

CREDIT OPINION

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Harris County Toll Road Authority, TX

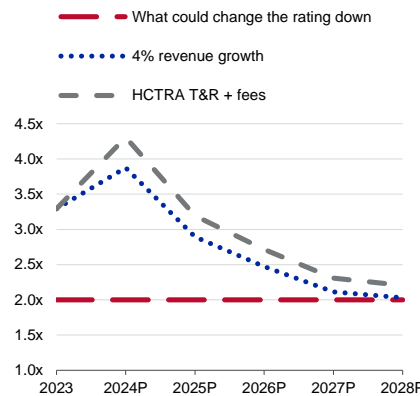
Update to credit analysis

Summary

[Harris County Toll Road Authority, TX's](#) (HCTRA, Aa1 senior/Aa2 first lien stable) credit profile is evolving as HCTRA enters a phase of increased capital spending and transformation of its toll collection processes that will lead to financial metrics weaker than HCTRA's recent historical levels. However, we expect that HCTRA will have sufficient revenue growth through transaction growth, resumed annual toll rate increases, and fee revenue to maintain strong credit metrics in line with Aa2 rated peers (see Exhibits 1 and 2). The system, located in and around the Houston metro area, supports a large, affluent, and growing service territory. HCTRA's facilities and connecting roads have experienced flooding over the past few years that have had operational impacts, however HCTRA's high liquidity (1,140 DCOH) mitigates negative revenue shocks. The open flow of funds that supports substantial annual transfers out of the authority to the county for mobility projects is a credit weakness, though the financial strength of [Harris \(County of\) TX](#) (Aaa stable) limits the potential for excess draws that would weaken the health of the toll road system.

Exhibit 1

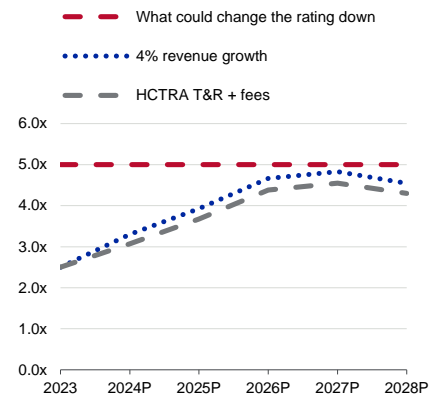
Total DSCR will remain above 2.0x if annual revenue growth is 4% or higher



Source: Moody's Ratings

Exhibit 2

Adjusted debt to operating revenue will similarly remain below 5.0x if annual revenue growth is 4% or higher



Source: Moody's Ratings

Credit strengths

- » DSCRs and cash balances will remain strong given our expectation of moderate traffic and revenue growth
- » Service area is among the largest metropolitan areas in the nation and is expected to continue strong growth long-term
- » Annual independent engineer's report shows system assets to be in good condition and current capital plan can be funded from revenues and small draws on reserves
- » Availability of an authorized but untapped property tax levy for general obligation debt service and a separate levy to make up any operating deficits provide additional flexibility

Credit challenges

- » Planned capital improvement plan is significant compared to existing debt, but low current leverage allows for debt issuance
- » Open flow of funds allows for transfers to the county, but have historically only been used for mobility projects
- » Though the economy has seen increased diversification, it remains heavily exposed to the energy sector, which has exhibited high volatility historically and will face challenges given our view of oil and gas price recovery
- » The elected county commissioners court directly oversee the authority, reducing the level of independence of rate setting versus peers

Rating outlook

The stable outlook reflects our expectation that HCTRA will renew rate increases in fiscal 2025 in line with its stated policy and that revenue will average more than 4%, which we estimate will keep total net revenue DSCR near 2.25x and adjusted debt to operating revenue peaking at 4.5x over the forecast period. However, given the tightness of metrics, HCTRA has little margin for slower revenue growth or higher than projected capital costs funded by debt at its current rating.

