MOODY'S INVESTORS SERVICE

CREDIT OPINION
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City of Philadelphia, PA

Update to credit opinion following upgrade to A1

Summary

The City of Philadelphia (A1 stable) benefits from a materially improved financial position as well as a steady tax base recovery following the coronavirus pandemic. Its credit profile also incorporates strong fiscal management and governance controls, as well as moderate liabilities relative to total city revenues.

While Philadelphia's economic indicators continue to reflect some of its challenges, such as relatively weak resident wealth and high poverty, and its real GDP growth lags that of the US, the city has seen considerable tax base growth over the last decade. Full value has grown by an average annual 5.9% over the last five years, and full value per capita is favorable at $127,552.

Philadelphia's fund balance and liquidity has notably improved over the past three years in particular, though this follows a decades' long trend of strengthened financial management and governance controls. Philadelphia benefitted from $1.4 billion in federal American Rescue Plan aid, which largely enabled the city to maintain operations and services while growing fund balance, despite some softening of revenue especially through fiscal 2021. The city's available governmental fund balance of $1.2 billion as of the 2022 year end is the strongest the city has realized in well over the past decade.

Philadelphia's overall leverage, incorporating debt, pension and OPEB liabilities, compares favorably to other large city peers and fixed costs are manageable. Even given significant future capital needs, particularly for the city's Water and Sewer enterprise, we expect the city to continue to be well positioned on leverage relative to similarly-rated peers.

On April 27, 2023, Moody's upgraded the city's issuer rating to A1 from A2. Concurrently, we upgraded the city's GOULT, City Service Agreement and Lease Revenue debt to A1 and assigned an A1 rating to the city's $124.18 million City Service Agreement Revenue Bonds, Series A,B,C of 2023. The outlook is stable for the issuer rating as well as all debt securities.

Credit strengths

» Regional economic center with major institutional presence

» Comprehensive long-term financial planning and conservative management practices

» Materially improved fund balance and liquidity expected to be maintained in the near term

Credit challenges

» Below-average socioeconomic characteristics, specifically high poverty, and populations that have not benefitted from general city growth

» Exposure to economically sensitive revenues

» Weak public school system is a somewhat limiting factor for the city

» Fund balance more narrow than other major city peers, despite improvement

Rating outlook

The stable outlook reflects our expectation that the city's reserve and liquidity position will hold steady in the near term, in line with management's current projections. The outlook also incorporates an expectation of continued tax base recovery post-pandemic and resiliency through any potential recessionary economic cycle.

Factors that could lead to an upgrade

» Continued strengthening of reserves and liquidity through near-term economic cycles

» Demonstrated continued strong fiscal governance and realization of “rainy day” fund reserves

» Strengthening of full value per capita and/or real GDP growth in comparison to the US

» Continued moderation of leverage and fixed costs relative to city revenues

Factors that could lead to a downgrade

» Any material draw on fund balance or an inability to establish rainy day funds

» Material increase in long term liabilities and fixed costs

» Weakening of economic metrics or material softening of economically-sensitive revenue streams

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.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 1
Philadelphia (City of) PA

