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CREDIT OPINION
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EMEA 44-20-7772-5454

New York (City of) NY

Update following assignment of ESG scores

Summary

New York City's Aa2 general obligation rating reflects the city's competitive advantages which include a young and highly skilled labor pool, access to higher education and medical centers, normally strong domestic and international transportation links and low crime rates relative to other large cities. The rating also reflects the city's strong institutional budgetary and financial management and the breadth and diversity of its revenue base. The city's financing responsibilities are broader than most local governments, since it is a city, five counties and the nation's largest school district and its debt burden is above-average because of this operational scope. Despite those responsibilities, the city's fixed costs for debt service, pensions and retiree healthcare are below the median for the largest local governments and in the bottom five among the nation's largest cities. On May 13 we revised the city's outlook to stable from negative.

Exhibit 1
Large federal pandemic aid helps provide New York City with substantial budget flexibility
American Rescue Plan Act and other recent federal aid distributions to New York City

Aid component	Aid amount (billions)
Direct fiscal aid	$5.9
Education aid	$7.0
Increased FEMA reimbursements	$1.3
Health aid	$1.0
Total	$15.2
Aid % estimated FY 22 tax revenue	**24.4%**
Aid % estimated FY 22 total revenue	**15.4%**

Source: US Treasury, City of New York

Credit strengths

» Exceptionally large and diverse economy driven by city's position as an international center of financial services, media, hospitality and a growing high tech sector

» Strong governance and financial best practices, including conservative revenue forecasting, tested through periods of fiscal stress and strong liquidity

» Strong pension funding practices

Credit challenges

» Significant economic and financial downturn caused by the policy responses to the coronavirus pandemic

» Ongoing need to find recurring budget solutions to close future year budget gaps

» Significant exposure to physical climate risks, especially hurricanes and sea level rise

Rating outlook

The stable outlook reflects improvement in the city's overall financial position, including the substantial budget flexibility provided by federal pandemic aid flowing to the city over the next several fiscal years and elimination of the risk that the State of New York (Aa2 stable) will cut aid to the city. The city's federal aid, more than $15 billion, equals 24% of estimated fiscal 2022 tax revenue. The outlook revision also reflects the positive impact on employment and tax revenue that the city's accelerating reopening will have, although we still expect the jobs recovery in New York to continue to lag the nation. Some major employers have announced their intent to return to the office, although with more remote work and less office space. The percentage of New York City residents who are fully vaccinated is slightly better than the US rate and will also help drive confidence in the local economy. Future year budget gaps persist and will be manageable but will need to be balanced amid slowly growing property tax revenue, reduced reserves and the need to keep pace with large pension and retiree healthcare liabilities.

Factors that could lead to an upgrade

» Recovery of city economy to near pre-pandemic levels, combined with structurally-balanced budgets

» Stronger reserves, at levels similar to higher-rated peers

» Reduction of debt burden or further reduction in fixed costs

Factors that could lead to a downgrade

» Divergence from well-established fiscal practices and strong budgetary management

» Emergence of significant liquidity strain, especially that results in the need for large cash-flow borrowing

» Economic events such as sustained declines in equity prices, or trends that significantly worsen structural budget imbalances

Key indicators

Exhibit 2
New York City

	2016	2017	2018	2019	2020
Economy/Tax Base					
Total Full Value ($000)	$969,430,400	$1,064,244,500	$1,149,208,800	$1,250,706,900	$1,315,907,500
Population	8,461,961	8,560,072	8,443,713	8,419,316	8,419,316
Full Value Per Capita	$114,563	$124,327	$136,102	$148,552	$156,296
Median Family Income (% of US Median)	90.4%	91.1%	91.9%	93.5%	93.5%
Finances					
Operating Revenue ($000)	$79,646,272	$83,287,642	$87,822,094	$95,497,737	$99,063,401
Fund Balance ($000)	$8,883,440	$8,763,029	$9,346,799	$9,155,551	$8,024,000
Cash Balance ($000)	$14,244,372	$12,156,339	$11,154,797	$9,702,413	$13,000,002
Fund Balance as a % of Revenues	11.2%	10.5%	10.6%	9.6%	8.1%
Cash Balance as a % of Revenues	17.9%	14.6%	12.7%	10.2%	13.1%
Debt/Pensions					
Net Direct Debt ($000)	$69,457,542	$72,620,832	$76,014,854	$77,297,205	$80,725,396
3-Year Average of Moody's ANPL ($000)	$115,064,989	$125,773,986	$131,353,822	$128,596,834	$142,267,800
Net Direct Debt / Full Value (%)	7.2%	6.8%	6.6%	6.2%	6.1%
Net Direct Debt / Operating Revenues (x)	0.9x	0.9x	0.9x	0.8x	0.8x
Moody's - ANPL (3-yr average) to Full Value (%)	11.9%	11.8%	11.4%	10.3%	10.8%
Moody's - ANPL (3-yr average) to Revenues (x)	1.4x	1.5x	1.5x	1.3x	1.4x

