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CREDIT OPINION
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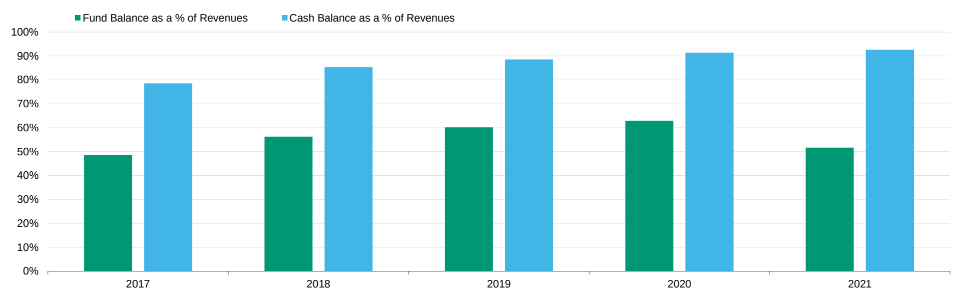
Harris (County of) TX

Update to credit analysis

Summary

Harris County, TX's (Aaa stable) credit profile is anchored by a large and global economy complemented by stable demographics that continue to drive the county's expansive and growing tax base. The county's economy is grounded in energy and resources, healthcare and logistics and transportation. Despite fluctuations in the energy industry, the county's economy has steadily improved over the past two decades. The financial profile is strong, supported by prudent practices that have driven multiple years of surplus operations and an accumulation of reserves (see Exhibit 1). The county will maintain its ample reserve position because its revenue mix is highly dependent on stable property tax revenue. Plus, federal funding will boost the county's available resources. Environmental considerations remain a challenge for the area but part of the exposure is mitigated by county as well as multilevel government funding for infrastructure investment to improve the area's resiliency. The debt and pension profile and fixed costs will remain affordable, supported by a large and established economy even though the county expects to issue additional and substantial debt over the next five to 10 years largely to support flood control initiatives.

Exhibit 1
Ample fund and cash balance levels remain well above 45% of revenue in the past five years



Fund and cash balance information considers general and debt service funds
Source: Harris County, TX Audited Financial Statements

Credit strengths

» Large and important economy driving assessed value growth

» Strong management team with a history of generating large surpluses

» Healthy reserves with ample liquidity in the operating funds

Credit challenges

» Area is prone to weather related events due to location close to Gulf Coast

» Sizeable debt issuance expected in the next few years for flood control projects

Rating outlook

The stable outlook reflects the county's important and expansive economy which will sustain its tax base and support property taxes, the largest source of operating revenue. This coupled with prudent fiscal practices will allow ample reserves to remain and allow debt and pension levels to remain affordable over the next five years.

Factors that could lead to an upgrade

» Not applicable

Factors that could lead to a downgrade

» Substantial reduction in reserves

» Material economic contraction signified by weakening in key indicators

Key indicators

Exhibit 2

Harris (County of) TX	2017	2018	2019	2020	2021
Economy/Tax Base					
Total Full Value ($000)	$421,438,862	$436,392,684	$448,414,364	$482,200,998	$504,850,540
Population	4,525,519	4,602,523	4,646,630	4,646,630	4,646,630
Full Value Per Capita	$93,125	$94,816	$96,503	$103,774	$108,649
Median Family Income (% of US Median)	93.3%	93.5%	92.2%	92.2%	92.2%
Finances					
Operating Revenue ($000)	$2,362,666	$2,371,430	$2,394,325	$2,573,425	$2,964,669
Fund Balance ($000)	$1,148,339	$1,335,512	$1,441,436	$1,619,309	$1,532,004
Cash Balance ($000)	$1,855,747	$2,022,716	$2,120,440	$2,352,266	$2,745,991
Fund Balance as a % of Revenues	48.6%	56.3%	60.2%	62.9%	51.7%
Cash Balance as a % of Revenues	78.5%	85.3%	88.6%	91.4%	92.6%
Debt/Pensions					
Net Direct Debt ($000)	$2,582,927	$2,449,388	$2,362,685	$2,414,024	$2,366,556
3-Year Average of Moody's ANPL ($000)	$3,732,524	$4,116,486	$4,410,572	$4,931,367	$5,772,769
Net Direct Debt / Full Value (%)	0.6%	0.6%	0.5%	0.5%	0.5%
Net Direct Debt / Operating Revenues (x)	1.1x	1.0x	1.0x	0.9x	0.8x
Moody's - adjusted Net Pension Liability (3-yr average) to Full Value (%)	0.9%	0.9%	1.0%	1.0%	1.1%
Moody's - adjusted Net Pension Liability (3-yr average) to Revenues (x)	1.6x	1.7x	1.8x	1.9x	1.9x