Factors that could lead to an upgrade

- » The Aa1 rating on the senior lien, the highest in our rated toll road portfolio, is unlikely to be upgraded given the current rating level
- » We do not expect the Aa2 rating on first lien bonds to go up in the medium term though continued strong growth, low leverage and annual rate increases would contribute to positive pressure

Factors that could lead to a downgrade

- » Failure to adhere to new toll escalation policy without reductions in the capital plan
- » Total DSCR below 2.0x
- » Adjusted debt to operating revenue above 5.0x
- » Days cash on hand below 400 days

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Key indicators

Exhibit 3

	2018	2019	2020	2021	2022	2023
Passenger Transactions Annual Growth (%)	0.1	8.2	1.2	-21.0	30.5	12.0
Operating Revenue (\$'000)	740,272	829,857	854,849	551,278	860,827	896,351
Debt Outstanding (\$'000)	2,256,415	2,237,585	2,210,890	2,334,680	2,230,520	2,111,320
Adjusted Debt to Operating Revenues (x)	3.30	2.91	2.84	4.71	2.90	2.50
Days Cash on Hand	1764	1847	1713	1964	1457	1,140
Senior Lien Debt Service Coverage By Net Revenues (x)	3.66	3.93	4.14	2.14	3.06	3.89
Total Debt Service Coverage By Net Revenues (x)	2.86	3.13	3.30	1.70	2.64	3.29

Source: Moody's Ratings

Profile

HCTRA operates a well-established multi-asset tollway system in the Houston/ Harris County metropolitan area. HCTRA's system includes 128 center lane miles and 830 lane miles. The HCTRA system connects with toll roads in Ft. Bend, Brazoria, and Montgomery Counties.

Detailed credit considerations

Revenue Generating Base: Houston service area continues to grow, outpace US

Much of the strength of HCTRA's credit profile is derived from its Houston metro area service territory and revenue generating base. HCTRA serves the center of the fifth largest metropolitan statistical area, as defined by the US Census Bureau, with a population of more than 7.5 million people in 2023. The metro area grew by 139,000 people from 2022 to 2023. We expect that region will continue to see above average population growth through the outlook period as the area economy will benefit from the up- and downstream energy economy, and expansion across housing, transportation and distribution. According to Moody's Analytics, Houston will advance faster than the nation in 2024, as oil industry and manufacturing improve.

HCTRA will also benefit from an expanding network of tolled facilities in adjacent counties, including [State Highway 249 System, TX](#) (Baa2 positive) and the managed lanes on SH 288 extending into Brazoria county, operated by [Blueridge Transportation Group, LLC](#) (Baa2 stable). We expect the increased regional usage of tolling and electronic toll collection will benefit HCTRA by reducing collection efforts and losses and result in small increases in revenue.

Improvements to tolling policy and potential to increase fee revenue with toll processing agreements

HCTRA's updated tolling policies should result in higher revenue while lowering expenses. HCTRA's renewed commitment to annual toll rate increases beginning in fiscal 2025 is key to mitigating the maturing system that we expect will have lower transaction growth. HCTRA had overridden its CPI based policy for much of the last decade as HCTRA did not need to raise rates and costs of signage and systems offset increased revenue. However, with the new implementation of cashless tolling making annual increases easier and the expectation of sizable debt issuance, HCTRA in September 2023 updated the toll rate policy to again increase rates at the greater of CPI and 2.0%, in line with TxDOT policies for [Grand Parkway Transportation Corp, TX \(A1, Stable\)](#) (GPTC) beginning in fiscal 2025.

HCTRA is phasing implementation of all-electronic tolling (AET) that will last through fiscal 2029. The phased approach mitigates collection risks on video tolling transactions. Other entities that have switched to AET have experienced manageable loss of revenue due to uncollectible transactions. HCTRA's approach should limit large decreases and allow for a gradual acceptance of the technology in the region. TxDOT currently operates SH 249 and GPTC in the region as AET facilities.

As has been disclosed by Texas Department of Transportation (TxDOT), HCTRA is in negotiations to become the toll processor for TxDOT. While negotiations are ongoing, we expect that HCTRA will include some operating margin for that and revenue will exceed costs. HCTRA recently entered into a new agreement with Vinci to provide image recognition, which is HCTRA's largest expense line. The Vinci contract decreases optical recognition expense by a third, providing addition margin possibilities.

