

RatingsDirect®

Vermont; General Obligation; School State Program

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Vermont; General Obligation; School State Program

Credit Profile		
US\$80.3 mil GO bnds ser 2021 A due 08/15/2040		
<i>Long Term Rating</i>	AA+/Negative	New
US\$39.3 mil GO rfdg bnds ser 2021 C due 08/15/2030		
<i>Long Term Rating</i>	AA+/Negative	New
US\$31.9 mil GO rfdg bnds ser 2021 B due 08/15/2030		
<i>Long Term Rating</i>	AA+/Negative	New
Vermont GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed

Rating Action

S&P Global Ratings assigned its 'AA+' long-term rating to the State of Vermont's:

- \$80.3 million series 2021A general obligation (GO) bonds;
- \$31.9 million series 2021B GO refunding bonds; and
- \$39.3 million series 2021C GO refunding bonds (Vermont Citizens Bonds).

S&P Global Ratings also affirmed its 'AA+' rating on Vermont's GO debt outstanding and its 'AA' rating on the Vermont Municipal Bond Bank's Vermont State Colleges system bonds outstanding that include an intercept mechanism dependent on appropriation funding from the State of Vermont to the Vermont State Colleges System.

The outlook on all ratings is negative.

The GO bonds are secured by the full faith and credit of the State of Vermont.

Credit overview

In our view, Vermont's proactive budget management practices and well-embedded strong financial policies have helped anchor the state's credit profile over time, as pressures have mounted from demographic trends and retirement liabilities. These strengths--which include regular forecast updates, annual midyear budget adjustments, consistent reserve levels across economic cycles, and debt affordability oversight--remain crucial to the state's credit quality. In our view, these practices have helped Vermont close a sizable 11.1% general fund budget gap in fiscal 2021, stemming from the COVID-19 pandemic, primarily by recurring measures. However, we anticipate that if the trajectory of current challenges persist, the state's structural budget balance could begin to slowly erode over the long term, given shrinking resources to address significant liabilities.

Vermont's credit profile remains challenged by a demographic profile that we expect will limit economic growth potential in the long term. The state, which has the second-lowest population in the nation, at approximately 623,000

residents in 2020, has recorded a cumulative population decline of 0.6% from 2011 to 2020, while the nation's population has grown by 5.7% over the same period, according to the U.S. Census Bureau. Although the state has recorded population gains in some years--including recently in 2017 and 2015--growth has been minimal. The state anticipates updated data from the yet-to-be-released 2020 Census will be crucial for its demographics strategy moving forward. We note the U.S. Census Bureau pushed back a Dec. 31, 2020, deadline to release updated state population totals informed by the 2020 census to April 30, 2021, given reporting challenges caused by the pandemic.

Although IHS Markit reports Vermont's net domestic migration has been negative for 15 consecutive years, the state believes the pandemic might have caused an uptick in in-migration--at least temporarily--because second-home buyers have been attracted to Vermont's low population density. Specifically, real estate activity in calendar 2020 showed a concentration of sales in resort towns, with a significant portion of sales activity from out-of-state buyers (such as from New York and Massachusetts), and property tax transfers during the first six months of fiscal 2021 were 40% higher than expectations. We believe it is unclear at present if Vermont, which has pursued workforce development initiatives in recent years aimed at attracting and retaining remote workers, will benefit from recent real estate activity in the long term.

At the same time, Vermont is facing demographic headwinds, its unfunded retirement liabilities have been rising (despite consistently meeting actuarially determined funding levels), and its contributions are expected to significantly increase. In our opinion, the state's pension funded ratio on a three-year average basis is weak at 59.7% and its unfunded liabilities are high at \$4,883 per capita and 8.3% of personal income. We calculate that Vermont's contributions to the state's pension plans do not meet our view of minimum funding progress needed toward full funding and are just short of our calculation of static funding or the level typically needed to maintain its current funding levels. The state's pension system boards passed a motion to find ways to lower the unfunded liability and actuarially determined employer contributions following determination that budgetary contributions would rise in fiscal 2022 significantly (by 43% and 49% for the state employees and teachers plans, respectively)). We understand the legislature is considering a proposal to establish a task force to study options for pension and other postemployment benefit (OPEB) reforms that could include overhaul of the management system, contribution changes and benefit changes. While we believe the state is actively pursuing reform efforts, it is currently unclear what might be passed or when.

