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CREDIT OPINION
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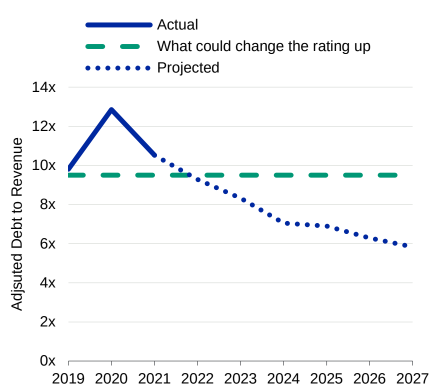
North Texas Tollway Authority, TX

Update following rating affirmation, outlook change to positive from stable

Summary

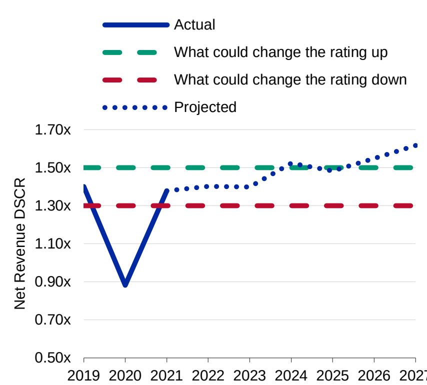
North Texas Tollway Authority's (NTTA, first lien A1, second lien A2, positive) improving credit profile stems from strong revenue and traffic recovery following COVID declines and rapidly improving leverage. NTTA's strong credit profile comes from the essential roadway network that is located in one of the fastest growing US service areas that will experience continued traffic growth given the North Texas region's strong population growth trends and employment gains. NTTA's automatic biennial toll increases have been implemented without delay and future increases will support growing revenue collection. The next increase is planned for July 2023. NTTA's system remains in good condition and future capital needs can be managed to match net cash flow generation. NTTA's previously high leverage is expected to continue to moderate (10.5x adjusted debt to operating revenue in 2021, and expected to drop to about 9.3x in 2022). Toll increases have allowed DSCR to recover to an all-in 1.33x, but will increase as toll revenue increases and annual debt service requirements level off in 2026.

Exhibit 1
NTTA's leverage will decrease steadily as revenue and debt amortization increase



Source: Moody's Investors Service

Exhibit 2
DSCR will begin to expand in 2024 as the pace of annual debt service requirements levels off
First and second tier debt service



In 2020, NTTA used a permissible transfer from the Capital Improvement Fund of $150 million to pay debt service, which resulted in bond ordinance DSCR of 1.28x.
Source: Moody's Investors Service

On August 25, 2022, we affirmed NTTA's ratings and changed the outlook to positive from stable.

Credit strengths

» Population and employment growth is among the strongest in the nation and continues to generate traffic and revenue growth

» Traffic and revenue have fully recovered to pre-pandemic levels since March 2022

» Most facilities were completed within the last 20 years and assets are in good condition. Construction risk for system expansions is minimal and should not impact traffic significantly for the projects that have been announced

» Strong tolling policy establishes a set 2.75% annual rate increase implemented every two years

» The system annual inspection report, issued by an independent consultant, states that system is in good condition with maintenance fully covered by annual deposits to Operating and Maintenance (O&M) and Reserve Maintenance funds (RMF)

Credit challenges

» Expanding service area could pressure NTTA to assume additional capital improvements, though the authority has opted out of several TxDOT projects

» The bond indenture flow of funds is open and allows for transfers up to 10% of surplus revenue to support non-system projects after all operating and debt service obligations of the authority have been satisfied

» Second tier bonds have half the standard 12-month DSRF and subordinate lien bonds lack a DSRF

» High proportion of toll-by-mail exposure results in leakage of revenue

Rating outlook

The positive outlook reflects our expectation that the North Texas economy will remain strong despite expectations of slowing US economic growth and support toll revenue growth that pushes debt service coverage ratios higher and leverage lower over the next few years.

Factors that could lead to an upgrade

» Sustained and projected DSCR of first and second tier bonds above 1.5x.

» Leverage, as measured by debt to operating revenue, below 9.5x

» The MIG 1 short term rating is the highest rating and cannot be upgraded.

