

CREDIT OPINION

3 October 2025



Contacts

Brittany Burrell +1.214.979.6896  
Analyst  
brittany.burrell@moody's.com

Adebola Kushimo +1.214.979.6847  
Associate Managing Director  
adebola.kushimo@moody's.com

CLIENT SERVICES

Americas 1-212-553-1653  
Asia Pacific 852-3551-3077  
Japan 81-3-5408-4100  
EMEA 44-20-7772-5454

City of New Orleans, LA

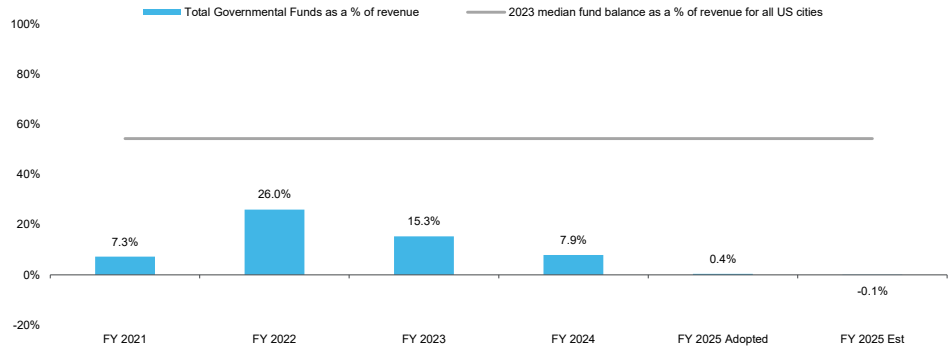
Update to credit analysis following downgrade

Summary

The [City of New Orleans, LA](#)'s (A3 negative) credit profile benefits from strong tourism activity and the institutional presence of higher education and health care providers. The city's credit profile also reflects a trend of declining reserves leading to a very narrow financial position that lags sector peers. Available fund balance and liquidity saw material and unexpected declines in fiscal 2024 and 2025 year-to-date (December 31 year-end), with further deterioration likely in the balance of fiscal 2025 and 2026 (see Exhibit 1). The city is implementing various cost reductions and exploring revenue enhancement measures that may moderate the expected use of reserves in 2025. Although the preliminary fiscal 2026 budget does not include further appropriation of reserves, it includes significant revenue enhancements that are subject to council approval. Absent council approval of the enhancements, revenue declines may continue to pressure the credit profile.

Despite economic gains made in recent years, growth in the city has not kept pace with national GDP growth and resident income remains well below the national average with the resident income ratio at 77%. The city's leverage ratio is manageable at 221% of fiscal 2024 revenue. Adjusted net pension liabilities (ANPL) has improved though remains elevated and constitutes the largest portion of the city's long-term liabilities. Obligations related to the state-mandated public safety employees' pension plans will likely remain elevated for the foreseeable future as the city continues efforts to increase public safety staffing. The city's exposure to environmental considerations is and will remain elevated though significant infrastructure investments by multiple levels of government have improved the area's resilience to weather events.

Exhibit 1  
**Fund balance fell significantly in recent years, and remains well below the median for US cities**  
Total governmental fund balance includes restricted reserves available for operations



Source: Audited financial statements; Moody's Ratings

## Credit strengths

- » Large tax base supported by tourism economy, institutional presence, and regional importance

## Credit challenges

- » Very narrow reserves with further declines likely
- » Significant portion of employment and revenue driven by tourist related sectors can cause volatility through economic cycles
- » Below average resident income ratio

## Rating outlook

The negative outlook reflects ongoing challenges faced by the city as it works towards sustainably balanced financial operations. Absent the successful implementation of various strategies to return to structural balance, further spend down of reserves will occur, reducing financial flexibility and further pressuring the city's credit profile.