	2019	2020	2021	2022	A Medians
Economy					
Resident income ratio (%)	70.5%	74.0%	76.9%	N/A	85.5%
Full Value ($000)	$54,890,066	$91,741,956	$99,268,222	$100,781,161	$729,748
Population	1,579,075	1,581,531	1,596,865	N/A	10,219
Full value per capita ($)	$34,761	$58,008	$62,164	N/A	$64,697
Economic growth metric (%)	N/A	-1.5%	-1.5%	N/A	-1.1%
Financial Performance					
Revenue ($000)	$8,502,622	$8,598,553	$8,664,614	$9,985,439	$21,949
Available fund balance ($000)	$497,676	$487,692	$570,119	$1,237,910	$8,725
Net unrestricted cash ($000)	$1,976,522	$2,031,682	$3,134,694	$4,519,148	$11,614
Available fund balance ratio (%)	5.9%	5.7%	6.6%	12.4%	40.6%
Liquidity ratio (%)	23.2%	23.6%	36.2%	45.3%	51.4%
Leverage					
Debt ($000)	$7,538,007	$8,173,909	$8,098,710	$9,045,487	$17,818
Adjusted net pension liabilities ($000)	$11,508,144	$13,198,871	$11,678,992	$9,381,434	$25,673
Adjusted net OPEB liabilities ($000)	$1,785,924	$1,933,459	$2,006,634	$2,045,066	$1,531
Other long-term liabilities ($000)	$613,300	$1,005,900	$1,130,800	$1,088,700	$652
Long-term liabilities ratio (%)	252.2%	282.7%	264.5%	215.9%	277.1%
Fixed costs					
Implied debt service ($000)	$533,897	$549,594	$585,355	$568,041	$1,258
Pension tread water contribution ($000)	$541,580	$529,037	$536,288	N/A	$711
OPEB contributions ($000)	$96,900	$104,600	$97,800	$118,300	$56
Implied cost of other long-term liabilities ($000)	$45,374	$44,716	$72,035	$79,314	$47
Fixed-costs ratio (%)	14.3%	14.3%	14.9%	13.0%	13.1%

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 Economic Growth metric cited above compares the five-year CAGR of real GDP for Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area to the five-year CAGR of real GDP for the US.
Sources: US Census Bureau, Philadelphia (City of) PA's financial statements and Moody's Investors Service, US Bureau of Economic Analysis

Profile

The city of Philadelphia, located along the southeastern border of the Commonwealth of Pennsylvania (Aa3 stable), is the largest city in the commonwealth and the sixth largest city in the United States with approximately 1.612 million residents (based on 2021 estimates).

Detailed credit considerations

Economy: Slow but steady tax base growth over the past decade; recovery post-pandemic

Philadelphia's economy was severely impacted by the coronavirus pandemic, as the city lost population as well as realized a sharp decline in workforce and employment, particularly through 2021. Favorably, however, many of Philadelphia's econometric indicators have recovered to pre-pandemic levels, and we expect continued resiliency in the near term given some notable economic improvements through 2023.

According to US Census data, Philadelphia lost roughly 1.7% of its population between April 1, 2020 and July 1, 2021, similar to other eastern-seaboard cities that were impacted by coronavirus closures - like New York City, NY (Aa2 stable) and Washington D.C. (Aaa stable), which lost an estimated 3.8% and 3.0% of their respective populations during this period. Favorably, however, total non-farm employment in Philadelphia has rebounded through February 2023, and stands at almost exactly its pre-pandemic level currently. While unemployment remains somewhat elevated, at 4.5% as of year end 2022 - compared to 3.5% for the Commonwealth and 3.3% for the nation as a whole - it is well below the 12.4% unemployment figure of 2020, showing a general return to workforce normalcy in the city.

Philadelphia's economy continues to be anchored by some of the top higher education and healthcare institutions in the nation, and these institutions will continue to be the cornerstone of the city's longer term recovery. Of the 15 biggest employers in Philadelphia, nine are either higher education or healthcare entities - most prominently the University of Pennsylvania (Aa1 stable) and the University of Pennsylvania Health System (Aa3 stable). The city is home to about 30 hospitals, including Thomas Jefferson University Hospital and the Children's Hospital of Philadelphia ("CHOP") (Aa2 stable). The nature of Philadelphia's largest institutions, including their already established brand equity and regional market share, will continue to provide stability for the sector.

Favorably, Philadelphia's largest institutions continue to expand and invest in the city. In 2021, Penn Medicine completed construction on a new 1.5 million square foot Patient Pavilion; one of the largest hospital projects underway in the nation and the largest capital project in Penn's history, and in late 2022, CHOP opened a new Center for Advanced Behavioral Healthcare in West Philadelphia, with 47,000 square feet dedicated to patient care. The city has also realized new ancillary growth from its eds & meds anchors – according to the city, Philadelphia research firms received $1.2 billion in NIH funding in 2022, particularly for cell therapy, gene therapy, and gene editing research.