Financial Operations and Position: Adherence to new tolling policy is required to maintain financial metrics

HCTRA's financial operations are a credit strength. Total DSCR in fiscal year ended September 30, 2023 was 3.29x, up from 2.64x in fiscal 2022. DSCR is likely to narrow significantly over the coming years as HCTRA funds most of its \$3.5 billion capital improvement plan with debt. HCTRA has not provided a longer forecast for coverage and leverage, but we estimate that annual revenue growth exceeding 4% would be sufficient to maintain DSCR above 2.0x. We base our projection on the assumption that HCTRA will fund future bond issuance similar to Series 2024A bonds - 30-year level debt service payments at 4%.

HCTRA estimates that total revenue, inclusive of toll revenue and fee revenue, will reach \$1.0 billion in fiscal 2024. Assuming 4% growth, which is reasonable given the toll policy and year-to-date transaction growth of 2%, HCTRA would remain comfortably above 2.2x DSCR (Exhibit 1). The potential for increased transactions from expansion projects and fee revenue from agreements with other toll facilities should provide greater margin.

The open flow of funds that supports substantial annual transfers out of the authority to the county for mobility projects is credit weakness, though the financial strength of Harris County limits the potential for excess draws that would weaken the health of the toll road system. In fiscal 2023, HCTRA transferred \$369.3 million out, compared to \$254 million in fiscal 2022 (February), and \$545 million in 2021. Historically, transfers had been approximately \$125 million annually. Transfers will also be limited if HCTRA's liquidity falls below 730 days cash on hand.

LIQUIDITY

HCTRA's historical liquidity is another credit strength. At the end of fiscal 2023, HCTRA reported more than \$1.1 billion in available cash and investments, or 1,140 days cash on hand (DCOH), and at no point in the last decade has HCTRA held less than 1,000 DCOH. Liquidity declined modestly in 2022 given the size of transfers out. However, we expect liquidity to remain strong even as HCTRA proceeds with the capital plan, and do not envision a scenario where HCTRA reduces liquidity to levels lower than 730 days given management's past policies on liquidity.

Debt and Other Liabilities - Potential debt issuance to fund capital plan should be manageable if revenues continue to grow at 4% and higher

Adjusted debt to operating revenue, which includes both direct debt as well as adjusted pension liabilities, was 2.50x in fiscal 2023, down from 3.01x in fiscal 2022. Due to the sizeable capital plan, leverage will increase over the forecast period, but will remain below 5.0x times if revenue continues to grow annually by 4% or greater (Exhibit 2)

HCTRA expects to fund the remaining \$3.5 billion of its five-year capital plan with existing capital funds, commercial paper and proceeds from past and future toll road revenue bonds. HCTRA projects that \$3.1 billion of the remaining \$3.5 billion will be funded by new debt issuance. We anticipate issuance between \$800 million and \$1 billion of annual debt issuance over the next few years.

The Ship Channel Bridge, one of the largest in the capital plan at \$1.45 billion, has an anticipated construction schedule of seven years. HCTRA has executed a design-bid-build contract for the bridge at an estimated construction project cost of \$858 million. Design-bid-build procurements typically leave the granting authority exposed to additional costs in future periods and HCTRA is carrying the remaining project costs in later years of the capital plan. We think that HCTRA's planning should help reduce cost overruns, but significant risk remains in later periods of the lengthy construction schedule. HCTRA has the limited ability to absorb some cost increases without significantly affecting its credit profile given the projected increased in leverage.

Some of the other major projects planned are removal all tolling barriers, the largest project with expected construction costs of \$1.6 billion. There is also a related \$238 million project for toll system enhancements. Some projects like the Hardy Downtown Connector (\$420 million over two phases) an other widening and connectors have the potential to add capacity and therefore increase revenues.

Legal security

The senior lien revenue bonds are special obligations of the county, secured by a senior lien on the trust estate established under the existing 2015 senior lien revenue bond indenture, which includes a gross pledge of funds in the debt service and debt service reserve fund (DSRF) and all revenues of the toll road system. The rate covenant requires toll revenue collection sufficient to produce revenues that provide at least 1.25x aggregate debt-service coverage on toll road senior lien revenue bonds accruing in such fiscal year. The senior lien DSRF, which is fully funded, is to be funded at not less than average annual aggregate debt service and not more than maximum annual debt service.