## Factors that could lead to an upgrade

- » Successful implementation of revenue enhancements resulting in surplus operations improving the city's reserves to levels more in line with A rated peers, typically above 40% of revenue
- » Decline in long-term liabilities below 200% of revenue and fixed costs below 10% of revenue

## Factors that could lead to a downgrade

- » Material operating deficit in fiscal 2025 eroding reserves beyond current position
- » Failure to demonstrate meaningful progress towards structurally balanced operations in the fiscal 2026 budget
- » Debt issuance that increases long-term liabilities to more than 400% of revenue

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

## Key indicators

Exhibit 2

### New Orleans (City of) LA

	2021	2022	2023	2024	A Medians
<b>Economy</b>					
Resident income ratio (%)	70.0%	72.7%	77.3%	N/A	84.1%
Full Value (\$000)	\$40,860,721	\$45,619,104	\$53,146,170	\$53,618,481	\$773,368
Population	383,974	380,408	376,035	N/A	10,256
Full value per capita (\$)	\$106,415	\$119,922	\$141,333	N/A	\$73,014
Annual Growth in Real GDP	4.6%	-1.3%	5.0%	N/A	1.4%
<b>Financial Performance</b>					
Revenue (\$000)	\$1,194,213	\$1,361,744	\$1,438,121	\$1,363,296	\$23,569
Available fund balance (\$000)	\$55,593	\$286,975	\$87,196	-\$26,726	\$10,598
Net unrestricted cash (\$000)	\$1,043,513	\$1,055,990	\$818,906	\$565,978	\$14,985
Available fund balance ratio (%)	4.7%	21.1%	6.1%	-2.0%	43.2%
Liquidity ratio (%)	87.4%	77.5%	56.9%	41.5%	60.8%
<b>Leverage</b>					
Debt (\$000)	\$1,111,273	\$921,882	\$806,946	\$932,271	\$19,877
Adjusted net pension liabilities (\$000)	\$1,940,681	\$1,607,325	\$1,575,748	\$1,388,392	\$22,873
Adjusted net OPEB liabilities (\$000)	\$149,676	\$105,923	\$107,010	\$91,658	\$1,390
Other long-term liabilities (\$000)	\$470,014	\$472,814	\$534,109	\$599,013	\$783
Long-term liabilities ratio (%)	307.5%	228.2%	210.3%	220.9%	234.0%
<b>Fixed costs</b>					
Implied debt service (\$000)	\$46,138	\$77,944	\$64,384	\$56,055	\$1,262
Pension tread water contribution (\$000)	\$78,847	\$67,089	N/A	N/A	\$544
OPEB contributions (\$000)	\$9,662	\$10,390	\$9,603	\$7,376	\$62
Implied cost of other long-term liabilities (\$000)	\$34,235	\$32,967	\$33,021	\$37,102	\$53
Fixed-costs ratio (%)	14.1%	13.8%	12.1%	15.7%	11.3%

For definitions of the metrics in the table above please refer to the [US Cities and Counties Methodology](#) or see the Glossary in the Appendix below. Metrics represented as N/A indicate the data were not available at the time of publication. The medians come from our most recently published [US Cities and Counties Median Report](#).

The real GDP annual growth metric cited above is for the New Orleans-Metairie, LA Metropolitan Statistical Area.

Sources: US Census Bureau, New Orleans (City of) LA's financial statements and Moody's Ratings, US Bureau of Economic Analysis

## Profile

The City of New Orleans has an estimated population of about 364,000 (as of 2023) and is the largest city in [Louisiana](#) (Aa2 stable) by population. The city is in the southeastern portion of the state and lies along the Mississippi River near the gulf coast. The city's economy is driven by tourism, trade, health care, and higher education.

