State of North Dakota
Update - Moody's Affirms North Dakota's Aa1 Issuer Rating; Outlook Negative

Summary Rating Rationale
Moody's Investors Service has affirmed North Dakota's Aa1 issuer rating. Moody's has also affirmed the Aa1 on the North Dakota Department of Transportation's (ND DOT) Grant and Revenue Anticipation Bonds, and the Aa2 on the state's appropriation-backed debt rating. Appropriation backed debt is issued by the North Dakota Building Authority. Moody's has also upgraded the North Dakota Department of Public Instruction School District Enhancement Program's rating to Aa2. The outlook on all of the above is negative.

The Aa1 issuer rating reflects the state's substantial remaining reserves after recession-driven draw-downs, very low debt and fixed costs, and its history of sound budget management, particularly in its use of oil-related revenues for one-time purposes. Our evaluation of North Dakota's credit profile also considers the additional risk presented by the state's Bank of North Dakota.

The Aa2 rating on the state's Building Authority bonds is notched off the Issuer Rating, reflecting the subject to appropriation nature of the payment obligation on the bonds. There are no bondholder remedies in the event of non-appropriation.

The Aa1 rating on the ND DOT's Grant and Revenue Anticipation Bonds is capped by the state's issuer rating (the GO equivalent), due to the need to annually appropriate the pledged state revenues, and the flow of pledged revenues through the state Department of Transportation prior to being transferred to the trustee. The bonds' credit fundamentals continue to be very strong, with a high 5x additional bond test and strong 76x maximum annual debt service coverage.

The upgrade of the North Dakota Department of Public Instruction's School District Enhancement Program to Aa2 is based on a recent revision to the intercept legislation that strengthens the program documentation and clarifies the timing and mechanics of the notification process. The Aa2 rating is also based on satisfactory revenue availability, as well as sound notification timing, mechanics and state support for essential public education services that are typical for a current year intercept program.
State's Very Low Debt Position and Fixed Costs will Support Financial Flexibility

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<tr>
<td>Net Tax-Supported Debt / Personal Income</td>
<td>3.0%</td>
<td>2.5%</td>
<td>2.0%</td>
<td>1.5%</td>
<td>1.0%</td>
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<tr>
<td>Net Tax-Supported Debt / Personal Income 50 State Median</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.5%</td>
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Source: North Dakota CAFRs; Moody's Investors Service

Credit Strengths

- Conservative state fiscal management practices, highlighted by the state's direction of oil-related revenues received during boom years towards one-time purposes such as reserve accumulation and capital projects
- Substantial remaining reserves, despite almost full depletion of the General Fund balance and Budget Stabilization Fund
- Very low debt, pension and OPEB liabilities lead to low fixed costs that will support continued financial flexibility

Credit Challenges

- The oil-driven economic recession has significantly reduced jobs, personal income and gross state product, and the timing of recovery is uncertain given the limited economic diversification beyond energy and agriculture
- Revenues declined 36% in the last biennium
- An 11% structural budget gap remains in the 2017-19 biennium, although this is significantly improved from the 28% gap in the prior biennium
- Ownership of a bank brings vulnerability to losses, particularly in the event of steep economic deterioration like the recent energy sector contraction

Rating Outlook

The negative outlook reflects the budget challenges posed by the remaining 11% structural budget gap, the uncertain pace of economic and revenue recovery, and somewhat optimistic revenue growth assumptions.

Factors that Could Lead to an Upgrade

- Sustained positive economic and revenue performance
- Restoration of structural budget balance
- Restoration of sufficient Budget Stabilization Fund reserves to offset the risk of future economic volatility

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.
Reduced exposure to Bank of North Dakota

Factors that Could Lead to a Downgrade

- Continued economic volatility that results in revenue underperformance
- Continuation or growth in structural budget gap
- Additional depletion of reserves
- A move away from conservative fiscal management