Factors that could lead to a downgrade

» Additional debt issuances or revenue declines that lead to sustained DSCR of first and second tier bonds below 1.3x

» Lower than expected video toll enforcement and collections

» Failure to implement planned toll increases necessary to produce projected debt service coverage levels

» Traffic and revenue growth no longer meets or exceeds current projections

Key indicators

Exhibit 3
North Texas Tollway Authority, TX

	2017	2018	2019	2020	2021
Total Transactions Annual Growth (%)	2.9	14.4	2.4	-23.3	24.6
Debt Outstanding ($'000)	9,533,055	9,495,368	9,314,895	9,501,217	9,573,394
Adjusted Debt to Operating Revenues (x)	12.60	10.54	9.80	12.85	10.52
Days Cash on Hand	931	986	1,161	1,399	1,428
Senior Lien Debt Service Coverage By Net Revenues (x)	1.73	1.64	1.81	1.21	1.94
Total Debt Service Coverage By Net Revenues (x)	1.33	1.29	1.31	0.85	1.33

In 2020, NTTA used a permissible transfer from the Capital Improvement Fund of $150 million to pay debt service, which resulted in bond ordinance DSCR of 1.28x.
Source: Moody's Investors Service

Profile

NTTA manages a well-established multi-asset tollway system in the Dallas-Fort Worth MSA. Assets include two bridges, one tunnel and five highways, approximately 151 center lane miles in length and with 1,145 lane miles. Traffic is predominantly two axle passenger cars with only 2.7% multi-axle vehicles

Detailed credit considerations

Revenue Generating Base - NTTA's growing service area population and economy supports above average transaction growth, toll rate increase policy promotes credit strength

The Dallas Fort Worth “metroplex” is poised to see strong economic growth in the rebound from the coronavirus outbreak. The region's economy is highly diversified, with the Dallas side of the metroplex benefiting from a high share of professional and financial services, as well as technology. Financial service firms have added significant jobs over the last couple of years, with Goldman Sachs adding about 1,000 jobs in 2021, Fidelity added 2,000 and Vanguard plans to add its first new US office in 14 years in Plano. With the new positions, the Dallas area has surpassed Chicago as the second largest financial center after New York, according to Moody's Analytics

The Fort Worth side of the region weighs more toward core manufacturing and transportation. Moody's Analytics expects that both halves will experience above average long-term growth given continued corporate relocations and expansions, which are driven by the region's favorable business environment and favorable migration and demographic trends.

Many of the recent corporate relocations and expansions have been outside of the central business districts, along the corridors of NTTA's facilities. Specifically, areas adjacent to the Sam Rayburn Tollway (SRT) have seen some of the largest investments over the past several years. Toyota, JP Morgan, and Liberty Mutual have all added significant jobs along the corridor. While most new large corporate relocations are outside of the downtown core, Goldman Sachs has proposed to consolidate into a new tower downtown.

One potential weak spot for demand for NTTA's facilities is the Dallas region's high proportion of professional and financial service jobs that could be more subject to long-term flexible work arrangements. We expect that flexible work arrangements will reduce demand for morning peak hour trips. NTTA's traffic consultant's forecast incorporates similar considerations. Given similar assumptions on working patterns and economic growth, we consider the new traffic forecast to be appropriate base case.

Lastly, Moody's Analytics notes that as housing affordability has tightened in Dallas, Fort Worth's relatively lower costs present opportunities to attract companies from Dallas and elsewhere. Increased demand for housing in the western half of the metroplex supports growth on two of NTTA's newer facilities, the Chisolm Trail Parkway (CTP) and the Texas 360 Tollway.