With an improving vaccination outlook, faster reopening schedule, and recent increases in federal stimulus, S&P Global Economics is optimistic that recovery in the U.S. is starting to accelerate. It recently raised its real GDP growth forecasts for 2021 and 2022 to 6.5% and 3.1%, respectively, from 4.2% and 3.0%, respectively, in our December 2020 report. S&P Global Economics expects this stronger economic growth will benefit state governments. For more on its views on the U.S. economy and state credit sector, respectively, see "Economic Outlook U.S. Q2 2021: Let The Good Times Roll" and "State, Local Government, School District, And Charter School Sector Views Revised Back To Stable," both published March 24, 2021, on RatingsDirect.

Vermont's latest consensus revenue forecast was conducted in January 2021. Projections for the general fund and partial education fund (including sales taxes but excluding property tax estimates not yet available at the time of the forecast) were increased compared with the previous August 2020 forecast and collections will nearly reach

pre-pandemic levels by the close of fiscal 2021 before exceeding them in fiscal 2022. Specifically, the January forecast projects the general fund and the partial education fund will rise by 0.2% and 5.4%, and 10.0% and 5.5% for fiscal years 2021 and 2022, respectively, compared with previous estimates for which the governor's fiscal 2022 executive budget proposal was based due in part to federal stimulus. In our view, the state's forecast includes reasonable projections: Vermont anticipates its gross state product (GSP) growth will be 3.4% in 2021 and 4.9% in 2022, while IHS Markit expects Vermont's GSP to rise by 5.4% in 2021 and 4.3% in 2022. The next consensus revenue forecast is expected to be held in July.

On a year-to-date basis through February 2021, both general and education fund revenues are running ahead of projections. The general fund is \$46.5 million (3.9%) above estimates but officials note at least a portion of this overperformance is due to fewer refunds in personal income tax going out in February than anticipated (given the later start to the opening of the filing season by the IRS this year). For the same period, the education fund is \$2.7 million (0.7%) above estimates; management notes this overperformance is more likely to be lasting compared to the temporary boost in the general fund from the delayed filing season.

The governor's executive budget proposal for fiscal 2022 totals \$1.90 billion for the general fund and \$1.88 billion for the education fund for a combined \$3.79 billion for the state's main operating funds, in our view. Key initiatives include funding for environmental projects, modernization of government technology, and housing. Management reports overall spending growth of 3% is mostly due to higher payments to retirement plans required for the fiscal year; pension obligations are fully funded at actuarially determined employer contribution levels. Officials also report that \$200 million in one-time investments are funded by using one-time revenues from a growing fiscal 2021 budgetary surplus and additional federal Medicaid match. The proposal fully funds Vermont's reserve accounts at statutory maximums.

The state's reserve accounts have typically remained at their maximum statutory levels of 5% of the previous year's budgetary appropriations, which we consider good, along with some additional reserves in the general fund. Specifically, the state's budget stabilization reserve held \$79.8 million at the close of fiscal 2020, which represents a good 5.0% of annual general fund expenditures. These three funds' stabilization reserves remained funded at their statutory maximums through the Great Recession and management reports are expected to remain at their statutory maximums through fiscal 2021.

Officials report the state did not need to obtain internal or external borrowing during fiscal 2020 and does not anticipate needing additional liquidity in fiscal 2021. If needed, Vermont has the statutory authority to seek external sources of liquidity.

The ratings reflect our opinion of the state's:

- Strong financial and budget management policies that have contributed to consistently good reserve and liquidity levels;
- Employment composition reflective of the U.S. economy, characterized by average income levels and low unemployment rates, although economic growth has been slow and demographic challenges persist;
- Well-defined debt affordability and capital-planning processes, in our view, that have limited leverage and

contributed to a modest tax-supported debt burden with rapid amortization of tax-supported debt; and

- Significant pension and OPEB, which remain sizable relative to those of state peers, despite some recent reform efforts.