All told, while the impact of coronavirus was material and overall economic recovery has been somewhat slow, and though Philadelphia's GDP growth lags the nation by -1.5% as of fiscal 2022, growth in Philadelphia's economy over the past decade has been notable. The city's all-industry GDP increased by 12% between 2011 and 2021, with particular growth in manufacturing (+35%), finance (+12%), professional and business services (+25%), as well as education and healthcare (+8%). The city's large, $171 billion tax base has grown roughly 6% on average, annually, over the last five years, and the city reports an additional $9 billion of full value development expected to come online through 2026.

Despite these positives, we expect the city to face certain continued economic challenges. Philadelphia's stubbornly high poverty level is a serious and long-standing concern, and the city continues to grapple with a substantial uptick in violent crime and gun violence over the past several years. This is a material social concern and potential limiting credit factor for Philadelphia going forward, especially if a return to the city, both by commuters and leisure visitors, is curtailed due to the real or perceived threat of crime. Softening of real estate values or labor markets in the event of a recession could impact Philadelphia's continued tax base stability, or limit the city's ability to raise taxes in the future if necessary. This risk is somewhat offset, however, by the city's decision to draw on much of its ARPA allocation in 2024 and 2025, so a continued financial cushion remains available in the event that the city's economic recovery stalls or softens.

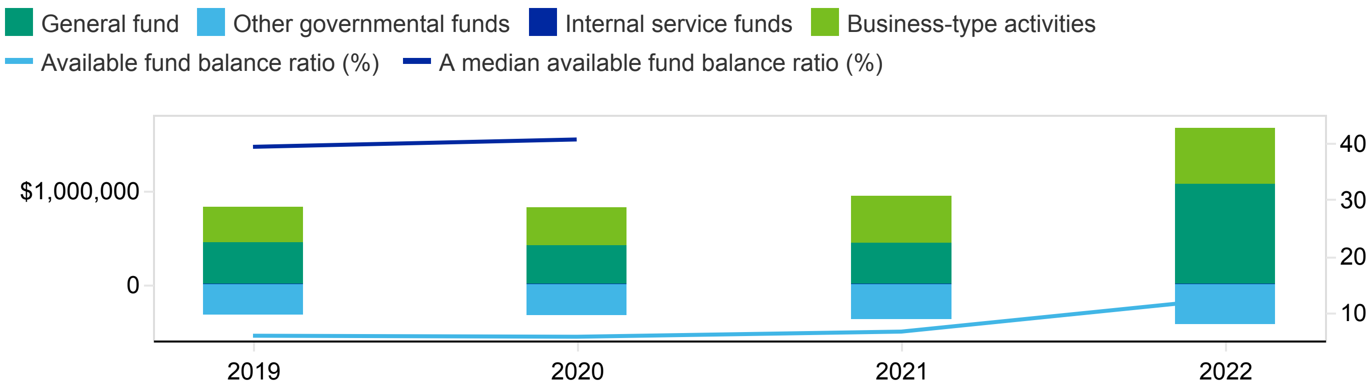
Financial operations: reserves and liquidity well exceed historic levels

The city's materially improved financial performance is a key benefit to its credit profile. Philadelphia's available General Fund balance stands at a healthy $1.07 billion as of audited fiscal year end 2022, or 22% of revenue. While still somewhat narrow versus other large city peers, this is the strongest fund balance the city has realized in well over a decade. Philadelphia is reasonably expected to maintain a financial position commensurate with its current credit profile through a base case recession scenario, and, favorably, even after the 2023 fiscal year end will still maintain more than $840 million of its $1.4 billion ARPA allocation as a cushion against potential negative economic headwinds.