2020 population figure is projected.
Sources: US Census Bureau, New York City's financial statements and Moody's Investors Service

Profile

New York City, the largest city in the US, is large and diverse, with a population of 8.3 million people (as of July 2019) and above-average wealth levels: personal income per capita is 142% of the US level. The size and scope of the city's operations are broader than most local governments: in addition to the city government, New York City is five counties and the nation's largest public school system, with 1.1 million students. New York City's GDP is larger than all but four states.

Detailed credit considerations

Economy and tax base: recovery accelerating but will lag the nation

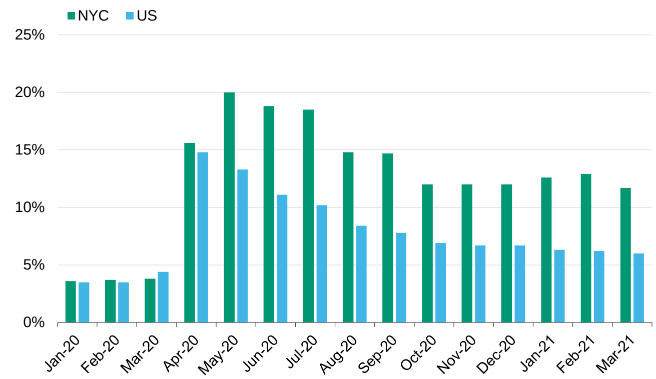
New York City's economy is the largest local economy in US with GDP larger than all but four states. The MSA's GDP is larger than Australia's and nearly as large as Canada's. Until the coronavirus crisis the city's economy was performing strongly and its employment situation was strong. The successful public health responses to the pandemic, however, took a heavy toll on the city's economy and we forecast it will be years before it regains the pre-pandemic peak.

The city's unemployment rate spiked from 3.6% just before the pandemic to 20% in May 2020, driven by large and rapid job losses in the city's hospitality, tourism, retail and cultural sectors (see Exhibit 3). Jobs now are beginning to grow again slowly (see Exhibit 4). Positively, between December 2020 and March 2021 the city gained 100,000 jobs back, mostly in the leisure and hospitality industry but also in education and healthcare and professional services.

Exhibit 3

New York City's unemployment rate remains elevated but will start to decline more rapidly as the city's reopening accelerates

New York City and US unemployment rates

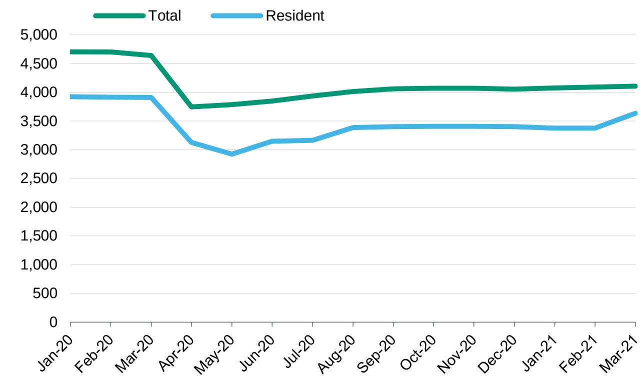


Source: Bureau of Labor Statistics

Exhibit 4

Resident employment has started a slow recovery ahead of total employment

Total and resident employment (thousands)



Source: Bureau of Labor Statistics

Several factors will help the city economy's recovery accelerate. Most major restrictions on the city's hospitality industry were lifted on May 19, the New York City subway returned to 24-hour operations on May 17 and Broadway, a major tourist attraction, will resume operations without crowd restrictions September 14. All state-mandated COVID restrictions were lifted on June 15. Some large employers also have begun to bring workers back to the office, although with increased remote work and possibly with less office space in the future. In addition, with 47% of the city's residents fully vaccinated, the city's vaccination rate slightly outpaces the nation's rate of 44% and will help restore confidence in the city's post-COVID economy.