The negative outlook reflects that there is at least a one-in-three chance we could lower our rating on Vermont. We believe the state's economic growth potential is limited by the social risk of Vermont's demographic profile, because the state's population has declined over the past decade (on a cumulative basis) and its population is among the oldest in the nation. While Vermont has rolled out various workforce development initiatives to address its demographics--including programs to retain college students and attract remote workers--and there have been reports of an uptick in domestic in-migration as the state's low population density attracts out-of-state residents during the COVID-19 pandemic, the long-term effects of these developments are currently unclear. At the same time, Vermont's unfunded retirement liabilities have grown, despite the state's history of meeting or exceeding actuarial determined contribution (ADC) levels. Should these trends continue, we expect this juxtaposition could lead Vermont to face heightened budgetary challenges not commensurate with the current rating level.

Based on the analytic factors we evaluate for states, on a four-point scale in which '1.0' is the strongest and '4.0' is the weakest, we have assigned a composite score of '1.9' for the State of Vermont, which is associated with a 'AA' indicative credit level. We have used the notch flexibility upward to 'AA+', reflecting the state's proactive fiscal management policies and practices, consistent reserve levels over multiple economic cycles, and modest debt burden guided by thorough capital planning. Vermont has historically pursued midyear budget updates each fiscal year, with emphasis on maintaining structural balance. This practice, along with regular forecast updates, has allowed the state to keep its reserve levels consistent over time, typically at levels we consider to be good. Vermont's debt affordability processes have reduced the state's debt burden over time and current authorization levels are expected to keep debt levels low in upcoming years.

Environmental, social, and governance (ESG) factors

In our opinion, the state is also exposed to some social risk through its demographic profile. The U.S. Census Bureau reports Vermont ranks among the oldest populations in the nation. In S&P Global Ratings' view, older-aged states reliant on older and higher-income households are more likely to experience revenue declines, in part the result of falling incomes at retirement. On the whole, S&P Global Ratings considers managing demographic trends a long-term factor affecting the credit quality of state governments and an important part of its holistic analysis of state credit quality.

We view the risks posed by the COVID-19 pandemic to public health and safety as a social risk, which, if sustained, could weaken the state's economy, liquidity, and budget performance. Absent the implications of COVID-19, we view Vermont's governance risks as being in line with our view of the sector as a whole, while the state's environmental risks are somewhat elevated because of the potential for severe flooding events along river corridors.

Negative Outlook

Downside scenario

We could lower our rating on Vermont if we believe that the trajectory of the state's economy will lead to softened economic metrics (such as demographic profile, GSP growth levels) in the long term, creating an increasingly challenged budgetary environment. In this scenario, the rating would no longer be commensurate with the current rating level, despite strong management practices and policies.

Although unexpected, increases to unfunded retirement liabilities driven by diversion of resources or lack of action to control the liability could also pressure the rating.

Return to stable scenario

Should Vermont's economy begin to show signs of structural improvement--such as from population gains caused by improved migration trends or from increased growth in GSP levels--or resiliency from economic pressures brought on by the current pandemic while the state's finances remain structurally balanced, we could revise the outlook back to stable.

Significant improvement to the funded status of Vermont's retirement liabilities would likely require additional budgetary resources in the near to medium term, given that contributions (which typically meet or exceed actuarially determined levels) fail to meet our calculation of minimum funding progress necessary to reduce the unfunded liability. In this scenario, we expect uplift to the state's credit profile would likely be recognized over the longer term.

Credit Opinion

Government Framework

Vermont does not have a constitutional or statutory requirement to enact or maintain a balanced budget, but it has consistently maintained sound finances. In our view, the state has significant flexibility to increase the rate and base of its major tax revenues, which include income taxes, sales taxes, and a statewide property tax that funds the state's support of local education. We view Vermont's revenue sources as diverse. The state does not allow voter initiatives and maintains the ability to adjust disbursements in order to maintain sufficient liquidity. Debt service can be paid without a budget, but there is no other legal priority for debt.

The state's tax structure is broad, and its revenue sources are diverse across several operating funds. The general fund relies primarily on unrestricted revenues from personal and corporate income, and meal taxes. The education fund relies primarily on a statewide property tax and sales and use taxes. The education stabilization reserve ended the year at the statutory maximum of 5% of expenditures. The transportation fund relies primarily on federal-match grant revenues, a motor vehicle license fee, and a motor fuel tax.

