expenditure pressures; and
- Moderately high debt burden across several measures, but relatively low unfunded pension and other

postemployment benefit (OPEB) liability.

Our rating on the state's GO bonds reflects its full faith, credit, and taxing powers. The motor vehicle fuel tax GO bonds are also secured by motor vehicle fuel taxes. Lease payments or payments made under a service contract, and subject to legislative appropriation, support the payment on appropriation-backed debt.

Following six years of litigation, the state is now compliant with the 2012 McCleary ruling, which found Washington had systematically underfunded its public education system. The court also removed its $100,000-per-day penalty. The ruling significantly altered how the state pays for education and significantly increased education-related spending for class size reductions, transportation, and operating costs. In our view, while the additional funding to address the McCleary ruling is sizable, we believe the conclusion of the lawsuit and associated monetary penalties is a positive development for the state in that it eliminates significant uncertainty and allows for a plan in the future. In 2017, as part of the plan to address the lawsuit, Washington increased its statewide property tax levy to $2.70 per $1,000 of assessed value through 2021 to generate $1.6 billion for basic education, offset by a scheduled local property tax reduction with varying local impact. The property tax rate would revert to $2.17 after 2021, unless reauthorized. The 2018 supplemental budget included another $702 million to fully implement new salary allocations and meet the McCleary deadline and, at the same time, rolled back a portion ($391 million) of the previous statewide property tax rate to $2.40 in 2019 only for tax relief. The $2.70 remains well below the $3.60 maximum rate, which provides flexibility in case of potential declines in property values. Forecasted revenue growth and use of unrestricted general fund balance helped fund the property tax reduction. After the changes, Washington's enacted 2018 supplemental budget totaled $44.6 billion, a $940 million (2.1%) expenditure increase compared to the state's enacted fiscal 2017-2019 biennium budget for the general fund, education legacy trust account, and opportunity pathways account. The enacted supplemental budget projects the budget stabilization account (BSA) will close the current biennium in fiscal 2019 at about $1.1 billion or an adequate 2.5% of biennial expenditures, which is lower than the $1.6 billion, or 4% of biennial expenditures, at the end of the 2015-2017 biennium. In addition to diverting projected unrestricted revenue to education spending that would have otherwise increased BSA deposits, the enacted budget transfers about $925 million (about 2% of the biennium budget) to the pension funding stabilization account to offset a portion of the annual employer pension contribution in fiscal 2019 and in the next biennium, which leads to what we view as use of one-time resources for ongoing expenses. When including the ending balance in the general fund, education legacy trust account, and opportunity pathways account, total reserves are expected to close at $2.4 billion or an adequate 5.3% of biennial expenditures. On an annualized basis, which is more comparable to other states, the estimated ending biennium balance represents what we view as a strong 11% of annual expenditures in fiscal 2019.

Washington's economy is among the highest performing in the country: In 2017, real GDP growth outpaced every state in the nation at 4.4% and was 0.8% above the state with the second highest growth (which was Colorado at 3.6%). More than 57% of the state's exports are civilian aircraft, engines, and parts (valued at $43.9 billion), and the state has benefitted from a record number of orders of 737s from the Middle East, Asia, and Africa. Other large employers such as Microsoft and Amazon continue to support the state's low unemployment rate (4.7%) and high per capita incomes (112% of the national average). However, as we discuss in "U.S. State And Local Government Credit Conditions Improve As Economic Growth Picks Up," published July 26, 2018, on RatingsDirect, the region faces challenges in housing affordability and trade. Washington's economy may be particularly vulnerable to escalating trade tensions. The state remains an important gateway for trade with Asia and Canada, and ranks third in the nation in annual export value and first in export value per capita. Although it is too early to predict impact of the tariffs, we expect the state's fast-paced growth to continue in 2018 and 2019.

The state's strong economy has translated into better-than-forecasted revenue growth. For the one month, revenues from June 11 through July 10, 2018, were tracking $41 million above the June forecast. Based on the June 2018 Economic Revenue and Forecast Council (ERFC) forecast, overall general fund revenue projections for the 2017-2019 biennium now total $43.5 billion. The forecast adjusted economic-driven revenue upward by $304 million but reflects a net $680 million decline from the previous forecast due to legislative changes that reduced the property tax levy for one year and moved property tax revenue to the education legacy trust fund from the general fund. Despite these changes, forecasted current state general fund revenue for the 2017-2019 biennium is a significant 16.6% above actual 2015-2017 biennium revenue and reflects economic growth as well as increased tax levy. The June 2018 revised general revenue forecast for the 2019-2021 biennium totals $49.4 billion, reflecting a moderated but still-strong 9% cumulative growth compared with current biennium revenue estimates. Before the recent U.S. Supreme Court ruling on internet sales taxes, the state passed legislation to expand taxes on certain online sales. Existing revenue forecasts already incorporated higher revenue due to the legislation and any additional benefit from the ruling is likely to be minimal.