Key Indicators

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<td>Operating Fund Revenues (000s)</td>
<td>3,082,498</td>
<td>3,268,040</td>
<td>3,914,607</td>
<td>3,325,027</td>
<td>2,410,044</td>
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<td>Balances as % of Operating Fund Revenues</td>
<td>56.6%</td>
<td>77.8%</td>
<td>51.3%</td>
<td>49.1%</td>
<td>41.4%</td>
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<td>Net Tax-Supported Debt (000s)</td>
<td>204,364</td>
<td>161,087</td>
<td>147,448</td>
<td>125,423</td>
<td>114,247</td>
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<tr>
<td>Net Tax-Supported Debt/Personal Income</td>
<td>0.7%</td>
<td>0.5%</td>
<td>0.3%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Net Tax-Supported Debt/Personal Income 50 State Median</td>
<td>2.8%</td>
<td>2.6%</td>
<td>2.5%</td>
<td>2.5%</td>
<td>2.5%</td>
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<td>Debt/Own-Source Governmental Funds Revenue</td>
<td>4.3%</td>
<td>3.0%</td>
<td>2.0%</td>
<td>2.0%</td>
<td>2.8%</td>
</tr>
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<td>Debt/Own-Source Governmental Funds Revenue Median</td>
<td>37.4%</td>
<td>36.1%</td>
<td>35.8%</td>
<td>34.4%</td>
<td>N/A</td>
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<td>ANR/Own-Source Govt. Funds Revenue</td>
<td>89.7%</td>
<td>62.7%</td>
<td>53.0%</td>
<td>20.0%</td>
<td>N/A</td>
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<td>ANR/Own-Source Govt. Funds Revenue Median</td>
<td>92.6%</td>
<td>87.6%</td>
<td>81.5%</td>
<td>83.1%</td>
<td>N/A</td>
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<td>Total Non-Farm Employment Change (Cy)</td>
<td>8.2%</td>
<td>3.6%</td>
<td>3.8%</td>
<td>-1.6%</td>
<td>-4.1%</td>
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<td>Per Capita Income as a % of US (Cy)</td>
<td>126.9%</td>
<td>125.1%</td>
<td>124.6%</td>
<td>116.1%</td>
<td>111.0%</td>
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Operating Fund Reserves exclude the Foundation Aid Stabilization Fund and Strategic Investment and Improvement Fund, which are held outside the General Fund.

Source: North Dakota CAFRs; Moody’s Investors Service

Recent Developments
Recent developments are incorporated in the detailed rating considerations below.

Detailed Rating Considerations

Economy
North Dakota’s economy has stabilized after a significant contraction, but remains vulnerable to the protracted energy sector recovery. In addition, the agriculture sector is being pressured by severe drought and stagnant wheat and soybean prices; however this is partially balanced by expansion in the state’s urban areas. In the medium term, we expect the state’s economy to acclimate to the lower level of oil activity given the relatively short duration of the oil boom, starting in 2010. This differentiates North Dakota from other energy states that have a long-term dependence on oil-related economic activity.

North Dakota oil prices hit bottom in February 2016 and have been slowly climbing since. Despite the sharp decline in prices, state revenues were supported by relatively stable production through mid-2016. The 2017-19 biennial budget assumes oil prices of $47/barrel and relatively conservative production of 925,000 and 965,000 barrels/day in fiscal 2018 and fiscal 2019, respectively.
Exhibit 3
Oil prices and rig count have stabilized after a steep correction; production held relatively steady through the recession

<table>
<thead>
<tr>
<th>Actual average price per barrel ($)</th>
<th>Rig count</th>
<th>Production (barrels/day)</th>
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<tr>
<td>250</td>
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<tr>
<td>200</td>
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<tr>
<td>150</td>
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<tr>
<td>100</td>
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<tr>
<td>50</td>
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<td>0</td>
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Source: State of North Dakota Monthly Revenue Reports

After significant declines, growth in jobs and personal income has resumed in the past several months, and North Dakota’s economy is stabilizing at a lower post-recession level. However, only 16% of jobs lost during the recession have been recovered to date, and total employment remains 29,000 jobs (6.2%) below the pre-recession peak. Personal income has experienced similar trends; after declining 5% from peak to trough (December 2014 to March 2016), personal income grew 1% in the year ending March 2017.

Exhibit 4
YOY job growth was 1.1% in April 2017 after 23 months of YOY declines

Source: Bureau of Labor Statistics

North Dakota’s unemployment rate remained well-below the national average through the energy contraction, reflecting declines in the labor force as out-of-state workers returned home when employment shrank. As of May, the unemployment rate has declined to 2.5% from 3.3% the prior May, reflecting the continued tight labor market. The US unemployment rate was 4.4% in May 2017.