On a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a '1.6' to Vermont's government framework.

Financial Management

Financial Management Assessment: Strong

We consider Vermont's financial management practices strong under our Financial Management Assessment methodology, indicating financial practices are strong, well-embedded, and likely sustainable.

Much of Vermont's debt and financial management practices are embedded in state statute. These, along with internally developed policies, guide the state's long-term budget and capital planning, debt management, and investing practices. The state has a well-established consensus revenue-estimating process. According to statute, the joint fiscal office and administration provides its respective revenue estimates for the general, transportation, and federal funds for the current and succeeding fiscal years to the Vermont Emergency Board.

Vermont law also requires a long-term capital plan. The governor submits a capital budget annually to the General Assembly, based on debt management provisions outlined by the state's capital debt affordability advisory committee. The committee's estimate is nonbinding, but the state legislature has never authorized new long-term GO debt in excess of the committee's estimated amount. The state has formal debt management policies, including a statutory debt affordability analysis developed by the capital debt affordability advisory committee that Vermont integrates into the operating budget development process and updates at least annually. Vermont has not entered into any interest-rate swaps and, therefore, does not have an adopted swap-management policy. Statutory restrictions and adopted administrative policies govern investment management, and the office of the state treasurer monitors compliance.

Budget management framework

The state has multiple tools to assist financial management. Vermont monitors revenues and publishes results monthly and the emergency board typically meets at least twice annually--in July and January--to evaluate the revenue forecast and make adjustments, if necessary. The state forecasts also include Medicaid revenue and spending. These consensus forecasting meetings can be convened more frequently and were held quarterly during fiscal years 2008-2010 in response to the Great Recession and the potential effect on revenue and expenditures. The emergency board includes the governor and the legislative chairs of the house and senate money committees. The forecasting process includes traditional economic and revenue forecasting, which Vermont performs with the assistance of outside economists, for the current and succeeding fiscal years, as well as a less-detailed forecast for the next eight years.

The governor has statutory authorization to adjust the budget within certain revenue and expenditure change limits when the Vermont legislature is not in session. Vermont maintains stabilization reserve funds at statutory levels to reduce their effect on annual revenue variations. In 1993, the state created separate budget stabilization reserves within the general and transportation funds. The amount in each of these reserves is not to exceed 5% of previous-year appropriations. In fiscal 1999, the state created an education fund budget stabilization reserve, which is to not exceed 5.0% of nonproperty tax revenues. The governor included a proposal in the fiscal 2013 executive budget to increase the general fund stabilization fund to 5.25% from 5.00%, but the legislature instead added a general fund balance reserve fund with a separate cap of 5.00% of expenditures.

On a four-point scale, with '1.0' being the strongest score, we have assigned a '1.0' to Vermont's financial management.

Economy

Vermont has the second-lowest population in the nation, at approximately 623,000 residents in 2020. Over the past decade, the state's population has declined as the nation's has grown. Specifically, Vermont has lost 0.6% of its population from 2011 to 2010 (negative 0.04% compound annual growth rate) as the nation's population grew 6.1% (0.68% compound annual growth rate). Although the state has recorded population gains in some years--including recently in 2015 and 2017--growth has been minimal and uneven.

The state's quality of life and well-educated workforce provide economic development opportunities; however, Vermont ranks low among the states in its business-tax and regulatory environment, and its slow workforce expansion could continue to stifle future economic growth prospects. The state's net domestic migration has been negative for 15 consecutive years, while the natural increase in births over deaths has been minimal, according to IHS Markit. The state expects updated data from the yet-to-be-released 2020 Census will be crucial for its demographics strategy.

Vermont reports it has strategized its workforce-development initiatives in order to address its demographic issues. Broadly, the state has coordinated efforts with the U.S. Department of Labor, kindergarten through grade 12 education, and higher education. Specific initiatives include work-opportunity tax credits and a program to attract remote workers. We believe that, while Vermont is taking proactive steps, the effectiveness of these measures is not yet clear.

The state's economy is driven by tourism, higher education, electronics, consumer-goods manufacturing, and agriculture (including dairy farming). Exports are an important part of Vermont's economy, with a substantial portion going to Canada, according to IHS Markit. Exports in 2020 primarily consisted of computer and electronic products (60.2%), followed by machinery (7.0%). In 2020, Vermont's exports totaled more than \$2.4 billion, 38.3% of which was with Canada.