Source: Harris County, TX Audited Financial Statements, US Census Bureau

Profile

Harris County, home to the City of Houston (Aa3 stable), is the third most populous county in the nation with a total population of over 4.5 million people. The economy is driven by energy and resources, manufacturing and logistics.

Detailed credit considerations

Economy and tax base: large economy drives tax base growth

Harris County's strong economic performance will remain over the next five to 10 years supported by a large and more diversified economy and strong assessed valuation growth. Despite a variety of challenges in the past decade such as a major weather event, lower oil prices and the coronavirus pandemic, that threatened to weaken the county's economic output, economic and associated tax base growth have been steady reflecting sustained demand (both commercial and residential) for the area.

Anchored by the City of Houston, a critically important global economic hub, the county's longer term economic outlook is solid because of favorable demographic trends and high demand for its main economic sectors: energy, healthcare and life sciences and logistics and transportation. Population growth has been persistent, recording double digit increases in the past four census cycles. In 2019, the American Community Survey estimated population at 4.6 million, an increase of over 12% since 2010. Historical access to abundant job opportunities has supported high labor force participation. However, the county was not immune to difficulties from the coronavirus pandemic with a September 2020 unemployment rate of 10%, which was higher than the state's 8.3% and nation's 7.7% per the Bureau of Labor Statistics. Positively, the rate has declined to 5.6% as of September 2021, even though it remained above the state's 4.9% and the nation's 4.6%.

Similar to other large urban areas, the county's income indicators lag the nation with the fiscal 2019 median family income at 92.2% of the nation. Positively, the median home value is low at 80.8% of the nation, signaling relatively low home affordability difficulties compared with peers.

Real property accounts for over 86% of the county's tax base with the rest from personal property. Mineral values are minimal in the area. With significant investment and redevelopment, assessed value has grown each year since fiscal 2011 yielding a sizeable $504.9 billion in fiscal 2021. The fiscal 2021 value is a solid 7.5% increase over the prior year bringing the five year average to 5.2%. The preliminary taxable value for fiscal 2022 as of April 30, 2021 was $513.6 million.

Financial operations and reserves: operating performance is strong and drives ample reserves

The county's solid financial position will be sustained by conservative budgeting and strong property tax revenue growth. Property taxes, the county's largest revenue source have grown consistently over time and are projected to continue their positive trajectory supported by the preliminary fiscal 2022 values, reflecting the value of properties that were in the ground as of January 1, 2021.

Fiscal 2022 started on March 1, 2021 with the county adopting a balanced budget for the year. With limited increases in new cost for unanticipated financial difficulties, the county's August 31, 2021, unaudited cash flow projects an increase of about $146 million in the general fund by fiscal year end.

Pandemic related costs of about $440 million have been manageable targeting various initiatives including emergency rental assistance, grants for small cities, student digital services, direct assistance and small businesses amongst others. The county expects these costs will be offset with federal funding. Following the $426 million received from the CARES Act, the county has also received $458 million in June 2021 (fiscal 2022) from the American Rescue Plan Act with another $458 million expected in the second quarter of 2022. These funds are outside of the county's ample resources.