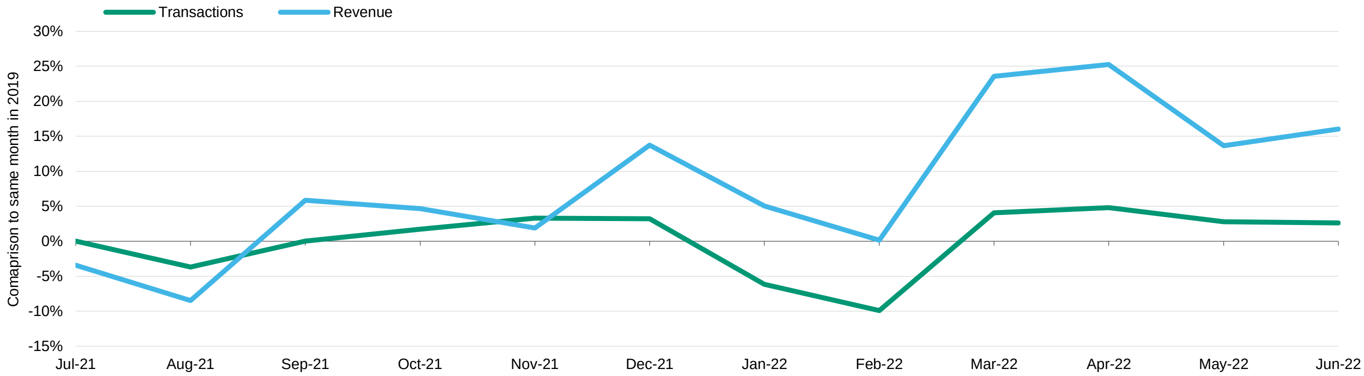
Though the newer facilities like the 360 provide greater diversification within the region, the majority of NTTA's revenues will continue to come from the three largest facilities, the President George Bush Turnpike (PGBT), Dallas North Tollway (DNT) and SRT, over the life of the outstanding bonds (see Exhibit 3).

Operational and Financial Performance - Strong transaction and revenue recovery following winter storms and the first omicron outbreak; reasonable T&R forecast

NTTA's strong revenue growth prospects are driven by the resumption of growth following the pandemic (Exhibit 3). The updated revenue forecast is reasonable given the growth prospects for the economy and NTTA's expected adherence to the tolling policy.

Exhibit 4

Revenue collection accelerated in March following the first Omicron wave and another round of unusually bad winter weather in February

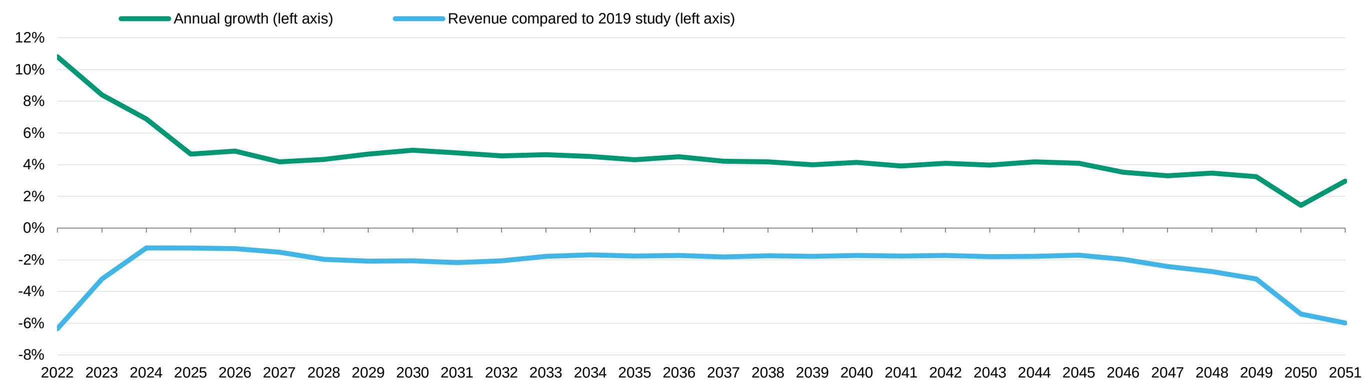


Source: NTTA

Following higher than normal annual growth projected over the next few years as work-from-home policies evolve, the long-term forecast considers reasonable annual growth between 4-5% (Exhibit 4). The revenue forecast assumes that NTTA's policy of 5.5% toll increases bi-annually (equivalent to 2.75% annual) will be maintained. NTTA has a demonstrated history of raising rates in line with policy, with the most recent increase happening in 2021 during the pandemic. The forecast also reflects that some trips expected before the pandemic will likely not return as some level of flexible work arrangements will remain and reduce the morning peaks during the week. The plan also does not include any revenue from any extensions of the existing facilities that are included in the capital plan.