Vermont's employment diversity by sector is generally in line with that of the nation, in our view, and has not demonstrated more cyclicity than when the U.S. Global Foundries completed its acquisition of IBM--the third-largest private-sector employer in the state, accounting for a large portion of Vermont's manufacturing employment and exports. Global Foundries, which manufactures semiconductors for consumer electronic products, including chips for cell phones and other devices, employs about 2,500 workers at its Essex Junction plant. According to IHS Markit, a large portion of the state's manufacturing exports includes computers and electronics products from the facility. The Vermont Yankee nuclear power plant ceased production at the end of 2014, and it will be demolished by 2026. Encore Renewable Energy, a Vermont solar panel company, received a total of \$1 million in investment grants from Maine, New Hampshire, and Vermont to continue its expansion in the region, according to IHS Markit.

State income levels are average, in our opinion. State per capita income of \$58,650 was 98.2% of that of the U.S. in 2020. GDP per capita of \$52,614 was 82.8% of the U.S. in 2020 and has historically remained at about this level.

On a four-point scale, with '1.0' being the strongest, we have assigned a '2.4' to Vermont's economy.

Budgetary Performance

We believe Vermont has a history of proactive budget management. The state, by statute, establishes a consensus revenue forecast at least each July and January. It has authority to make midyear budget adjustments and has done so, with an emphasis on structural balance, each fiscal year since 2012 through various budget adjustment acts. The state's process for identifying and remediating budget shortfalls early in the fiscal year allows for flexibility of resolution, in our view.

S&P Global Ratings considers Vermont's combined general fund and education fund revenue to be diverse, with statewide education taxes, personal income taxes, and sales taxes constituting 36.4%, 24.3%, and 13.8% of fiscal 2020 revenue collections, respectively.

Several key changes were made to existing state revenue and expenditure distributions effective in fiscal 2019, as passed in Act 11 in 2018. The most significant changes were the shifts of the entirety of the sales-and-use tax and 25% of the meals-and-rooms tax from the general fund to the education fund. At the same time, the act eliminated a lump-sum annual transfer of general fund dollars to the education fund. Officials report the law was intended to remove the need for this interfund transfer. In our opinion, this shift puts an additional spotlight on the education fund as one of the state's core operating funds.

Vermont maintains separate budget stabilization funds in its general, transportation, and education funds that are available to offset undesignated fund deficits. The statutory maximum for the three stabilization reserves is 5% of the previous-year budgetary appropriations. The three stabilization funds have been at their statutory maximums since fiscal 2007. Vermont pools the cash reserves for these major funds, which result in sufficient liquidity for operations during the fiscal year. Officials indicate that the state has not externally borrowed for liquidity since fiscal 2004.

We note Vermont maintains other available reserves outside of its budget stabilization fund that are restricted for designated uses. These funds include the general fund balance reserve, the 27/53 reserve (to meet liabilities during years with a 27th biweekly payroll and a 53rd week of Medicaid payments), and the human services caseload reserve (for caseload-related needs of several human services agencies). The state projects these funds will contain \$15.88 million, \$16.27 million, and \$98.24 million, respectively, at the close of fiscal 2021.

Audited fiscal 2020 results (generally accepted accounting principles basis)

Vermont's audited financial statements as of June 30, 2020, report positive operating results for the state's general fund, on a generally accepted accounting principles (GAAP) basis. Total general fund revenues were \$1.57 billion and total general fund expenditures were \$994.6 million, while net transfers out are sizable, at \$523.5 million (53% of expenditures), attributable in part to providing funding for the state's Medicaid program waiver. The general fund ended the fiscal year with a total fund balance of \$264.5 million, which represents 24.3% growth from fiscal 2019. The general fund balance is composed of \$56.6 million in nonspendable funds, \$12.4 million in assigned funds, and \$195.5 million in unassigned funds. General fund cash and cash equivalents totaled \$205.6 million, down slightly from \$215.3 million in fiscal 2019.