In fiscal 2021 (February 28 year-end) the county reported a general fund surplus of $433.4 million, increasing its total balance to $2.4 billion, an abundant 84.3% of revenue. Of the total fund balance, $1.4 billion (49.3% of revenue) was available. The positive performance in fiscal 2021 extends the county's solid and surplus operating performance since fiscal 2012.

The general fund as reported in the CAFR includes a group of funds (General Operating, Public Contingency, Mobility Fund and General Debt fund). Within the group, the general operating and public contingency sub funds had unassigned balances of $1.3 billion and $93.2 million respectively. The mobility sub fund had about $333 million restricted for related projects and the debt sub fund had $276.9 million restricted for debt. The county's available reserves was $1.5 billion, 51.7% of operating revenue, when including the non-major governmental debt service fund.

The county remains well under its property tax cap although starting in fiscal 2021, the county's ability to raise property taxes on an annual basis was reduced to 3.5% without voter approval. This revenue limitation excludes new construction, in compliance with the mandate from Senate Bill 2. Total county operations are subject to a cap of $8.00 per $1,000 of assessed value with the Attorney General's office not permitting more than $4.00 allocated to debt service. The fiscal 2021 tax rate was $3.91 ($3.30 for general fund including $.010 for public improvement contingencies and $0.51 for debt service).

Liquidity

The county's liquidity is high. As of August 31, 2021, general operating sub fund cash was $731.7 million. The county also maintains liquidity in other funds available for general operating needs including $99.2 million in the Public Contingency Fund, $417.3 million in the Mobility Fund and $201.2 million in the Debt Service Fund. Together, these funds account for the general fund reported in the CAFR and totaled $1.4 billion.

At fiscal year end 2021, general fund cash was $2.5 billion, 87% of revenue. This number increases to $2.7 billion, 92.6% of operating revenue when including the non-major governmental debt service fund.

Debt and pensions: modest debt burdens with affordable pensions

Harris County's debt profile will remain affordable supported by its large tax base even as debt issuance is expected in the next several years. The direct debt burden of 0.4% on a fiscal 2021 valuation is modest. This number increases to 6.2% when considering overlapping debt. The direct debt incorporates the county's $530.8 million in unlimited tax debt and $1.3 billion in limited tax debt (including the flood control contract tax bonds). The county also has $171.6 million in toll road tax bonds which have been fully supported by net revenue from the county's toll system, therefore they have been netted out of the debt burden. Of the total debt, we rate about $1 billion.

Payout is affordable with about 70% of principal retired in 10 years. Authorized unissued debt totals about $2.7 billion with $2 billion allocated for flood control projects. The county expects debt issuance over multiple years to support a variety of initiatives including flood control.

The county's five year capital plan calls for $8.8 billion in investments over the next five years. More than half ($5.2 billion) will be for flood control projects with another $2.7 billion for toll road projects. The rest of the investments will focus on other county wide initiatives. Funding for the toll projects will be derived from the county's toll road authority, while the flood control projects will benefit from the $2.5 billion authorized by voters in 2017, and the county's property taxes. The county also expects $1.2 billion from partners while $1.4 billion in funding is to be determined.

Legal security

The unlimited tax road bonds are payable from a direct and continuing annual ad valorem tax levied against all taxable property without legal limitation as to rate or amount.

The permanent improvement bonds are payable from a direct and continuing annual ad valorem tax levied against all taxable property within the limits prescribed by law. The county is legally allowed an $8 per $1,000 of assessed value tax rate for all purposes and the Attorney General's office will not permit more than $4 to be allocated for debt.

The flood control bonds are secured by a direct and continuing annual ad valorem tax levied against all taxable property within the limits prescribed by law. The flood control district can levy a total tax rate of $3 with no limit on how much can be used for debt service.

Debt structure

All of the county's general obligation long term debt is fixed rate. The pro forma debt service schedule is descending with a final maturity in 2047.