The New York City economy still has far to go, however. Tourism pre-pandemic generated more than $4 billion in annual tax revenue and accounted for 8% of the city's economy. The pandemic dealt a severe blow to tourism with the number of visits to the city down by two-thirds between 2019 and 2020 and business travel fell by three-quarters, according to the city's tourism bureau. It forecasts that leisure visitation will regain its pre-pandemic peak in 2023 but that business travel will not until sometime after 2025. These forecasts are in line with our own forecasts of post-COVID trends in leisure and business travel.

Similarly, the pandemic's effect on the amount of office space New York City businesses need is still unclear. Remote work has been the norm for knowledge workers during the pandemic and office vacancy rates have increased. Even with future hybrid models that combine remote and in-office work, how much office space businesses decide to shed is unknown and the timeline for when they make those decisions is likely to be a long one. Data from Moody's REIS show vacancy rates remaining above their pre-pandemic level through 2025 but lower than vacancy rates in other cities reliant on their central business districts. The data also show office rents recovering by 2028.

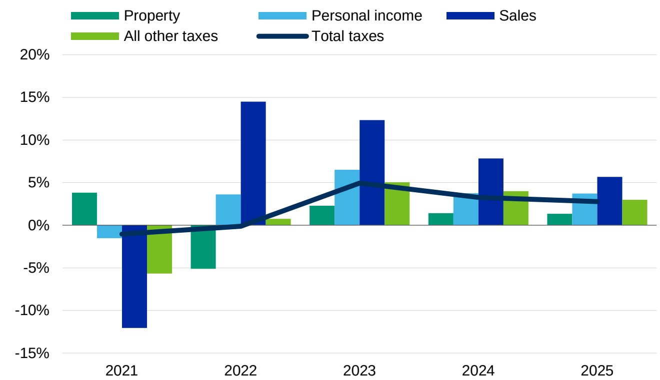
Financial operations and reserves: federal aid helps to drive stabilization of finances

The economic consequences of the pandemic on tax revenue was a sharp, fast but temporary decline but with slow growth forecast through the city's multiyear financial plan (see Exhibit 5). Sales taxes (12% of estimated fiscal 2022 tax revenue) declined severely, driven downward especially by the contraction in travel and tourism (see economy section above). As the city reopens through the fall sales taxes will benefit. Personal income taxes (22% of fiscal 2022 tax revenue) have performed better, especially because most higher-wage knowledge work has been able to shift to remote work, at least temporarily and because the stock market has performed strongly over most of the past year. Demonstrating those trends, wage withholding over the past three months has met or exceeded collections in the same months not only in fiscal 2020 but also fiscal 2019 (see Exhibit 6).

Property taxes (47% of fiscal 2022 estimated tax revenue) will feel the longest pandemic-related effect. Based on declines in market values of commercial and multifamily residential property in its January 2021 assessments, New York City saw an immediate property tax revenue decline in its proposed fiscal 2022 budget (starts July 1, 2021), with a $1.6 billion (5.1%) decrease compared to the prior year and 0.9% lower than fiscal 2020. The decline was driven by a 9.6% decrease in billable assessed value for commercial property, which had been growing strongly in prior years and a 1.2% decline in billable assessed values for large multifamily residential properties.

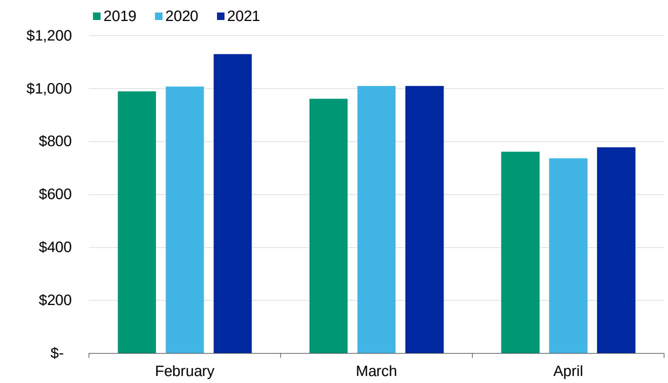
In addition the city chose not to raise property tax rates to maintain or increase the total levy. The forecast through fiscal 2025 reflects slow recovery of commercial property values with average annual growth of 0.5% through fiscal 2025. Total property tax revenue is forecast to increase 1.7% annually fiscal 2023-2025, reaching the pre-pandemic peak that last year.