The state's reliance on retail sales, and business and occupation taxes for a combined 69% of general fund revenues (on a budgetary basis) typically affords Washington more revenue stability than other states that rely on personal income tax revenues. However, cyclicality in the economy could pressure 2019-2021 general fund revenue, as reflected in the ERFC's pessimistic economic scenario that reflects 6.7% lower general fund revenue than currently estimated for the next biennium due to downside risks from international trade policy uncertainty, higher oil and gasoline prices, a maturing economic expansion, Federal Reserve rate activity, or geopolitical risks.

Three initiatives are currently certified for the November 2018 ballot, including an initiative on gun ownership restrictions, a measure that would ban local government taxes on groceries, and an initiative to establish a carbon fee. Initiative 1631, if approved by voters, would enact an initial carbon emissions fee of $15 per metric ton of carbon effective Jan. 1, 2020. A previous carbon tax initiative in 2016 did not pass. A fiscal impact study of the initiative estimates the fee could raise up to $722 million annually by fiscal 2023 for carbon-neutral investments and administrative costs. The initiative could also mean higher expenditures for certain local governments and school districts that provide electricity and natural gas services or operate their own fueling distribution facilities. If passed, Washington would be the first state in the nation to impose a fee on carbon pollution.

In general, we consider Washington's approach to financial management strong, as reflected in our Financial Management Assessment (FMA) and budget management scores. Well-established economic and revenue forecasting, and increasingly refined debt management practices and oversight, served the state's credit quality well during the recession and its aftermath. Forward-looking state policies facilitate budget practices we view as prudent, including minimal reliance on payment deferrals or other one-time responses to anticipated budget gaps.

As of Sept. 12, 2018, Washington is expected to have about $19 billion in GO bonds outstanding, net of reimbursements. Of this, about $6.6 billion of the state's net GO debt is payable first from excise taxes on motor vehicles and special fuels. The state is also expected to have about $878 million of certificates of participation (COPs) outstanding including COPs for state and local agencies. Tax-supported debt was moderately high, in our opinion, at about $2,500 per capita and 4.5% of total personal income at the end of fiscal 2017. Debt paydown remained average, in our view, with about 55% of principal outstanding amortized over 10 years. We expect debt levels to remain moderately high given anticipated future issuance, particularly for the state's transportation capital program.

Long-term liabilities include those related to the state's pension system and retiree health care. Based on June 30, 2017, comprehensive annual financial reports for the cost-sharing plans, we calculate Washington's share of the net pension liability across 12 pension plans (not including a share of the school employees retirement system liability) totaled about $2.5 billion as of June 30, 2017, or about $350 per capita and 0.7% of personal income, which is very low, in our view. The aggregate funded ratio across plans, including cost-sharing plans in which the state participates as of June 30, 2017, is what we consider good at almost 87%. We note the plan adopted a 7.5% rate of return assumptions, down from 7.7%, which is more conservative and will likely reduce the reported funded ratio in the near term. We consider Washington's unfunded OPEB liability, representing about $740 per capita, below average. OPEBs are funded on a pay-as-you-go basis.

Based on the analytic factors we evaluate for states, we have assigned Washington a composite '1.7' on a four-point scale whereby '1.0' is the strongest and '4.0' is the weakest.

Outlook

The stable outlook reflects our view of Washington's continued economic and revenue growth and the resolution of the McCleary ruling. Nevertheless, we expect that significant upward pressure on spending originating in legal- and voter-approved mandates will remain a soft point in the state's credit profile. However, legal requirements that Washington enact budgets that not only balance for the current biennium but also project balance through the following biennium help facilitate a structural approach. That, coupled with Washington's ongoing discipline vis-a-vis funding the state's budget reserves, should help insulate the state rating from unexpected economic or revenue weakening. Potential for upward movement would likely entail moderation of growth in debt levels and sustainable growth in revenue that keeps pace with the state's underlying economic growth rates and mandated costs.