## Detailed credit considerations

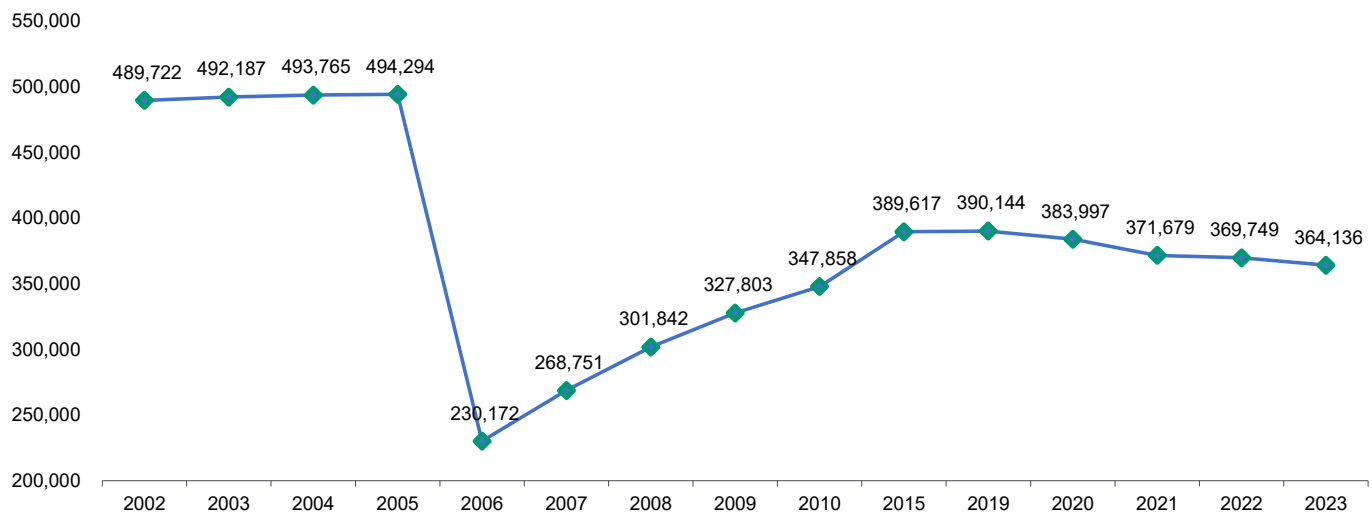
### Economy: strong tourism supports economic stability

The greater New Orleans area will continue to benefit from strong tourism activity and the institutional presence of higher education and health care providers. The city's main industries include tourism, transportation and trade, health care and higher education. The city annually hosts several major events that drive tourism including Mardi Gras, the New Orleans Jazz Fest, Essence Fest, and the New Orleans Film Festival. The city is also home to two professional sport franchises—the New Orleans Saints football team and the New Orleans Pelicans basketball team—and recently hosted the NFL Super Bowl in February 2025. The city continues to see increases in hotel, conference, and cruise line activities.

While the economy has seen positive gains in recent years, the city still faces some challenges. While GDP has nearly recovered to pre-pandemic levels, it still lags the nation with an annual average increase of 0.4% over the past five years. The US GDP has increased an annual average of 2.3% in the same period. The city's resident income also lags similarly rated peers with a median household income of 77% of the US when adjusting for regional price parity. While the city's full value per capita has increased to almost \$143,000, well above the median for the A rating category, this is due in large part to population declines in recent years (see Exhibit 3) coupled with recent tax base growth driven largely by appreciation.

Exhibit 3

After years of growth post-Katrina, population has seen steady declines since 2019



Source: US Census Bureau

Despite these challenges, the city remains a destination of regional importance. Resurgence in tourism and related economic activity will be key to supporting the city's economic trajectory over the next three to five years.

#### Financial operations: narrowing reserves with further declines expected

The city's financial reserves will see declines in fiscal 2025 following material declines in fiscal 2024. In recent years, the city has successfully adopted balanced budgets due to the availability of one time funds – both American Rescue Plan Act (ARPA) funding and fund balance – to cover lost revenue as a result of the pandemic. In fiscal 2024, the use of reserves exceeded the budgeted amount with that trend expected to continue in fiscal 2025.