Exhibit 5
Tax revenue forecast illustrates nature of pandemic response on the city's economy
Year-over-year estimated percentage change in tax revenue by type



Source: New York City Office of Management and Budget

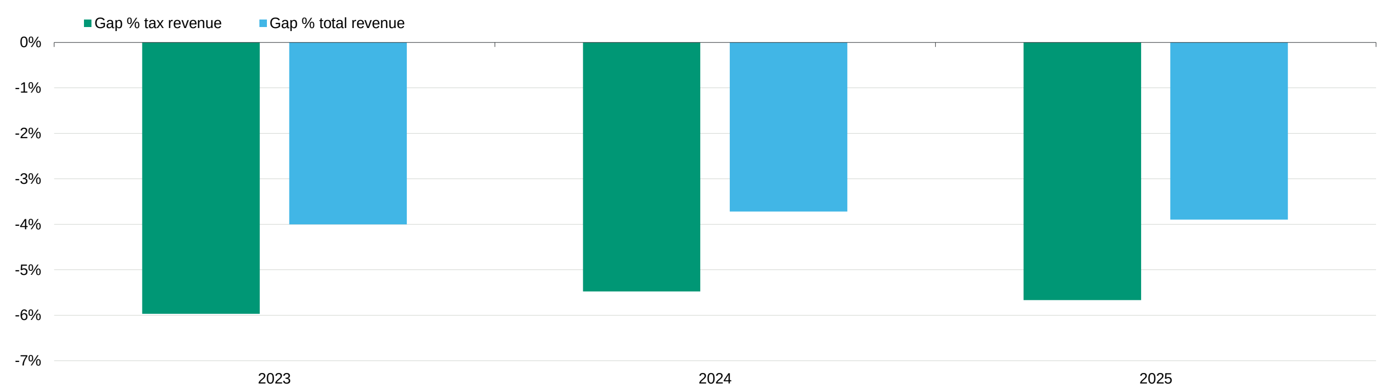
Exhibit 6
Income tax withholding buoyed by knowledge workers and strong market performance
$ millions



Source: New York City Comptroller

Even with slow growth in tax revenue, two main factors help to stabilize the city's finances. The largest is the passage of the American Rescue Plan Act (ARPA) which provides state and local governments with $350 billion in [direct fiscal relief](). The amounts New York City will receive under ARPA and other federal support measures are significant, totaling more than 24% of estimated fiscal 2022 tax revenue (see Exhibit 1 on page 1). The city will receive half of its allocation this month and its use is front loaded in fiscal 2022 and 2023 with decreasing use through fiscal 2025, allowing the city to structurally balance its budget with its own revenue as the federal funds are used. Second, the State of New York will also receive a very large distribution through ARPA which helps close its own budget gaps and essentially precludes cuts it seemed likely to have to make in education aid to the city. Nonetheless the city still faces budget gaps in future years of its financial plan (see Exhibit 7), which are manageable in our opinion.

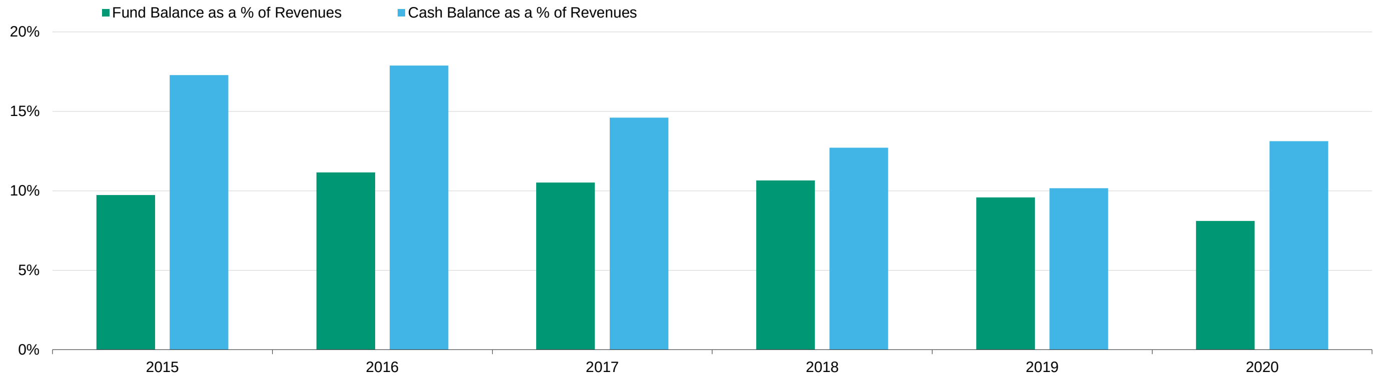
Exhibit 7
Future year budget gaps are manageable
Forecast gaps as a percentage of tax revenue and total revenue