Downside pressure on the state rating would likely have economic origins. A sharp falloff in the housing market or sustained weak demand for key state exports, fueled in part by a strong U.S. dollar, changes in trade policy, or slower-than-expected growth from China, could all contribute to such a scenario. State policymakers' response to a downside economic scenario--whether it's timely and structurally oriented--would likely dictate any effect on our rating on Washington. If lawmakers delayed taking corrective action or relied extensively on one-time solutions to budget gaps, allowing the state's reserve balances to decline precipitously, this could result in downward pressure on the rating.

Governmental Framework

Washington's statutory requirement to adopt a balanced budget, when coupled with the state's financial management policies, encourages the state to ensure ongoing fiscal solvency. Legal protections for Washington's GO debt include a specific constitutional requirement that the legislature make appropriations in the budget for the interest and principal installment payments on state debt. Although neither state statute nor the state constitution provides that debt service be a priority relative to other state payment obligations, no other payment obligation enjoys a specific requirement that an appropriation be made. In our view, this has the practical effect of providing debt service with a strong legal position among Washington's various payment obligations.

The governor has authority to make across-the-board reductions to spending allotments when a cash deficit in a particular fund is projected. However, the authority to impose disbursement reductions does not include allotments for basic education, pension benefits, or GO debt service. The state's office of financial management monitors and makes recommendations about cash management activities to the governor.

An active voter-initiative environment complicates Washington's governmental framework. We view the initiative as limiting the state's fiscal flexibility somewhat. However, the legislature's willingness and ability to set aside provisions of voter-approved initiatives when fiscal conditions warrant has proven beneficial to credit quality, in our view. (Initiatives may be amended with a two-thirds vote of the legislature within two years of passage and a simple majority of the legislature thereafter.) We noted, for instance, that during the 2011-2013 biennium and eight of the 14 preceding years to that biennium, the legislature temporarily suspended initiatives 732 and 728 (for teacher cost-of-living salary increases and smaller class sizes, respectively). During the 2012 legislative session, the legislature repealed I-728 altogether. The legislature also suspended I-732 again for the 2013-2015 biennium and suspended features of I-1351 (class size reduction) for the current biennium. The state constitution allows Washington to raise taxes with a majority vote of the legislature.

On a scale ranging from '1.0' (strongest) to '4.0', we have assigned a score of '1.7' to Washington's governmental framework.

Financial Management

We consider Washington's financial management practices strong under our FMA methodology. An FMA of strong indicates our view that practices are strong, well embedded, and likely sustainable. The state ERFC, which is made up of representatives appointed by the governor's office, both houses of the legislature, and both major political parties, as well as the state treasurer, produces an analytical report on economic and revenue performance each month and, by statute, presents quarterly revenue forecasts covering the current and upcoming biennium. The state uses the council's forecasts, which are based on a modified IHS Connect model of the U.S. economy, to set revenue parameters at biennial budget adoption. Washington has a record of making budget adjustments within the biennium when the forecast council materially changes its projections. Beginning with the fiscal 2013-2015 biennium, state law required the legislature to balance not just the biennial budget, but also the spending and revenues anticipated for the subsequent two-year period. In addition, three times per year, the state convenes a Caseload Forecast Council, which forecasts service requirements in such areas as public assistance, state corrections, medical assistance, and kindergarten to grade 12 (K-12) education. The executive and legislative branches use these forecasts, along with historical expenditures, to formulate budget proposals and midbiennium revisions.

Further guiding budgeting decisions is a rolling, four-year general fund forecast maintained by the state's ERFC. Washington uses these forecasts to quantify the timing and scope of potential deficits in the subsequent biennium and, in some cases, to begin addressing structural imbalances before the next budget cycle begins. Although the state does not have a minimum reserve policy, Washington Constitution requires the state to set aside 1% of most unrestricted state revenues in each fiscal year into a budget stabilization fund, a form of rainy-day fund. That fund can be tapped under a provision allowing the state to draw on the fund when employment growth falls below 1%, in the event of a catastrophic emergency, or by a 60% supermajority vote of the legislature. When the fund reaches 10% of estimated general state revenues in that fiscal year, the state can also draw excess funds for education capital projects. In addition, in November 2011, voters approved a measure requiring that any revenue growth that exceeds one-third of the average biennial growth in state revenues during the previous five biennia be transferred to the BSA. Although constitutional provisions help boost reserve levels in good years, in 2018 the state passed supplemental budget legislation that made a one-time allocation of a portion of unrestricted state revenue for fiscal 2019 education funding rather than to the BSA. While this has been deemed constitutional by a superior court judge, and we believe current BSA balances remain good, any potential recurring diversions in the future could diminish growth of these balances.