Finances and Liquidity
North Dakota’s financial profile deteriorated during the recession; however, the state maintains satisfactory financial flexibility due to its accumulation of large reserves during the oil boom years, very low fixed costs, and its solid budget management. The state relied heavily on reserves to offset its 36% revenue loss over the past two years, and its structural imbalance reached 28% in the 2015-17 biennium. A significant portion ($1.2 billion) of this structural imbalance was resolved by eliminating one-time capital projects in the new biennial General Fund budget. However, despite a 6% reduction in recurring appropriations, a shift of an additional $100 million of oil and gas taxes to the General Fund, and $200 million of interest earnings from the Legacy Fund, the 2017-19 biennial budget remains 11% structurally imbalanced. The budget cuts will primarily be effected through a 4% reduction in FTE, with no planned program or service cuts.
In addition, the budget is balanced with somewhat optimistic growth assumptions for the two largest revenues, sales taxes and individual income taxes. Annual sales tax growth is projected to be 3.3% and 7.8% in fiscal 2018 and 2019, respectively. Income taxes are projected to grow 8.9% and 5.1% in fiscal 2018 and 2019, respectively. Total tax revenue growth has stabilized in the last few months of fiscal 2017, and June receipts were above forecast.

The state has utilized sound budget management practices to designate energy-related revenue growth during the oil boom for one-time purposes such as adding to reserves and funding one-time capital projects. Since fiscal 2012, the state has appropriated $4.2 billion of General Fund revenues for capital projects and set aside $4.6 billion in its Legacy Fund.

Only a small portion of revenues from the state’s oil and gas production tax and oil extraction tax flow to the general fund, equivalent to 10% of recurring revenues. Under state law, the first 30% of oil and gas revenues flow to the Legacy Fund. The remaining 70% is distributed to the state, various trust funds and political subdivisions. Of the state’s share, $400 million flows to the General Fund, $200 million to the Tax Relief Fund, $75 million to the Budget Stabilization Fund, $20 million to the disaster relief fund, $3 million to lignite research fund and the remainder to the Strategic Investment and Improvements Fund for capital projects. This flow of funds is established in the budget legislation and can be adjusted with each biennium.

**LIQUIDITY**

North Dakota estimates that combined fiscal 2017 General Fund balance and Budget stabilization Fund will decline to slightly below 5% of recurring expenditures (on a budgetary basis) from 54% the prior year. Reserves were used to offset the 36% revenue decline experienced during the 2015-17 biennium and fund General Fund operations and capital expenditures (discussed above).

Despite this significant decline, the state estimates an additional $1.3 billion (63% of recurring appropriations) will be available in the Foundation Aid Stabilization Fund, the Tax Relief Fund, and the Strategic Investment and Infrastructure Fund, providing additional liquidity and budget flexibility. Over the 2017-19 biennium, these combined balances are budgeted to decline slightly to 53% of recurring appropriations.

In addition, the state’s Legacy Fund balance has increased to $4.6 billion from $3.9 billion due to the continued inflow of oil and gas tax revenues. Per the state constitution, effective July 1, 2017, the state can use interest earnings from the Legacy Fund, of which $200 million is budgeted in 2017-19, to support General Fund operations. In addition, the state could use up to 15% of the principal, if approved by two thirds of the Legislature, however this has not been considered for the current biennium.

The Budget Stabilization Fund is capped at 15% of expenditures and the state can only access the BSF in the event of a revenue shortfall above 3% or by legislative action. The state has budgeted to deposit $75 million in the BSF in the current biennium from oil and gas tax revenues.

The state also maintains the Foundation Aid Stabilization Fund and the Tax Relief Fund for primary and secondary education funding. The Foundation Aid Stabilization Fund receives 10% of oil extraction revenues and has a balance of $622 million. The state constitution was amended by voters in November 2016 to allow the state to use balances to support K-12 funding during normal budget cycles, rather than being limited to budget cuts. The Tax Relief Fund is funded with oil and gas extraction and production taxes in each biennium and used to provide additional K-12 funding in the following biennium to reduce school district property taxes. This fund has a current balance of $300 million. The Tax Relief Fund does not have statutory restrictions on its use, and can be reallocated for other purposes.

The state’s Strategic Investment and Improvement Fund is held outside the General Fund for one-time capital expenditures and is funded with oil and gas extraction and production taxes. The fund currently has $346 million of uncommitted reserves.