In fiscal 2025, the city budgeted the use of \$102.3 million of fund balance in support of operations and one-time capital funding. As of September, the city is further projecting a \$30 million decline in revenue and a \$70 million increase in expenses that could result in the use of additional reserves. Unbudgeted 2025 costs are largely attributable to public safety overtime stemming from the Bourbon Street terror attack on New Years Day as well as additional expenses in response to the unprecedented snowstorm that occurred a few weeks later. Furthermore, the city reports a decrease in property tax collections, declines in sales taxes, and other declines in revenues as a result of state legislative changes.

The city is working on several cost reduction measures intended to offset increased costs and declines in revenues, at least to a degree. Several revenue enhancement measures are also under consideration as part of the fiscal 2026 budget development process that could lead to increased property and sales tax revenue, if approved by council. The city's ability to successfully implement cost reduction and revenue enhancement measures through the remainder of fiscal 2025 and into fiscal 2026 will be key considerations in future reviews.

The city closed fiscal 2024 (December 31 year-end) with Moody's calculated available fund balance of -\$26.7 million representing -2% of revenue. This was a material decrease from the prior year due to the unplanned use of an additional \$78 million in fund balance largely in support of public safety overtime and capital projects as the city prepared for the 2025 NFL Super Bowl. Positively, the city currently holds \$135 million in restricted fund balance. Management intends to retain \$100 million of that as a static amount specifically to be used for emergencies while the additional \$35 million may fluctuate year-to-year as it is based on a percentage of general fund expenditures.

Per a charter amendment approved by voters in November 2017, the city must maintain a rainy day savings fund equal to 5% of the average past five years of general fund expenditures which is reported as restricted fund balance. This reserve cannot be utilized unless two-thirds of the council votes to use it, though that may only occur in the case of an emergency, economic recession, or federal

mandate. Additionally, the city has a goal of maintaining a 2% unreserved fund balance and 8% emergency fund balance within the committed general fund balance.

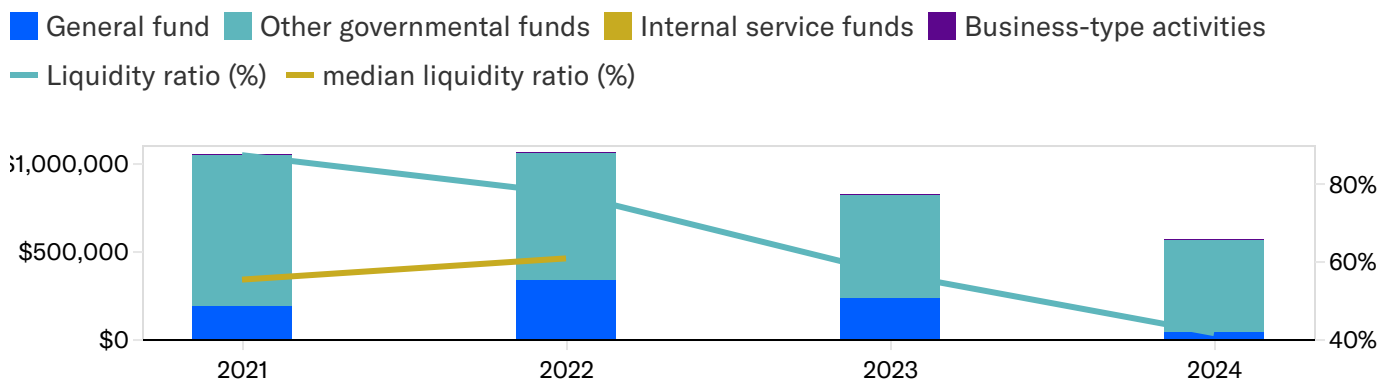
The city's largest revenue sources are property and sales taxes, which together accounted for approximately 48% of revenue in fiscal 2024. Intergovernmental revenue and charges for services were also main revenue sources at 32% and 15%, respectively. The city has seen sales tax and hotel/motel taxes return to pre-pandemic levels. Management expects sales tax growth to moderate in the coming years. Declines in property tax collections will likely remain a challenge in the coming years.