The education fund, on a GAAP basis, closed the fiscal year with slightly negative operating results. Total education

fund revenues were \$1.66 billion and total education fund expenditures were \$1.71 billion, resulting in an operating deficit of \$47.4 million (2.8% of expenditures); net transfers into the fund were \$40.1 million. The education fund ended the fiscal year with a total fund balance of \$96.2 million, which is about level from fiscal 2019. The education fund balance is composed entirely of committed funds. Cash and cash equivalents totaled \$68.5 million, down from \$82.4 million in fiscal 2019.

Across total governmental funds, the state posted an ending balance of \$1.1 billion, a slight increase from fiscal 2019. This ending balance consists of \$64.0 million in nonspendable balances, \$532.8 million in restricted funds, \$287.9 million in committed funds, \$15.0 million in assigned funds, and \$195.5 million in unassigned funds. Available cash and cash equivalents are \$1.6 billion, which represents a strong 25.4% of total governmental funds expenditures, in our view.

On a four-point scale, with '1.0' being the strongest, we have assigned a '1.4' to Vermont's budgetary performance.

Debt And Liability Profile

In our opinion, Vermont's total tax-supported debt burden is generally low to moderate at \$1,036 per capita, 1.8% of personal income, and 1.9% of general government spending. Compared with GSP, the fiscal 2020 tax-supported debt service was low, in our view, at about 1.97%. We consider the debt amortization to be rapid, with officials retiring just over 74% of tax-supported debt over the next 10 years.

Vermont's debt portfolio consists of only fixed-rate debt, without any exposure to interest-rate swaps. The state also does not have any direct-placement debt.

The state has a debt affordability committee that annually recommends a maximum amount of debt issuance for the next two fiscal years, and while the committee's recommendations are not binding, Vermont has consistently adhered to them. The recommendation for fiscal years 2022 and 2023 is \$123.18 million, reflecting no change from the recommendation in previous biennium fiscal years 2020 and 2021. Debt service can be paid without a budget, but there is no other priority for the payment of debt before other general state expenditures.

When determining the state's liabilities, we view in aggregate its proportionate share of liabilities in Vermont's two defined-benefit pension plans and its two OPEB plans that offer health care to retirees.

- We view the state's pension funding discipline as somewhat weak because, while contributions in recent years have met actuarially determined levels, they have not covered our calculation of minimum funding progress. We considered the funded ratio across all plans to be weak, at 56.1% in fiscal 2020.
- The state funds its retiree health care obligations on a pay-as-you-go basis but has made some progress toward reducing the unfunded liability in the past and is current exploring options for prefunding the liability. We view the state's net OPEB liability as significant.

Pension liabilities

In our view, Vermont's unfunded pension liabilities are significant compared with those of many state peers, despite various reform efforts in recent years. Although the state has consistently met or exceeded ADC funding levels,

Vermont's contributions continue to fall below our calculation of minimum funding progress, which we anticipate will lead to growing liabilities over time.

We consider Vermont's three-year average, pension-funded ratio across its pension plans to be weak, at 59.7%. At the same time, the state's proportionate share of the plans' net pension liability reflects what we view as a high \$4,883 per capita and 8.3% of personal income.

Vermont maintains three statutory defined-benefit pension plans. The VSERS is a single-employer plan and the VSTRS and Vermont Municipal Employees' Retirement System (MERS) are multiple-employer, cost-sharing plans. The state appropriates funding for the first two systems; the municipal system is supported entirely by municipal employers and employees and is not included in our calculation of the state's pension liabilities. The plans are funded as follows:

- VSERS: 63.81% funded, with the state's applicable net pension liability \$1.09 billion.
- VSTRS: 50.00% funded, with the state's applicable net pension liability \$1.95 billion.

On the whole, management factors and actuarial inputs do not significantly encumber or improve our view of Vermont's overall pension funding discipline. VSERS and VSTRS each assume a closed, 20-year amortization period and uses the level-percentage-of-pay method, which assumes rising future payroll and results in escalating absolute pension contributions over time, based on the method's deferral of current contributions. Neither plan projects an asset-depletion date under the most recent available Governmental Accounting Standards Board (GASB) reporting.