**Debt and Pensions**

North Dakota’s continued financial flexibility is supported by its very low leverage position and low fixed costs.

North Dakota’s 2016 net tax supported debt was $114.2 million. The state ranks 48th in the nation for net tax-supported debt per capita ($151 vs. the median of $1,006) and net tax-supported debt as a percent of personal income (0.3% vs. the median of 2.5%).
DEBT STRUCTURE
The state currently has no general obligation debt outstanding, and its constitution virtually prohibits general obligation borrowing unless secured by real estate. The state has issued lease-backed debt, primarily through the North Dakota Building Authority, for which the legislature must biennially appropriate interest and principal payments. The state has no outstanding variable rate debt or private bank loans.

DEBT-RELATED DERIVATIVES
North Dakota has no outstanding interest rate swap agreements.

PENSIONS AND OPEB
North Dakota’s 2016 adjusted net pension liability (ANPL), our measure of the government’s pension burden, was 22% of own-source revenues, below the 50-state median of 85%. The three-year average ANPL as of 2016 27% of revenue. Moody’s ANPL reflects certain adjustments made to improve comparability of reported pension liabilities.

The state contributed $42 million to its pension systems in fiscal 2015. This amount is less than the contribution amount that would allow the state’s reported net pension liability to “tread water” – or remain stable from one year to the next, assuming investment return and other actuarial assumptions are met for the year. However, given the state’s very low fixed costs, any future contribution increases would be unlikely to pressure the state’s budget.

The state’s combined debt service, pension, and OPEB contributions in fiscal 2016 were very low, at 2% of own-source governmental revenues, providing the state ample flexibility to adjust future budgets.

The state’s OPEB liability is very modest at $79 million, half of which represents the implied rate subsidy for certain retirees.

Governance
The North Dakota executive branch’s strong powers, including the ability to withhold appropriated funds in the course of a biennium, help the state monitor and respond to revenue shortfalls when they do occur. The governor also has line-item veto power over appropriation legislation. State agency spending generally cannot exceed three quarters of a biennium’s operating appropriations in the first three quarters of a biennium, and short-term borrowing beyond the course of a biennium is not allowed. Together with these safeguards, the state’s conservative revenue forecasting and budgeting practices have limited its need for non-recurring resources to supplement general fund revenues. North Dakota’s financial management profile could be further strengthened by implementation of policies requiring development of multi-year financial plans.

STATE DISTINGUISHED BY OWNERSHIP OF BANK
North Dakota is distinguished among states by its ownership of a bank, the Bank of North Dakota, which serves both as the state government’s financial arm and as an economic-development agent. The bank operates lending, retail, trust and investments, and student loan divisions. The state is required to deposit all state funds with the bank, unless otherwise governed by statute, such as the state’s Legacy Fund, which is invested with the State Investment Board.

The bank is not a member of the Federal Deposit Insurance Corp. (FDIC). Instead, the state guarantees bank deposits; therefore any mass withdrawals could diminish the liquidity of both the bank and the state. The potential impact is moderated, however, by the high concentration of state deposits, which were 72% of the bank’s total deposits as of June 30, 2017. The bank’s assets remain very liquid, with 31% in cash and investments, although this has declined from 46% in 2014 as the state has withdrawn deposits to balance its budget. The bank’s liquidity guidelines require, among other things, that cash and highly liquid, long-term assets be equal to at least 20% of total deposits and borrowings.

Although the state does not guarantee bank loans, owning a financial institution entails vulnerability to losses, particularly in the event of a weak agriculture sector or steep economic deterioration, like the recent energy sector contraction. While less than 2% of the bank’s 54.9 billion loan portfolio is in direct loans to energy sector projects (as of 3/31/17), the bank has loans that are indirectly exposed to the energy sector, such as housing and hospitality projects. Risks are moderated by the bank’s satisfactory $80 million loan loss reserve (1.7% of the total loan portfolio or 1.9% of the non-guaranteed portfolio), very strong tier 1 capital position of $899 million, and history of strong net income performance. Annual net income has grown over the past five years to $136 million in fiscal 2016 (December 31).
In fiscal 2017, the state resumed annual transfers from the BND that had been temporarily discontinued for the prior ten years. The bank transferred $100 million of net income to the state General Fund in the fourth quarter of the state's fiscal year (ending 6/30/17). The state’s biennial budget includes the transfer of another $140 million of bank net income over the next two fiscal years. Based on the bank’s recent financial performance, we expect it will have sufficient flexibility to make this transfer without reducing its capital position.