### Liquidity

At fiscal year-end 2024, available liquidity across all governmental funds totaled \$566 million, including \$91.8 million in the debt service fund, representing 41.5% of fiscal 2024 revenue and a 31% decline from fiscal 2023. This decline reflects the spend down of pandemic aids as well as the increased use of fund balance in support of operations. Liquidity has declined further year-to-date in fiscal 2025 with the budgeted use of reserves and the city contending with significant, unplanned expenses.

Exhibit 4

**Cash has declined with the increase use of reserves in support of operations**



Source: Audited financial statements; Moody's Ratings

### Leverage: manageable leverage, elevated fixed costs

The city's leverage compares favorably to similarly rated peers and will remain manageable even as the city prepares to issue additional debt in the near term. The city ended fiscal 2024 with a long-term liabilities ratio of 221%. City Council recently authorized the issuance of \$90 million in debt to pay legal judgements and settlements against the city. Half of the authorized amount will be issued in 2025 with the balance projected to be issued in 2027. Additionally, the city will approach voters in November 2025 for authorization of approximately \$500 million in support of various capital projects.

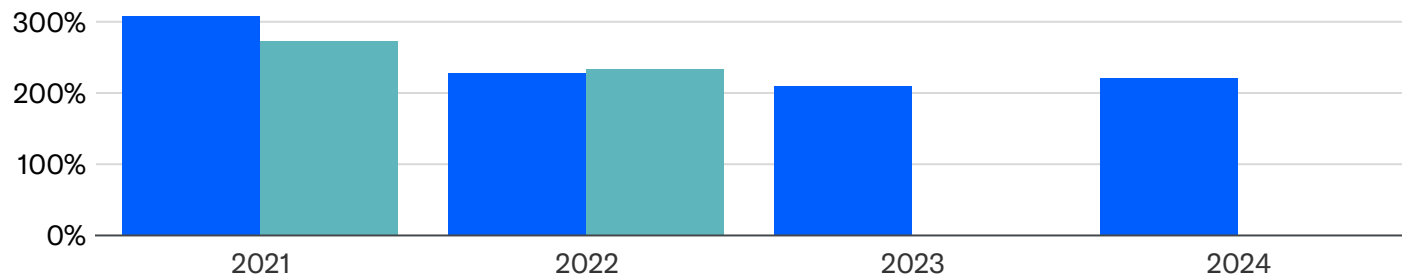
All leverage is in the city's governmental activities funds with debt accounting for approximately 31% of the city's total leverage ratio. The Moody's adjusted net pension liability (ANPL) improved in fiscal 2024 supported by increases in both pension contributions and interest rates based on which future liabilities are discounted, but remains elevated and constitutes the largest portion of the city's long-term liabilities ratio at 46%.

The city's ability to fully fund pension obligations will play a role in the city's credit profile going forward; specifically, costs associated with the old firefighters plan that is funded on a pay-as-you-go basis and the obligations related to the Municipal Police Employee Retirement System (MPERS). The continued loss of officers has reduced the amount the city is paying into the pension fund which triggered fines. The city remains in communication with MPERS to identify a solution to alleviate the fines related to the decreased contributions as a result of the loss of officers. The city is also in the midst of a leave conversion lawsuit with MPERS to determine if the city has sufficiently paid into the fund when considering retiring officer's unused sick leave. An adverse ruling against the city resulting in additional liabilities could negatively impact the credit profile.

Exhibit 5

**Total Primary Government - Long Term Liabilities**

■ Long-term liabilities ratio ■ Median long-term liabilities ratio - Aa cities



Source: Audited financial statements; Moody's Ratings

**Debt structure**

All of the city's debt is fixed rate and amortizes in annual installments over the long term with final maturity in 2053.