Washington's constitution currently limits maximum debt service costs on various purpose GO bonds to 8.25% of an historical average of general state revenue; this limit falls to 8% on July 1, 2034. The treasurer releases an annual debt affordability study, which describes issuance trends and effective constraints on debt issuance and uses demographic and financial indicators as well as peer analysis to inform the legislature on the state's debt obligations. The state uses a model to estimate debt capacity assuming 25-year amortization and level debt service. Given that Washington's debt levels are already moderately high on most measures, we believe steps to contain the growth of the state's debt burden are favorable for credit quality.

The state budgets for capital spending on a biennial schedule but plans on a rolling, 10-year basis and includes funding sources. A formal investment management policy covers eligible investments, maximum maturities (10 years), allocations of nongovernment securities, and internal and external controls.

Budget Management Framework

Washington adheres to budget management practices we consider generally strong. Across different gubernatorial administrations, when confronted with projected budget gaps, the state's political leadership has demonstrated a willingness to consider difficult fiscal adjustments, including both expenditure and revenue measures. In addition, when deficits emerge midcycle, the state has generally responded with timely corrective actions. Revenue projections are apolitical and are developed according to Washington's independent revenue forecasts. When deficits do emerge, however, the state tends to include nonrecurring measures among its solutions, and its updates-to-actual fiscal performance that includes both revenue and spending trends is not regularly available at intrayear intervals.

On a scale ranging from '1.0' (strongest) to '4.0', we have assigned a score of '1.5' to Washington's financial management.

Economy

The state continues to experience consistently strong economic growth trends relative to national levels. In 2017, real GDP growth was 4.4%, which represents the highest growth in the country, followed by Colorado at 3.6%, and we expect this growth to persist in 2018 and 2019. Washington experienced year-over-year population growth in 2017 of 1.71%, compared with the national 0.72% growth, and the state's population is forecast to continue to increase more than 1% annually for the next few years. Furthermore, Washington's relatively low age-dependency ratio (59.1), good per capita gross state product (116% of the national average as of 2017), and good per capita incomes (112% of the U.S. average for 2017) are characteristic of the state's relatively strong economic profile. Washington has continued to see strong job growth across most sectors and particularly in trade, transportation, and utilities, as well as in construction and education and health. The state unemployment rate has also improved gradually, recorded at 4.7% in June 2018. Economic development prospects remain relatively good, in our view, with the state's above-average education level among residents, access to ports, and below-average energy costs.

Washington is an important gateway for trade with Asia and Canada, and ranks third in the nation in annual export value and first in export value per capita. Trade helps to diversify Washington's prospects for growth while somewhat insulating the state from U.S. economic cycles. Being a heavy exporter-state also has a downside, however, because it exposes Washington's economy to a strong dollar, adverse changes in trade policy, and fluctuations in economic performance from around the globe. In our view, escalating trade tensions could pressure the state's economy although it is too early to determine the magnitude of its effect.

Large companies such as The Boeing Co., Amazon, and Microsoft have become such monoliths in the Washington economy that company performance or decisions to expand elsewhere can cause notable swings in the state's economic indicators. Boeing, the state's largest employer with nearly 80,000 full-time employees, accounts for most of the state's transportation exports. In 2017, civilian aircraft, engines, and parts represented a large 57.1% of total state exports valued at $43.9 billion in 2017. This is down from 60.2% in 2016. The decline can be attributed to Boeing's efforts to move jobs out of the state, as well as labor-saving automation. The company reported 1,500 layoffs in 2017. However, it has been ramping up production of its 737s to fulfill record numbers of orders from the Middle East, Asia, and Africa. There is some evidence of improvement in 2018 because transportation equipment exports rose 2.8% in the first quarter of the year compared with first-quarter 2017, according to the state. Also of note, Microsoft plans to expand its headquarters by 2.5 million square feet, invest $150 million in transportation, and employ as many as 8,000 new employees within the next five to seven years.

The housing market remains strong, particularly in and around the Seattle area. Home prices are up 10.4% over 2016, and housing starts are up 5.3%. We see some evidence that growth could stall in the coming years as housing demand is met.

On a scale ranging from '1.0' (strongest) to '4.0', we assigned a score of '1.3' to Washington's economy.