The plans' board of trustees agreed on Sept. 24, 2020, to lower its long-term investment return assumptions for the VSERS and VSTRS plans to 7.0% from 7.50%. The lower assumed discount rate is expected to increase required employer contribution rates in future fiscal years. Prior adjustments to the assumed long-term investment rate of return include an agreement made in July 2017 to lower the rate to 7.50% from 7.95%. Through 2014, actuarial valuations used a "select and ultimate" method for developing interest-rate assumptions, where return assumptions varied by period, ranging from 6.25% in year one to 9.0% in years 17 and later.

As of fiscal 2020, the VSERS and VSTRS plans reported five-year average rates of return of 5.7% and 5.8%, respectively, which are below the plans' assumed rate of return. The VSERS plan's ratio of active members to beneficiaries equals 1.2, significantly below the median national ratio of 1.3. The VSTRS plan's ratio is slightly lower, at 1.0. We believe the plans incorporate experience trends and industry standards in their experience studies conducted at least every five years.

State contributions for VSERS and VSTRS are actuarially based and funding has historically been at least 100% of the ADC, which we view positively. Vermont budgets for pension contributions based on percentage rates of each member's annual earnable compensation and the actuarial valuations two years prior. It budgets for the VSTRS ADC appropriation at the beginning of the year. The VSERS ADC accrues as a percent of salary expenses throughout the year, and the state adjusts subsequent appropriations to reconcile year-to-year variations in actual payroll to meet the projected ADC. Each plan's actuary recommends a contribution amount and each plan's retirement board reviews the actuary's recommendations annually before submitting their recommendation to the governor and both houses of the legislature for inclusion in Vermont's annual budget. The legislature is not required to follow the recommendations of

the actuaries or the governor.

Since fiscal 2012, actual annual contributions to the systems have exceeded the respective ADCs, which state officials attribute to conservative budgeting. However, contributions for both plans continue to fall below our calculation of minimum funding progress, which we anticipate will lead to growing liabilities over time.

Other postemployment benefits liabilities

We believe Vermont's OPEB liabilities are significant. Notably, the state's unfunded retiree health care liabilities are the sixth-highest in the nation on a per capita basis and are nearly as large as the state's unfunded pension liabilities. We expect these liabilities will continue to rise, given the current pay-as-you-go financing structure; however, management notes the state is looking into various prefunding options.

Vermont offers two retiree health care plans to retirees of the VSERS and STRS. The Vermont State Postemployment Benefits Trust Fund (VSPB) is a single-employer, defined-benefit plan and the Retired Teachers' Health and Medical Benefit Fund (RTHMB) is a cost-sharing, multiple-employer, defined-benefit plan. The separate multiple-employer Vermont Municipal Employees Health Benefit Fund for local government is administered by the state, but has no liability to the state, and is not included in our OPEB calculations.

On a combined basis, Vermont's proportionate share of the net OPEB liability (NOL) was \$2.67 billion in fiscal 2020, according to GASB 74/75 reporting. This translates into a NOL per capita of about \$4,284, which is well above the median of \$570 and average of \$1,469 across the states (as of fiscal 2019, the latest aggregated data).

In the past, Vermont had taken steps to contain growth of unfunded retiree health care liabilities. The state's retiree health care plans enrolled retirees in a Medicare Part D Employer Group Waiver Plan (EGWP) from a retiree drug-subsidy program--effective Jan. 1, 2014, for VSPB and Jan. 1, 2015, for RTHMB--partially to achieve cost savings. The state has also established an OPEB trust fund for the VSERS, but it is minimally funded.

On a four-point scale, with '1.0' being the strongest, we have revised our score on Vermont's debt and liability profile to a '2.8' from a '2.9'.

Related Research

Through The ESG Lens 2.0: A Deeper Dive Into U.S. Public Finance Credit Factors, April 28, 2020

Ratings Detail (As Of April 15, 2021)		
Vermont GO		
Long Term Rating	AA+/Negative	Affirmed
Vermont GO		
Long Term Rating	AA+/Negative	Affirmed
Vermont GO		
Long Term Rating	AA+/Negative	Affirmed
Vermont GO		
Long Term Rating	AA+/Negative	Affirmed

Ratings Detail (As Of April 15, 2021) (cont.)

Vermont GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Vermont Bnd Bank, Vermont		
Vermont		
Vermont Mun Bnd Bank (Vermont) SCHSTPR		
<i>Long Term Rating</i>	AA/Negative	Affirmed

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