**Debt-related derivatives**

The city is not party to any interest rate swaps or other derivative agreements.

**Pensions and OPEB**

The city has three single-employer pension plans, the Employees' Retirement System and two plans for Firefighters (new system and closed old system). The City also participates in the Municipal Police Employees' Retirement System, which is a statewide cost-sharing plan, and includes assets from the city's single employer police plan that was merged in 1983.

The city's contributions to the Municipal Police plan are set by the state legislature and benefits are set by state statute. Contributions to the employees' plan and new firefighters plan are actuarially determined while the old firefighters plan is funded on a pay-as-you-go basis. The old plan covers firefighters employed before 1968.

The city made several benefit changes to the employee's plan for new hires as of January 1, 2018, including a lower benefit multiplier, increased retirement age, lower base earnings for benefit calculations, and shorter DROP period. Cost-of-living adjustments (COLAs) are not granted, even for current retirees, unless the plan is at least 95% funded.

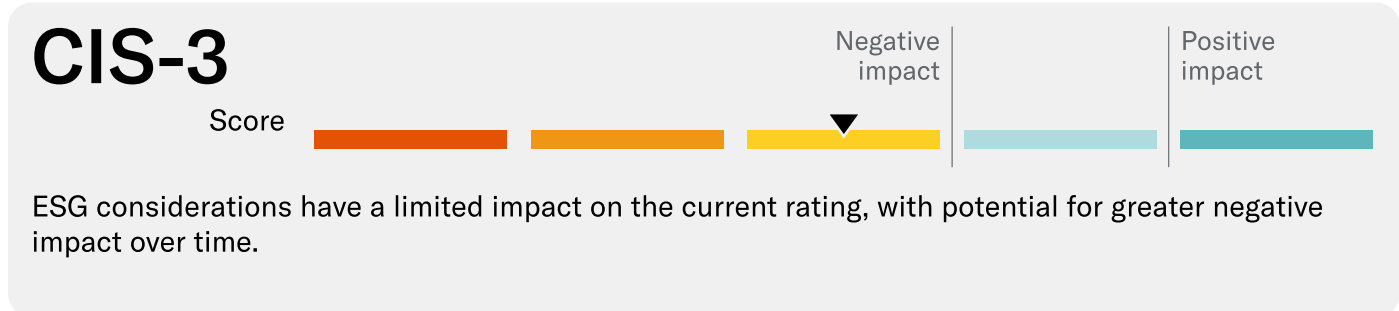
The result across all pension plans is an adjusted net pension liability (ANPL) of \$1.4 billion for fiscal 2024, compared to a reported unfunded liability of \$1 billion. For fiscal 2024, the city's pension contribution was \$114.1 million. The city's other post-employment benefits (OPEB) contribution was \$7.4 million in fiscal 2024.