The city continues to demonstrate prudent budget controls and fiscal governance, hallmarks of its improved financial performance over the past several years. The city projects substantial deposits to its Budget Stabilization Reserve (BSR) from its General Fund over the next three years, which will further support fiscal controls by requiring formal certification from the city's Director of Finance before monies can be transferred out of the BSR. The movement of monies into a more formal reserve fund eliminates potential political noise around the city's financial health going forward and further strengthens governance controls, another core aspect of the city's credit profile.

The city's total available fund balance, inclusive of its governmental funds (the General Fund, HealthChoices Fund, Grants Revenue and Other Governmental funds) and the net current assets of its business type activities (Water and Sewer and Aviation) is satisfactory at $1.24 billion, or 12.4% as of fiscal year end 2022, up materially from 6.58% the year prior, primarily due to strengthened general fund balance. Notably, the general fund outperformed original projections for fiscal 2022 by a significant margin. This was partially a result of the city's conservative budgeting, as well as stronger than expected Business Income Receipts Tax (BIRT) and Realty Transfer Tax revenues. The city expects a modest appropriation of general fund reserve for fiscal 2023. Inclusive of its other funds and all else being equal, we expect total available fund balance across all of the city's funds to remain relatively stable in the near term.

Exhibit 2
Fund Balance



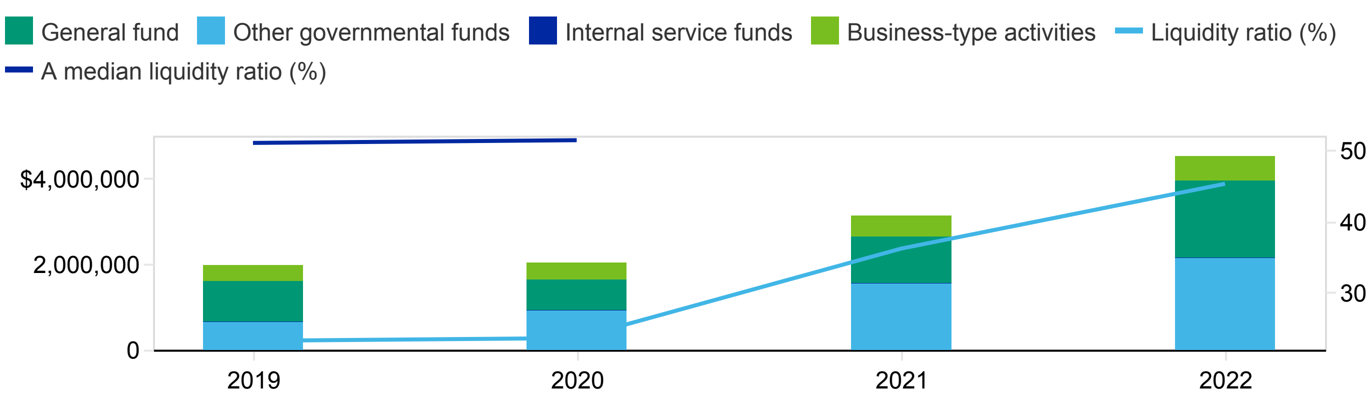
Source: Moody's Investors Service, City of Philadelphia audited financial statements

Liquidity
Total net unrestricted cash and investments of $4.52 billion is a notably strong 45.3% of revenue, and well outperforms the city's liquidity position over the last several years, as evidenced in the exhibit below. The majority of liquidity is held in the general fund and other governmental funds, though Grant Fund liquidity is inflated by ARPA monies.

General Fund cash of $1.78 billion is somewhat stronger than available fund balance of $1.07 billion given a large allocation for doubtful accounts and material liabilities for unearned revenue and potential overpayment of taxes.