The county's outstanding debt is largely fixed rate but includes a $1.8 billion commercial paper (CP) program ($237.7 million outstanding as of November 8, 2021) excluding the program secured by toll revenue. As of November 8, 2021, CP accounted for 6% of the county's total debt. Commercial paper is used for capital purposes, in anticipation of periodic long-term bond issues. External liquidity for the program is provided by State Street Bank and Trust Company (Aa2 Stable), Bank of America N. A. (Aa2 stable), JPMorgan Chase Bank N.A. (Aa2 Stable), and Wells Fargo Bank N.A. (Aa2 stable), all of which have short term ratings of P-1.

Debt-related derivatives

The county has no general government swap exposure.

Pensions and OPEB

The county provides retirement, disability and death benefits for all of its non-temporary employees through a nontraditional defined benefit pension plan in the statewide Texas County and District Retirement System (TCDRS). The county has consistently fully funded its annual required contributions. However, we note that TCDRS' discount rate of 7.6% is higher than most large US public pension systems and highlights the system's vulnerability to pension asset volatility. Although the rate was reduced from the 8% reported in the prior year.

We gauge pension investment risks at the issuer level using our “pension asset shock indicator,” which is our estimate of the one-year probability of a pension investment loss amounting to 25% of a government's operating revenue. The indicator is a function of size of pension assets compared with revenue and asset volatility risk. The higher the assumed rate of investment return, the higher the expected volatility or standard deviation of returns that we assign, based on our estimated efficient frontier. Given the high assumed rate of return and sizable pension assets accumulated, Harris County's pension asset shock indicator of 13.1% was well above the median 6% for the entities covered in our most recent survey of the nation's largest local governments.

Unfunded pension and other post employment benefits (OPEB) liabilities should remain affordable, although the county's discount rate is high highlighting its risk to pension asset volatility. Our fiscal 2021 adjusted net pension liability (ANPL) for the county, using a 2.52% discount rate, is $7.2 billion, an affordable 2.4 times operating revenue. In comparison, the county reported a GASB net pension liability of $699.5 million, using a 7.6% discount rate. The three year average ANPL was about 2 times operating revenue or 1.1% of full value.

The county has a strong history of making required contributions and in fiscal 2021, the county paid about $172 million, which was above the our calculated “tread water” level of $110.7 million. The “tread water” indicator measures the annual government contribution required to prevent the reported net pension liability from growing under reported assumptions. Although actual contributions were higher than tread water, the indicator is understated given that the discount rate remains high.

The county offers other post-employment benefits (OPEB) to its retirees in the form of medical, dental vision and basic life insurance benefits. The plan has historically been funded on a pay as you go basis; county officials expect this will continue. In fiscal 2021, the county contributed $62.1 million. The county's adjusted net OPEB liability was $3.2 billion. At 107% of revenue, the liability is an affordable source of balance sheet leverage.

Total fixed costs (pensions, debt and OPEB) was $575 million or an affordable 17% of operating revenue, with debt service accounting for most the costs at 11%.

ESG considerations

Harris (County of) TX's ESG Credit Impact Score is neutral-to-low CIS-2.

Exhibit 3

ESG Credit Impact Score

CIS-2

Neutral-to-Low

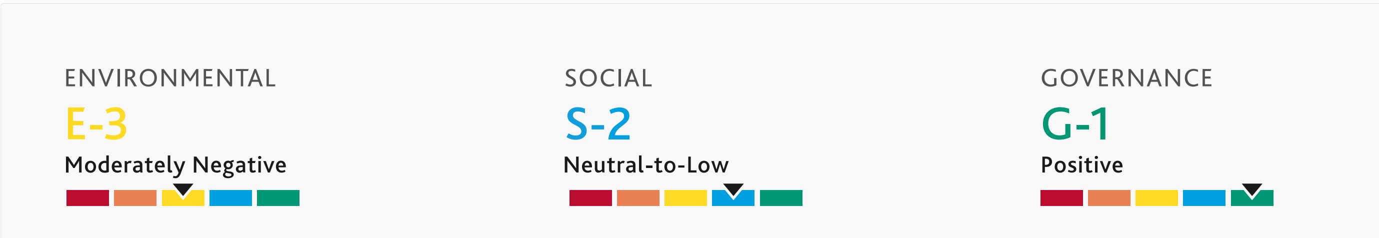
For an issuer scored CIS-2 (Neutral-to-Low), its ESG attributes are overall considered as having a neutral-to-low impact on the current rating; i.e., the overall influence of these attributes on the rating is non-material.