## ESG considerations

New Orleans (City of) LA's ESG credit impact score is CIS-3

Exhibit 6

ESG credit impact score

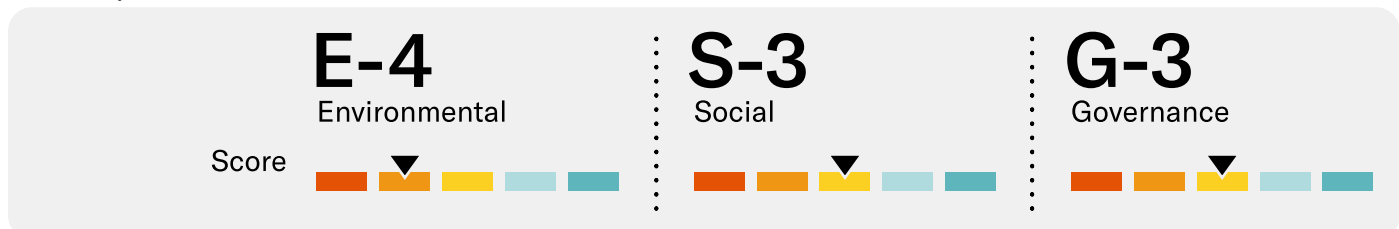


Source: Moody's Ratings

New Orleans' Credit Impact Score of **CIS-3** indicates that ESG considerations have a limited impact on the current credit rating with potential for greater negative impact over time. The score reflects exposure to governance challenges as reflected in the reliance on reserves in recent years that has weakened the city's financial position. Further erosion of reserves due to imbalanced operations could weaken the credit rating in the future and limit the city's flexibility to manage social and environmental risks. The score also reflects social risks as the city has seen steady declines in population in recent years and contends with income levels that fall well below national levels. The exposure to environmental risks is mitigated in part by the area's extensive infrastructure development and planning. The city benefits from external financial and capital investment from other levels of government and other organizations to combat environmental challenges. These initiatives support the city's resilience and capacity to respond to external shocks.

Exhibit 7

ESG issuer profile scores



Source: Moody's Ratings

### Environmental

New Orleans' environmental issuer profile score is **E-4**. The city has significant exposure to physical climate risks, particularly hurricanes, heat stress and water stress. Risks related to water management, waste and pollution and natural capital is low. The city benefits from a regional approach through the Southeast Louisiana Flood Protection Authority-East and Southeast Louisiana Flood Protection Authority-West and capital planning that guides ongoing infrastructure development. Additionally, the city has implemented policies that govern building codes and development, all targeted at increasing its resiliency. Absent these mitigating initiatives or if the city fails to continue pursuing similar initiatives, the environmental score will weaken. Exposure to carbon transition risks is inherent in the city's role as an energy employment center. Sustained demand for green alternatives will weigh on the city but its effects will play out over a much longer period.

### Social

The city's social issuer profile score is **S-3** reflecting declining demographic trends due to negative net migration and low birth rates as well as income levels that lag national medians. The score also reflects exposure to health and safety risks as a result of having

high violent crime rates relative to similarly sized cities. The city has relatively low exposure to other social risks including education, housing, and access to basic services.

### Governance

New Orleans' governance issuer profile score is **G-3** reflecting budget management challenges evidenced by the increased use of available fund balance beyond budget expectations in recent years pressuring the city's already narrow financial position. While the city is committed to policy credibility and effectiveness through the establishment of a rainy day savings reserves, fund balance policies, and oversight of debt issuance and debt service payment by the Board of Liquidation, it is also challenged by the ongoing narrowing of the city's financial position. The city will continue efforts to enhance revenues and reduce expenditures in an effort to return to sustainably balanced operations. The city's institutional framework is solid, and financial disclosures are generally in line with peers with audits typically available within a year after the fiscal year closes.

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 US Cities and Counties Methodology includes a scorecard, which summarizes the rating factors generally most important to city and county credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

The city's scorecard indicated rating is three notches off the assigned rating because of overweighting of the very narrow available fund balance ratio. The city's available fund balance ratio does not include additional, restricted reserves available to the city. Even still, reserves are expected to remain very narrow relative to sector peers as the city works to return to balanced operations.

Exhibit 8

### New Orleans (City of) LA

	Measure	Weight	Score
<b>Economy</b>			
Resident income ratio	77.3%	6.3%	Baa
Full value per capita	142,975	6.3%	Aa
Economic growth metric	-2.0%	6.3%	A
<b>Financial Performance</b>			
Available fund balance ratio	-2.0%	50.0%	B
Liquidity ratio	41.5%	6.3%	Aaa
<b>Institutional Framework</b>			
Institutional Framework	A	6.3%	A
<b>Leverage</b>			
Long-term liabilities ratio	220.9%	12.5%	A
Fixed-costs ratio	15.7%	6.3%	A
<b>Notching factors</b>			
Financial disclosures	-0.5		
Scorecard-Indicated Outcome			Baa3
<b>Assigned Rating</b>			<b>A3</b>

The Economic Growth metric cited above compares the five-year CAGR of real GDP for New Orleans-Metairie, LA Metropolitan Statistical Area Metropolitan Statistical Area to the five-year CAGR of real GDP for the US.