Source: New York City Office of Management and Budget

Liquidity
Cash management for the city is a strong point and overall through the pandemic cash balances have been healthy (see Exhibit 8). As of May 12, cash balances were more than $1 billion greater than the same point last year. Importantly for the city's cash position, potentially large cuts in state education aid did not occur. The city has not issued cash flow notes since 2004.

Exhibit 8
Cash balances will increase as ARPA aid begins to flow



Source: Audited financial statements, Moody's Investors Service

Debt and pensions: moderate overall leverage

Legal security
The general obligation bonds are full faith and credit obligations of the city, secured by a real property tax levied without limitation as to rate or amount. All of the city's property tax is deposited into the general debt service fund, which is administered and maintained by the state comptroller.

State law requires that the real property tax — which is used to pay general obligation debt service — be segregated into a general debt service fund held by the state comptroller. The state also statutorily covenants not to impair the rights of city bondholders to be paid when due. In our opinion, those features do not create a statutory lien on the property tax in favor of general obligation bondholders, but are strengths in the payment mechanism that are not found in most local government general obligation bonds. In addition, the financial plan and quarterly reports on the city's interest rate derivatives are submitted to a state oversight board. The city also typically is an early adopter of new accounting standards, which aids in transparency of how those changes will affect the city's bottom line

Debt structure
Unlike most other large cities, no separate school district or county government exists that also finances New York City's capital costs, which results in a higher bonded debt load when compared to some other local governments. New York City's net debt as a percentage of full value is 6.1%, well above most other cities. However, New York City's tax base is broader than just its real estate value: unlike most property tax-dependent local governments, the city's revenue base also includes personal income taxes, sales taxes and other taxes.

The city's outstanding debt is nearly evenly split between general obligation bonds and bonds issued by the New York City Transitional Finance Authority secured by personal income taxes (and if necessary, sales taxes) (see Exhibit 9). It also has a small amount of appropriation-backed debt outstanding, issued by the Hudson Yards Infrastructure Corporation (HYIC) to finance extension of a subway line and smaller amounts issued by Health + Hospitals (H+H) for healthcare facilities, the Educational Construction Fund (ECF) for schools, the Dormitory Authority of the State of New York (DASNY) for court and health facilities and the Industrial Development Agency (IDA) for costs associated with a proposed new headquarters for the New York Stock Exchange that was canceled in the wake of September 11. General obligation and TFA debt issuance combined is subject to a limit based on a five-year average of taxable full value. As of January 31, 2021 the city had $45.4 billion of debt capacity.

Most outstanding GO debt is fixed rate, with less than 15% in various floating rate modes (see Exhibit 10). In addition, 7% of outstanding TFA debt is floating rate. Counterparty risk is managed through a diverse array of liquidity providers: 14 banks provide liquidity support for general obligation variable rate debt and 8 support TFA variable rate demand debt.

The city manages its variable rate portfolio proactively to renew or replace expiring liquidity facilities or to convert variable rate bonds to fixed rate or other interest rate modes if necessary. In an effort to reduce its overall borrowing costs and mitigate bank exposure, the city has converted some variable rate demand bonds to floating rate index modes (all of which are based on SIFMA). Those bonds do not have the put risk associated with demand debt but the city must refinance most of them at specific dates or interest rates will step up to higher levels. Those risks are highly manageable given the city's record of market access.