A remaining challenge is that the bank is subject only to examinations by the state’s Department of Financial Institutions. Examination reports, which are not publicly disclosed, are submitted to the state Industrial Commission, consisting of the governor, the attorney general, and the agriculture commissioner. An independent auditor reviews the bank annually and prepares a publicly available financial report. This sets the bank apart from private-sector financial institutions subject to examinations and oversight by independent regulators.

**Legal Security**

**BUILDING AUTHORITY BONDS**

Debt service on the Building Authority bonds is provided for by semi-annual rent payments made pursuant to lease agreements between the authority and nine state agencies, subject only to legislative appropriation. The agencies include the North Dakota Board of Higher Education, the Historical Society, Department of Corrections and Rehabilitation, the Attorney General’s Office, Office of Management and Budget, the Department of Health, the Veteran’s Home Department, the Job Service Department, and Parks and Recreation. Under the lease agreements, each agency covenants to request funding in the executive budget. Debt service payment dates are far enough removed from the July 1 start of the state’s fiscal biennium to limit risk of an event of non-appropriation due to late budget adoption. There are no debt service reserve funds associated with these issues, and there are no bondholder remedies in the event of a non-appropriation. The agency has covenanted in its lease agreement to make biennial lease funding requests to the governor for inclusion in the state’s executive budget proposals.

**ND DEPARTMENT OF PUBLIC INSTRUCTION’S SCHOOL DISTRICT ENHANCEMENT PROGRAM**

Pursuant to North Dakota code 6-09.4-23, the superintendent of the state Department of Public Instruction (DPI) will intercept aid due to a school district if notified of a potential debt service deficiency. As a current year program, revenues available to be intercepted include any state entitlement funds that are due or payable or appropriated to the school district (aid distributed pursuant to chapter 15.1-27).

The program receives average oversight from the state. To participate in the program, school districts must adopt a bond resolution and agree to provide a bond counsel opinion as well as file the debt service schedule with the DPI. School districts must also certify to an additional bonds test of two times maximum annual debt service based on school aid available to the district. Debt service payment dates are set for February 1 and August 1 of each fiscal year, with August 1 representing the principal payment date. Having the principal payment date earlier in the fiscal year provides a larger cushion of interceptable state aid if needed. Participation in the intercept program is irrevocable as long as the bonds are outstanding.

The authorizing legislation is silent in regard to the state’s right to repeal, revoke, or rescind the intercept provisions; however we expect strong continued state support of the program given the essentiality of public education.

The program has never been tested, but given strong timing and mechanics established in bond resolutions and administrative documents, there is a high likelihood of timely intercept. The documentation of mechanics is average, and has been recently enhanced by revisions to the authorizing statute that clarify the notification timing and mechanics. Mechanics and timing will also continue to be detailed in administrative documents, financing-level bond resolutions, and paying agent agreements.

These documents provide for strong timing and mechanics. Pursuant to its bond resolution, each school district covenants to pay debt service to the paying agent five days before payment is due. Pursuant to the revised legislation, if it is unable to make a bond payment, it will notify the DPI and the paying agent not less than 15 days prior to any such potential default in the deposit. In addition, the paying agent agreement directs the paying agent to notify the DPI of a deficiency five days before the debt service date. Once the state is notified of an insufficiency in the debt service fund the state will advance funds immediately in order to achieve timely payment to bondholders.
Use of Proceeds
Not applicable.

Obligor Profile
North Dakota is the 47th largest state by population in the United States. Its gross domestic product per capita ranks 47th among the states (in current dollars).

Methodology
The principal methodology used in the state's long term issuer rating was US States Rating Methodology published in April 2013. The principal methodology used in the programmatic long term issuer rating was State Aid Intercept Programs and Financings: Pre and Post Default published in July 2013. The principal methodology used in the Department of Transportation rating was US Public Finance Special Tax Methodology published in July 2017. An additional methodology used in the lease-backed ratings was Lease, Appropriation, Moral Obligation and Comparable Debt of US State and Local Governments published in July 2016. Please see the Rating Methodologies page on www.moodys.com for a copy of these methodologies.
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U.S. PUBLIC FINANCE

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