Sources: US Census Bureau, New Orleans (City of) LA's financial statements and Moody's Ratings

## Appendix

Exhibit 9

### Key Indicators Glossary

	Definition	Typical Source*
<b>Economy</b>		
Resident income ratio	Median Household Income (MHI) for the city or county, adjusted for Regional Price Parity (RPP), as a % of the US MHI	MHI: US Census Bureau - American Community Survey 5-Year Estimates RPP: US Bureau of Economic Analysis
Full value	Estimated market value of taxable property in the city or county	State repositories; audited financial statements; continuing disclosures
Population	Population of the city or county	US Census Bureau - American Community Survey 5-Year Estimates
Full value per capita	Full value / population	
Economic growth metric	Five year CAGR of real GDP for Metropolitan Statistical Area or county minus the five-year CAGR of real GDP for the US	Real GDP: US Bureau of Economic Analysis
<b>Financial performance</b>		
Revenue	Sum of revenue from total governmental funds, operating and non-operating revenue from total business-type activities, and non-operating revenue from internal services funds, excluding transfers and one-time revenue, e.g., bond proceeds or capital contributions	Audited financial statements
Available fund balance	Sum of all fund balances that are classified as unassigned, assigned or committed in the total governmental funds, plus unrestricted current assets minus current liabilities from the city's or county's business-type activities and internal services funds	Audited financial statements
Net unrestricted cash	Sum of unrestricted cash in governmental activities, business type activities and internal services fund, net of short-term debt	Audited financial statements
Available fund balance ratio	Available fund balance (including net current assets from business-type activities and internal services funds) / Revenue	
Liquidity ratio	Net unrestricted cash / Revenue	
<b>Leverage</b>		
Debt	Outstanding long-term bonds and all other forms of long-term debt across the governmental and business-type activities, including debt of another entity for which it has provided a guarantee disclosed in its financial statements	Audited financial statements; official statements
Adjusted net pension liabilities (ANPL)	Total primary government's pension liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Ratings
Adjusted net OPEB liabilities (ANOL)	Total primary government's net other post-employment benefit (OPEB) liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Ratings
Other long-term liabilities (OLTL)	Miscellaneous long-term liabilities reported under the governmental and business-type activities entries	Audited financial statements
Long-term liabilities ratio	Debt + ANPL + ANOL + OLTL / Revenue	
<b>Fixed costs</b>		
Implied debt service	Annual cost to amortize city or county's long-term debt over 20 years with level payments	Audited financial statements; official statements; Moody's Ratings
Pension tread water contribution	Pension contribution necessary to prevent reported unfunded pension liabilities from growing, year over year, in nominal dollars, if all actuarial assumptions are met	Audited financial statements; Moody's Ratings
OPEB contribution	City or county's actual contribution in a given period	Audited financial statements
Implied cost of OLTL	Annual cost to amortize city or county's other long-term liabilities over 20 years with level payments	Audited financial statements; Moody's Ratings
Fixed-costs ratio	Implied debt service + Pension tread water + OPEB contributions + Implied cost of OLTL / Revenue	

\*Note: If typical data source is not available then alternative sources or proxy data may be considered. For more detailed definitions of the metrics listed above please refer to the [US Cities and Counties Methodology](#).

Source: Moody's Ratings

© 2025 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [ir.moody.com](http://ir.moody.com) under the heading "Investor Relations — Corporate Governance — Charter and Governance Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Clasificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs and NZAs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.



CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454