Exhibit 9

Outstanding TFA future tax secured debt overtakes general obligation bonds

Debt outstanding by type ($ millions)

Credit	Amount outstanding	% of outstanding
General obligation	$38,784	45%
Transitional Finance Authority future tax secured	$40,679	48%
Appropriation-backed	$4,484	5%
Total	**$83,947**	**100%**

Data as of June 30, 2020. Appropriation-backed includes HYIC, H+H, ECF, DASNY and IDA.
Source: Audited financial statements

Exhibit 10

Small amount of floating rate poses minimal credit risk

Outstanding general obligation debt by mode ($ millions)

	Fixed Rate	VRDBs	Index Rate	Fixed rate stepped coupon	ARRS	Auction Rate	Total
Outstanding	$33,134	$4,093	$625	$197	$100	$635	$38,784
% total	85%	11%	2%	0.5%	0.3%	2%	100%

ARRS are adjustable rate remarketed securities, which have remarketing and basis risk but no hard put risk.
Source: City of New York offering documents

Debt-related derivatives

The city has two outstanding interest rate swap agreements associated with its general obligation bonds, with two counterparties. The swap portfolio's potential risks to the city are minimal: rating triggers that would cause the agreements to terminate early or post collateral are low, ranging between Baa1 and Baa3. As of March 31, 2021 the combined outstanding notional amount of the swaps was $416 million, with a mark-to-market value of -$57 million.

Pensions and OPEB

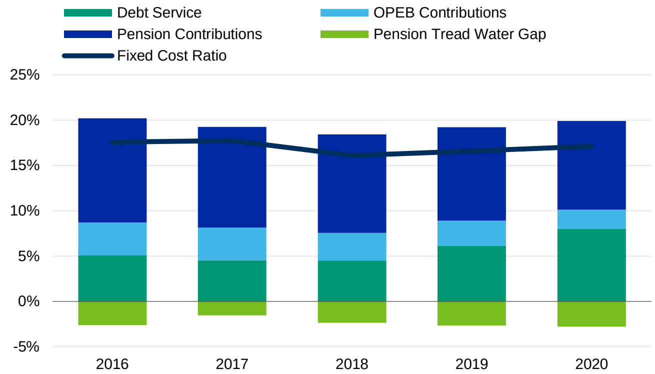
New York City's adjusted net pension liability (ANPL) is in the lower half of the 50 largest local governments equaling 173% of operating revenue in fiscal 2020. Strong pension funding practices include routinely contributing in excess of the "tread water" amount needed to keep the city's net pension liability from growing, under reported assumptions: in fiscal 2020, the city contributed 140% of the tread water amount. The city's pension system includes three multiemployer cost-sharing plans (the New York City Employees Retirement System, Teachers Retirement System and Board of Education Retirement System), and separate plans for fire and police.

Nonetheless, New York City's fixed costs for debt service, pensions and OPEB contributions are in the bottom one-third of the 50 largest local governments and the bottom five of the largest cities. Using our tread water metric, New York City's fixed costs were 17% of fiscal 2020 revenue (see Exhibits 11 and 12).

Exhibit 11

New York City's fixed costs are low relative to other big cities

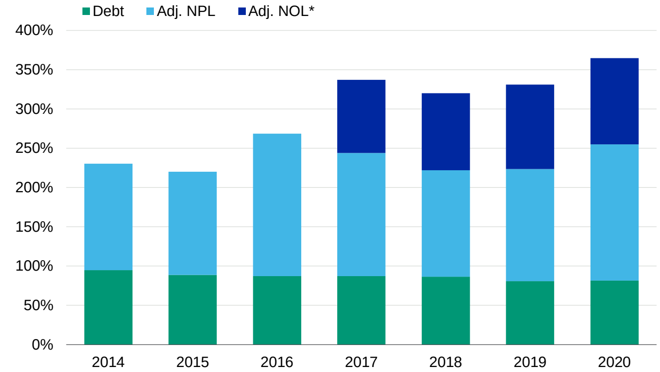
Fixed costs for debt service, pension tread water and OPEB as a percentage of revenue



Source: Audited financial statements, Moody's Investors Service

Exhibit 12

Leverage increases in fiscal 2020 because of impact of low interest rates



*Adj. NOL not available pre-GASB 75

Source: Audited financial statements, Moody's Investors Service

ESG considerations

New York City's ESG Credit Impact Score is moderately negative CIS-3.

Exhibit 13

ESG Credit Impact Score

CIS-3

Moderately Negative

NEGATIVE IMPACT POSITIVE IMPACT

For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.

Source: Moody's Investors Service

New York City's ESG Credit Impact Score moderately negative (**CIS-3**), reflecting its above average exposures to environmental and social risks and good governance.