Exhibit 5

The consultant's forecast growth of 4-5% is reasonable and reflects some small loss compared to pre-pandemic expectations



Source: NTTA

DSCR will improve gradually through 2026 as shown in Exhibit 2 if the traffic forecast is met. DSCR on first tier bonds will exceed 2.0x over the forecast period, a very strong level that is consistent with Aa rated toll roads. DSCR of first and second tier bonds will be more narrow near 1.4x for the next couple of years, but should be adequate as we expect revenue volatility from potential new variants or seasonal outbreaks to be less severe than the initial stages of the pandemic. Both DSCR metrics will expand annually after 2026 as annual debt service requirement level off, absent future debt issuances.

Liquidity

NTTA reported 1,428 days cash on hand (DCOH) at the end of fiscal 2021, representing a slight increase from 1,399 DCOH in fiscal 2020. As of June 30, 2022, NTTA reported unrestricted and discretionary balances of $774 million, which would cover 1,231 days based on the operating expense and RMF deposits expected for full year 2022. NTTA plans to use unrestricted cash balances over time to complete the current capital plan, which could cause a modest decrease in liquidity, but we expect liquidity to remain strong for NTTA's operating profile.

Debt and Other Liabilities - High leverage will moderate with revenue growth and no expected debt issuance

NTTA's current fiscal 2022-20263 capital plan includes $1.55 billion of project costs that will be funded from net cash flow and existing balances in capital improvement fund (CIF). The largest projects in the plan include the addition of one lane in each direction on the northern portions of the DNT and extension of the DNT. NTTA conservatively budgets for capital projects and recent bids have varied, with some coming in higher than expected but several coming in below budget despite high regional inflation. The conservatism of the plan makes it unlikely that NTTA will need to issue debt to fund the capital plan, absent continued high levels of inflation.

Planning for the eastern end of the PGBT and the 360 Tollway are also included in the current 5-year plan. Those projects combined have an estimated combined $2 billion of project costs that will occur in the next plan, if the projects go forward. Given the annual net cash flow projected beyond 2026 and the debt service profile, we do not expect debt issuance of a magnitude that would negatively pressure the rating from those projects.

Legal security

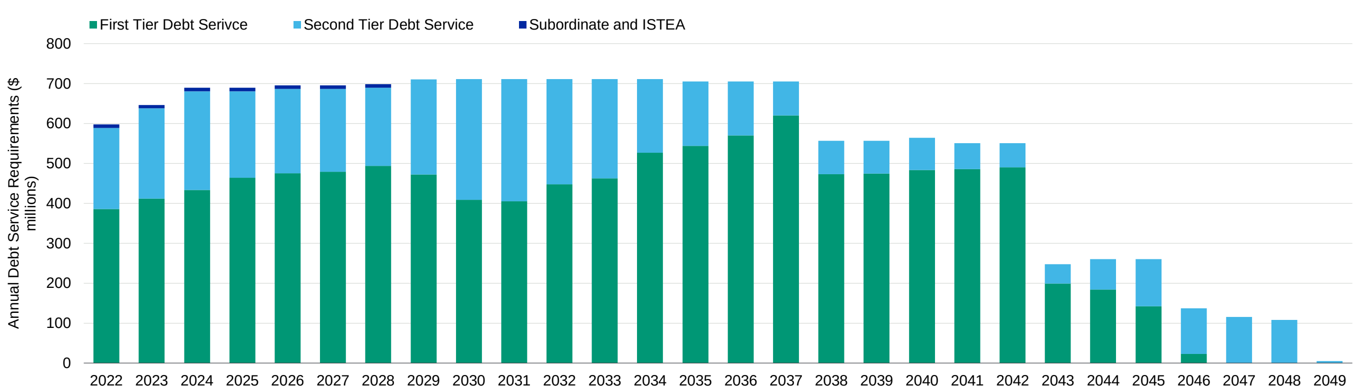
The NTTA bonds are secured by net system revenues, with first tier having a priority claim, followed by the second tier and the capital improvement fund (CIF) bonds that are secured only by balances in the CIF. The rate covenant in the amended and restated trust agreement dated April 1, 2008 requires net revenues to provide at least 1.35 times coverage of first tier debt service requirements, 1.2 times coverage of outstanding first tier and second tier debt service, and 1.0 times coverage of all outstanding obligations. The first tier bonds are additionally secured by a DSRF equal to average annual debt service and the second tier DSRF equal to one-half of average annual debt service.