Budgetary Performance

The state's lack of a formal policy for its budget reserve level allows low balances to persist through protracted periods of economic and revenue softness. However, during expansionary phases of the economic cycle, Washington consistently returns operating surpluses and good budgetary reserve positions. The state reports that the combined near general fund and BSA reserves as of June 30, 2017, were almost $2.8 billion, or 7.3% of the 2015-2017 biennium budget (excluding federal expenditures). The fiscal 2017-2019 enacted biennial budget's estimated combined ending balance is $2.9 billion or 6.5% of biennial expenditures, which we still consider good.

Retail sales, and business and occupation taxes together account for a combined 69% of general fund tax revenues and typically afford more revenue stability than other states, many of which rely on personal income tax revenues. Spending priorities are regularly evaluated through the state's "priorities of government" approach to zero-based budgeting. Independent and formal revenue and caseload forecasts inform budget decisions, and political leaders have demonstrated a willingness to make difficult adjustments when necessary to target structural budget balance.

Similar to many other states, significant spending areas in Washington's budget are largely nondiscretionary. The state estimates that as much as two-thirds of spending--primarily for K-12 education, Medicaid, foster care, debt service, and pensions--is effectively legally required by some combination of the state constitution, statute, court decision, or federal mandate. In addition, Washington voters have, over the years, approved initiatives that have reduced the revenue and spending autonomy of the state. The McCleary decision pressured state spending by requiring higher state funding for K-12 school districts.

Washington's liquidity has strengthened markedly since the aftermath of the Great Recession when monthly general fund cash deficits had grown to more than $1 billion. General fund cash flows generally fluctuate throughout the year based on timing of receipts. In 2018, there was a$1.6 billion negative general fund cash position in March, related to a software update and timing of collections When general fund cash is negative, the state has access to cash for liquidity in its treasury and treasury trust funds, the former of which is subject to legislative appropriation. This cash is held in the custody of the state treasurer, who invests it on a commingled basis. As a result of its good access to internal liquidity, Washington does not rely on external borrowing for cash flow management. Therefore, we continue to view the state's internal liquidity sources as sufficient to support Washington's general fund budget operations--which we expect will remain on track, along with state revenues and the economy more broadly. State authority to defer payments and issue cash flow notes, if needed, also serve as contingency liquidity measures, but Washington managed through the Great Recession without taking these steps.

At the end of July 2018, the state treasury and treasurer's trust fund's month-end cash balance was $6.9 billion, compared with the average annual $5.5 billion balance in fiscal 2018. Investments are conservative, in our view, with an average of 41.5% of funds invested in U.S. treasuries and agencies as of June 2018. In addition to Washington's investment guidelines, state policies require that collateral in repurchase agreements (of which the state currently has none) for U.S. Treasury, agency, and money market instruments be priced at 102% of market value. Mortgage-backed repurchase agreements of more than seven days are subject to a higher, 105% requirement.

Fiscal 2017 audited results

According to audited financial statements for fiscal 2017, the state's general fund assigned and unassigned fund balance, on a generally accepted accounting principles basis, was $2.4 billion, or a good 7.4% of expenditures, which is down slightly from audited fiscal 2016 results. However, the general fund posted a $971 million operating surplus net of transfers, which is higher than the $564 million surplus reported in fiscal 2016 audited statements. In addition, the fund balance improved to $4.2 billion (a strong 13.2% of expenditures) in fiscal 2017 compared with $3.2 billion (a strong 10.7% of expenditures) in fiscal 2016.

On a scale ranging from '1.0' (strongest) to '4.0', we have assigned a score of '1.8' to Washington's budget performance.

Debt And Liability Profile

Washington's debt is moderately high by several measures, in our opinion, including debt per capita, debt as percent of personal income, and debt service costs to general government spending. In 2015, the legislature passed fuel taxes and certain license fees as part of a transportation revenue package to help fund significant transportation investment in the state over the next 16 years. Washington's transportation revenue forecast council forecasts total transportation revenues of almost $6.5 billion for the current biennium and about $6.6 billion for the upcoming biennium. The revenue forecast includes the new revenue from the 2015 transportation package, which will help support $5.3 billion in authorized and planned future GO bond issuance for the total program.

State pension liability

Washington's unfunded pension liability represents its proportionate share of several pension plans and consists primarily of its share of the unfunded liability for Washington Public Employees Retirement System 2 and 3 (PERS 2/3) and Washington Public Employees Retirement System 1 (PERS 1). Washington's proportionate share of all plans' net pension liability translates into what we view as a relatively small $348 per capita and 0.6% of personal income. We consider the state's three-year average pension-funded ratio good at 87%. Washington's pension-funded ratio as of June 30, 2017, was still good at 89.5%, albeit slightly below the 90.6% reported in fiscal 2014.