Exhibit 14

ESG Issuer Profile Scores

ENVIRONMENTAL	SOCIAL	GOVERNANCE
E-3	S-3	G-1
Moderately Negative	Moderately Negative	Positive

Source: Moody's Investors Service

Environmental

New York City's exposure to physical climate risks is high compared to regional and local governments as a sector, reflected in its E issuer profile score of moderately negative (**E-3**). Of the physical climate risks Moody's affiliate Four Twenty Seven evaluates, New York City's most significant exposures are to hurricanes, sea level rise and water stress. While the local government sector overall has low exposure to environmental risks, New York City's risks are more elevated because of its location on the Eastern Seaboard and its geographic position between two tidal estuaries. While only 6.2% of the city's housing stock is in the flood plain, those data understate its storm risks. In addition, all 14 of its wastewater treatment facilities, 12 of 27 power plants, 16% of all hospital beds and a significant portion of public housing are in the flood plain. New York City's reservoirs, however, are distant from hurricane sea level rise risks and the third water tunnel adds redundancy. Superstorm Sandy in 2012 caused an estimated $47 billion in damage across the region it hit (which was broader than just New York City) and $26 billion in lost economic output. New flood maps that reflect the Sandy experience and other scientific and technical improvements are expected in 2021 and likely will show more of the city at flood risk. That, in turn, will require more property owners to buy flood insurance and could also slow growth in property values. In addition to economic loss, Sandy cost the city an estimated $10.7 billion for emergency response and capital repair (including the New York City Housing Authority and NYC Health + Hospitals), covered by federal funds. To mitigate its environmental risks, the city is undertaking a 10-year $20 billion plan to protect infrastructure against natural disasters, especially coastal flooding, which will mostly be paid for with federal funds.

Social

New York City's S issuer profile score of moderately negative (**S-3**) reflects several factors. Income inequality in the five counties that make up New York City is among the highest in the nation, a driver of social spending and of policy priorities to create more affordable housing. Health and safety metrics are more favorable, however: nearly 93% of New York City's population has health insurance, slightly higher than the national rate. Similarly, on a per capita basis crime rates remain the lowest of big US cities.

Governance

New York City's G issuer profile score is positive (**G-1**). New York City's financial management is characterized by strong, institutional budget and financial management practices that emerged from the 1970s fiscal crisis and substantial transparency of its financial operations. The hallmark of these practices is effective multiyear planning via quarterly updates to the city's five-year financial plan, including consistently conservative revenue estimates, which gives a clear forward-looking view to potential budget challenges. The city is also known for its early adoption of new accounting standards and for being one of the most timely municipal issuers to publish its annual audited financial statements. By law, changes in property tax billable assessed value are phased-in over five years, which evens out ups and downs in the city's real estate markets and helps minimize swings in the city's tax revenue. Nonetheless, even with the city's strong governance structure, actions to structurally balance the budget can be politically difficult and the city's reserves are typically much lower than the sector and so provided limited financial resilience to its other exposures. State law that limits the amount of real property tax that a municipality may levy in any year — a factor in our institutional framework for New York cities — does not apply to New York City.

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 15

New York City

Scorecard Factors and Subfactors	Measure	Score
Economy/Tax Base (30%) [1]		
Tax Base Size: Full Value (in 000s)	$1,424,691,923	Aaa
Full Value Per Capita	$169,217	Aaa
Median Family Income (% of US Median)	93.5%	Aa
Notching Factors:[2]		
Regional Economic Center		Up
Finances (30%)		
Fund Balance as a % of Revenues	8.1%	A
5-Year Dollar Change in Fund Balance as % of Revenues	0.5%	A
Cash Balance as a % of Revenues	13.1%	Aa
5-Year Dollar Change in Cash Balance as % of Revenues	-0.5%	Baa
Management (20%)		
Institutional Framework	Aa	Aa
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	1.0x	A
Notching Factors:[2]		
Unusually Strong or Weak Budgetary Management and Planning		Up
Other Scorecard Adjustment Related to Management: Revenue flexibility not reflected in inst. framework score.		Up
Debt and Pensions (20%)		
Net Direct Debt / Full Value (%)	5.7%	Baa
Net Direct Debt / Operating Revenues (x)	0.8x	A
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value (%)	10.0%	Baa
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues (x)	1.4x	A
Notching Factors:[2]		
Unusually Strong or Weak Security Features		Up
	Scorecard-Indicated Outcome	Aa1
	Assigned Rating	Aa2

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

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