Debt structure

NTTA's debt structure has been simplified by transactions that brought new facilities into the system and eliminated variable rate debt while lowering future annual debt service levels requirements. The 2022 refinancing will realize approximately $62.3 million in net present value savings. Following this transaction, NTTA will have close to two thirds of debt on the first tier and one third on the second tier. Subordinate lien bonds will compose less than 1% of the debt structure.

Exhibit 6

Annual debt service requirements will level off after 2024, providing for greater coverage or flexibility to add debt if needed to expand



Source: NTTA

Debt-related derivatives

None

Pensions and OPEB

NTTA participates in the Texas County and District Retirement System (TCDRS), a hybrid benefit pension plan. NTTA reported $159.9 million of pension assets and $158.7 million of pensions liabilities, resulting in a net pension asset of $1.14 million in fiscal 2021. On our adjusted net pension liability (ANPL) basis, NTTA had a $159.9 million liability in fiscal 2021. We view these liabilities to be manageable in relation to NTTA's overall debt load.

NTTA also participates in the Public Employees Benefits Cooperative (PEBC), a single employer defined healthcare plan. NTTA reported an other post-employment benefit (OPEB) liability of $20.1 million in fiscal 2021.

We adjust the reported pension and OPEB liabilities of entities that report under governmental accounting standards, to enhance comparability across rated issuers. Under governmental pension accounting, liabilities are discounted using an assumed rate of investment return on plan assets. Under our adjustments, we value liabilities using a market based discount rate for high quality taxable bonds, a proxy for the risk of pension benefits.

ESG considerations

Environmental

Overall, toll road issuers face limited impact from environmental risks, including NTTA. Reducing emissions from cars by limiting traffic is not a factor in the project's service area. Traffic volumes are linked to regional economic trends, land use, employment and population growth, as well as personal mobility requirements.

Social

Toll roads face social risks from customer relations and social trends. NTTA's risks from customer relations is viewed to be neutral, while the region's high growth rates positively affect demographic considerations.

Governance

The NTTA has a nine-member board of directors - two members from each of four counties served by the authority and one appointed by the Governor of Texas from a county adjacent to the authority's service area. Eight of the nine members must vote affirmatively to add on another project to the system, or to proceed with a stand-alone/off system project.

Rating methodology and scorecard factors

The principal methodology used in these ratings was Publicly Managed Toll Roads and Parking Facilities published in March 2019. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

The assigned rating of A1 on the first tier bonds matches the grid indicated rating of A1. The scorecard indicated outcome is based on fiscal 2021 values.

Exhibit 7

Factor	Subfactor	Score	Metric
1. Market Position	a) Asset Type	Aa	
	b) Competitive Position and Environment	Aa	
	c) Economic Strength and Diversity of Service Area	Aaa	
2. Performance Trends	a) Annual Revenue (USD Million)	Aaa	925
	b) Operating Track Record and Revenue Stability	Aa	
	c) Ability and Willingness to Increase Toll Rates	Aa	
3. Leverage and Coverage	a) Debt Service Coverage Ratio	Baa	1.38x 1st & 2nd Tier, 1.33x Total
	b) (Debt + ANPL) to Operating Revenue	Caa	10.52x
Notching Considerations		**Notch**	
	1 - Debt Service Reserve Fund	-0.5	
	2 - Open Flow of Funds	-0.5	
	3 - Days Cash on Hand	1.0	1,428
	4 - Asset Ownership and Financing Structure	0.0	
	5 - Leverage Outlook	0.0	
Scorecard Indicated Outcome		**A1**	

Source: Moody's Investors Service

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