While statutes require the Office of the State Actuary (OSA) to calculate an actuarially determined contribution (ADC), actual contribution levels across plans do not always meet the ADC. With its biennial budget process, the state legislature appropriates pension contributions every two years. Although contributions have historically been set to equal the contractually required contribution, they frequently fall short of the ADC because they are not adjusted after the budget is adopted. In addition, adopted contribution levels for most plans have been different than OSA's calculated ADC due to legislative actions, such as the 2014 legislature's adoption of contribution levels for several pension plans, which phased in increases over a relatively lengthy, six-year period to incorporate certain changes to mortality assumptions as of the most recent experience study. Furthermore, we calculate that average total annual plan contributions in the previous three years did not cover a level equal to service cost and an interest cost component plus some amortization of the unfunded liability across plans; however, trends have been improving in recent years and contributions were approximately 97% of costs in fiscal 2017.

We believe, on the whole, management factors and actuarial inputs do not significantly worsen or improve our view of the state's overall pension funding discipline. PERS 1 assumes a rolling 10-year amortization period and uses a "level percentage of pay" method, which assumes rising future payroll and results in escalating pension contributions over time. The actual average net investment return for the five years through fiscal 2017 for both PERS 1 and PERS 2/3 exceeds the actuarial assumed 7.7% rate of return. In fiscal 2017, both plans reported increased investment returns, at 13.84% for PERS1 and 14.10% for PERS 2/3. As of fiscal 2015, all of the plans--except for the smaller veterans and volunteer firefighters retirement plans--use an assumed 7.7% actuarial rate of return, which is scheduled to fall to 7.5% as of fiscal 2018. The lower assumed rate of return will likely increase estimated liabilities and reduce the reported funded ratio. No plans have projected an asset depletion date under Governmental Accounting Standards Board 67, which we believe is reasonable given current assumptions. Since PERS 1 is closed to new members and projected benefit payments are declining, the ratio of active members to beneficiaries of 0.05 is well below the median national ratio of 1.4. The PERS 1 plan-funded ratio of 61.24% in fiscal 2017 is relatively low, in our opinion, although cash flow projections reflect a fairly short horizon of future plan contributions through 2031, assuming plan assets will generate the assumed annual rate of return to pay remaining member benefits as the plan winds down. On the other hand, PERS 2/3 has a strong 3.3 active-to-beneficiary ratio relative to the national median, and what we consider a strong 91% plan-funded ratio. We believe the system generally incorporates experience trends and industry standards in its experience studies and updates its economic experience studies every two years, although updates to the demographic experience studies occur every six years, which we believe is relatively infrequent. An updated economic experience study was issued in August 2017.

State OPEB liability

On an actuarial basis, Washington's portion of the unfunded actuarial accrued OPEB liability was almost $5.5 billion as of Jan. 1, 2017, or about $740 per capita, which is below the national median. The state provides both an explicit and implicit subsidy for retiree health benefits. Washington's OPEBs produce an implicit liability by allowing retired employees to purchase health, life, dental, and disability insurance in the same pool as current employees at a subsidized rate. The explicit benefit subsidizes retired members' monthly premiums up to $150 per member per month for enrollment in Medicare Parts A and B. According to audited results for fiscal 2017, the state contributed $95 million for pay-as-you-go expenses for retiree benefits, equal to less than 1% of annual general fund expenditures that same year. The state's annual OPEB cost was $5.0 million (a still low 1.7% of general fund expenditures). We understand that Washington does not plan to fully fund OPEB on an actuarial basis for the foreseeable future.

On a scale ranging from '1.0' (strongest) to '4.0', we have assigned a score of '2.3' to Washington's debt and liability profile.

Ratings Detail (As Of August 16, 2018)		
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed

Ratings Detail (As Of August 16, 2018) (cont.)		
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed

Ratings Detail (As Of August 16, 2018) (cont.)		
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Long Term Rating	AA+/Stable	Affirmed
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Long Term Rating	AA+/Stable	Affirmed
Washington GO		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
Aberdeen, Washington		
State of Washington, Washington		
Aberdeen (Washington) APPROP		
Long Term Rating	AA/Stable	Affirmed
FYI Properties, Washington		
State of Washington, Washington		
FYI Properties (Washington) APPROP		
Long Term Rating	AA/Stable	Affirmed

Many issues are enhanced by bond insurance.