The first lien revenue bonds are also special obligations of the county, secured by a first lien on, pledge of and security interest in the Trust Estate established under a new revenue bond indenture, which includes a pledge of all revenues derived from the operation of the toll facilities comprising the Harris County Toll Road System, subject to and subordinate in all respects to any lien or pledge granted with respect to senior lien revenue bonds under the 2015 Indenture. The first lien bonds also benefit from a 1.25x rate covenant and the covenant that HCTRA will not issue new debt on the senior lien beyond replacement of the existing commercial paper program – which occurred and closed on April 22, 2022 - and the refunding or replacement of the Series 2007B bonds and related swaps (in connection with the expiration of LIBOR) unless the issuer obtains written approval of 75% of first lien bondholders. The 2023A bonds refunded the 2007B bonds and related swaps.

Series 2024A first lien bonds are not being issued as Reserve Fund Participants in the First Lien Debt Service Reserve Fund, or stated differently, will not have a cash funded debt service reserve at the time of the sale. Series 2024 first lien bonds holders will have the benefit of a "springing" debt service reserve fund that will be funded in the flow of funds if first lien debt service coverage falls below 2.0x.

Debt structure

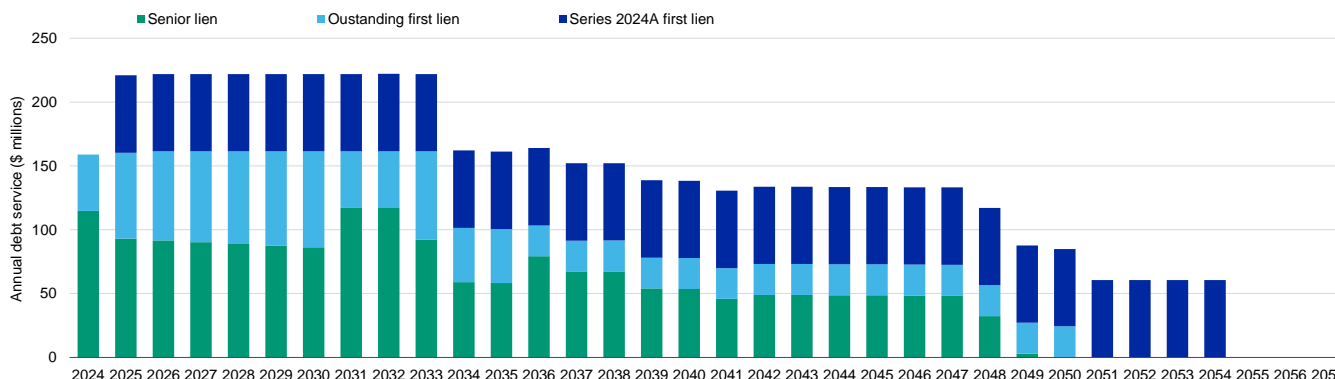
Upon completion of the Series 2024A sale, the post-sale debt structure should be around:

- » \$1.15 billion senior lien bonds (rated Aa1)
- » \$1.67 billion first lien bonds (rated Aa2)
- » \$130 million subordinate lien bonds (rated Aaa based on the county's tax pledge)

HCTRA recently restructured its debt and now the first lien bonds will become the working lien for the authority. The authority plans to move all senior lien bonds to the first lien from the Senior Lien as refunding opportunities present themselves. Under the updated indenture, the county benefits from added flexibility with multiple lien levels, while incorporating modern terms seen in RMA indentures relating to reserve funds, surety policies and defeasance securities, among others, and updating the statutory authority for financing and developing toll roads in Texas. The updated statutory authority will allow the county greater flexibility in determining whether to bond finance a broader range of projects, including joint projects with TxDOT (such as the recent HCTRA contributions for TxDOT interchange projects), transportation components of flood control projects that relate to the HCTRA toll road system and capital improvements to the Washburn Tunnel and Lynchburg Ferry, which the County currently can fund with surplus revenue on a pay-as-you-go basis.