Source: Moody's Investors Service

Harris County's ESG Credit Impact Score is neutral-to-low (CIS 2) reflecting moderately negative exposure to environmental risks that is mitigated in part by the county's extensive infrastructure development and planning, low to neutral exposure to social risks and a very strong governance profile. These factors as well as an exceptionally strong balance sheet and external financial and capital investment from higher levels of government to combat environmental challenges support the government's rating, resilience and capacity to respond to shocks.

Exhibit 4

ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

The county's overall E issuer profile score is moderately negative (**E-3**) reflecting some exposure to environmental risks particularly physical climate risks, and carbon transition, even though risks across all other categories including water management, waste and pollution and natural capital is neutral to low. The county has developed extensive flood control infrastructure and undergoes multiyear capital planning for future infrastructure development. These practices supported by voter approved funding and policies that govern building codes and development will increase the county's resiliency. Absent these mitigating initiatives or if the county fails to continue pursuing similar initiatives, the E IPS score will weaken. Exposure to carbon transition risks is inherent in the area's role as a global energy leader. Sustained demand for green alternatives will weigh on the county but its effects will play out over a much longer period.

Social

The county's S issuer profile score is neutral to low (**S-2**) reflecting positive exposure to demographics supported by a young populace and high net migration and low housing exposure. Labor and income, education, health and safety and access to basic services are neutral to low in the area.

Governance

Harris County's strong governance profile supports its rating as captured by a positive G issuer profile score (**G-1**). This reflects a strong institutional framework and policy credibility and effectiveness demonstrated by solid budget management evidenced in budget outcomes that are significantly favorable compared to expectations. The county's commitment to transparency and disclosure is also evident in monthly reporting of key financial information. The county also produces long range financial forecasts and capital planning that encompass population projections to guide a forward planning view for its resources.

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

Exhibit 5

Harris (County of) TX

Scorecard Factors and Subfactors	Measure	Score
Economy/Tax Base (30%) [1]		
Tax Base Size: Full Value (in 000s)	$504,850,540	Aaa
Full Value Per Capita	$108,649	Aa
Median Family Income (% of US Median)	92.2%	Aa
Notching Adjustments:[2]		
Regional Economic Center		Up
Finances (30%)		
Fund Balance as a % of Revenues	51.7%	Aaa
5-Year Dollar Change in Fund Balance as % of Revenues	20.6%	Aa
Cash Balance as a % of Revenues	92.6%	Aaa
5-Year Dollar Change in Cash Balance as % of Revenues	40.9%	Aaa
Management (20%)		
Institutional Framework	Aa	Aa
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures (x)	1.1x	Aaa
Debt and Pensions (20%)		
Net Direct Debt / Full Value (%)	0.4%	Aaa
Net Direct Debt / Operating Revenues (x)	0.7x	A
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value (%)	1.1%	Aa
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues (x)	1.9x	A
Notching Adjustments:[2]		
Unusually Strong or Weak Security Features: Debt is secured by state statute		Up
	Scorecard-Indicated Outcome	Aaa
	Assigned Rating	Aaa

[1] Economy measures are based on data from the most recent year available.
[2] Notching Factors are specifically defined in the Local Government General Obligation Debt methodology
[3] Standardized adjustments are outlined in the GO Methodology Scorecard Inputs publication
Source: Harris County, Texas audited financial statements, US Census Bureau, Moody's Investors Service

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