Exhibit 4

Annual debt service requirements will escalate as future debt issuances will be planned to fund the capital improvement plan



Source: Harris County

Debt-related derivatives

N/A

Pensions and OPEB

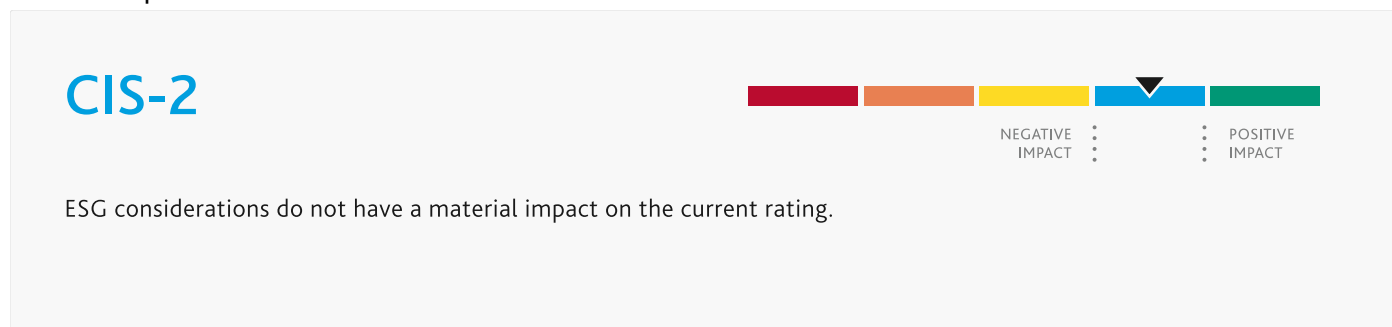
Pursuant to GASB 68, as of September 2023, HCTRA reported a net pension liability of \$24.3 million. Our adjusted net pension liability (ANPL) was \$130 million, which is manageable for an entity of this size.

ESG considerations

Harris County Toll Road Authority, TX's ESG credit impact score is CIS-2

Exhibit 5

ESG credit impact score



Source: Moody's Ratings

Harris County Toll Road Authority's (HCTRA **CIS-2** indicates that ESG considerations are not material to the rating. HCTRA has elevated environmental risks caused by exposure to flooding and hurricanes, but HCTRA maintains solid liquidity to mitigate intermittent revenue losses. Social risks do not pose significant risks, but HCTRA has positive exposure to favorable demographic trends.

Exhibit 6

ESG issuer profile scores



Source: Moody's Ratings

Environmental

E-3 HCTRA has negative exposure to physical climate risks because of Harris County's high risk of hurricanes, which have historically resulted in operational disruptions. The increasing use of electric or hybrid vehicles still require the use of the roadways, limiting exposure to carbon transition risks impacts on traffic and revenue. While roadway materials are carbon intensive (i.e., concrete and asphalt), wide use of sustainable alternatives have yet to become widely and affordably available and there has yet to be a rise in political or social pressure to decarbonize construction materials to date.

Social

S-2 HCTRA faces limited social risk. HCTRA benefits from positive exposure to demographic and societal trends because the region's well above average population growth supports increasing transaction and revenue collection levels.

Governance

G-2 HCTRA's exposure to governance risk is limited. HCTRA faces risk from organization structure given the increase in transfers to the county for non-toll road projects. The toll road operates as a division of Harris County. Its operating board is comprised of members of the county commissioners court, all five of whom are elected officials

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

The principal methodology used in these ratings was Publicly Managed Toll Roads and Parking Facilities published in May 2023. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

The scorecard indicated rating for HCTRA matches the assigned rating for the first lien bonds, which is the operating lien for the authority.

Exhibit 7

Scorecard for Harris County Toll Road Authority, TX

Scorecard shows audited fiscal 2023 metrics

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	Aaa	\$896m
	b) Operating Track Record and Revenue Stability	Aa	
	c) Ability and Willingness to Increase Toll Rates	A	
3. Financial Metrics	a) Debt Service Coverage Ratio	Aaa	3.29x
	b) (Debt + ANPL) to Operating Revenue	Aaa	2.50x
Notching Considerations		Notch	
	1 - Debt Service Reserve Fund level	0	
	2 - Open/Closed Flow of Funds	-1	
	3 - Days Cash on Hand	1	
	4 - Asset Ownership and Financing Structure	0	
	5 - Leverage Outlook	-0.5	
Scorecard Indicated Outcome:		Aa2	

Source: Moody's Ratings

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