Overall net unrestricted cash of $4.52 billion across all of the city's funds is considerably stronger than available fund balance of $1.24 billion for several reasons. First, Grant Revenue Fund Cash (primarily ARPA funds) is offset in the audited financial statements by a large unearned revenue liability, which creates a negative fund balance for this fund. Further, the city's HealthChoices Fund balance and much of the fund balance in the “Other Governmental” funds is restricted, and so is not included in Moody's fund balance ratios, though these monies are available for specified purposes and services the city is mandated to provide. All told, the city's liquidity position is somewhat overstated in light of ARPA monies, while fund balance is somewhat understated given the accounting treatment of certain restricted fund balances.

Exhibit 3
Cash



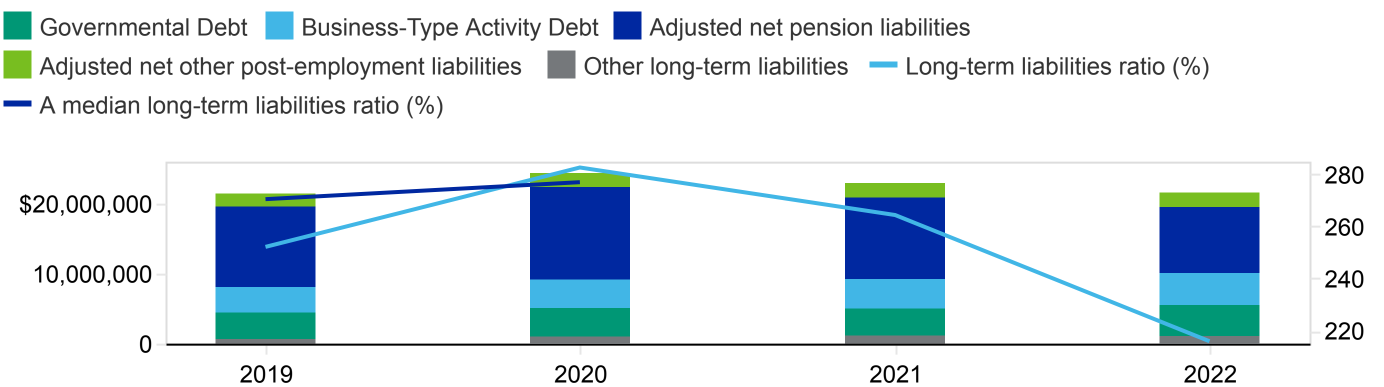
Source: Moody's Investors Service, City of Philadelphia audited financial statements

Leverage

Philadelphia's overall leverage ratio - all liabilities (debt, pension and OPEB liabilities) to total governmental revenue - is quite reasonable compared to other large city peers and fixed costs are manageable. The city's total liability ratio stands at just 215%. In comparison, the median for Moody's-rated large cities (by population) is 352%. Similarly for fixed costs, Philadelphia's ratio is a manageable 13%, compared to a peer group median of 17%. Even given significant future capital needs, particularly for the city's Water and Sewer enterprise, we expect the city to continue to be well positioned on leverage relative to similarly-rated peers.

The city's long term liabilities amount to $21.56 billion at year end 2022, largely driven by net pension liabilities, as indicated by the chart below. Overall debt is reasonable and a material 72% of principal is scheduled to be repaid in 10 years, with a notable debt service “cliff” in 2030, allowing for some additional operating flexibility in the near term.

Exhibit 4
Total Primary Government - Long Term Liabilities



Source: Moody's Investors Service

Legal security
Roughly $1.8 billion of the city's overall debt is supported by its general obligation, whereby the city pledges its full faith credit and taxing power to bondholders.

The remainder of the city's debt has been issued as service fee bonds and lease revenue bonds. While service and lease rental payments are legal, valid and binding obligations of the city, payable out of current city revenues, they do not carry the city's general obligation pledge. Rather, the city covenants to provide for payment in its annual budget (same line item as General Obligation debt) and these payments are absolute and unconditional without being subject to any contingencies. The city's pension obligation bonds originally funded a portion of the unfunded liability for the city's retirement system and were also issued as service fee debt.

Debt structure
The city has moderate variable rate exposure representing approximately 4% of its total debt obligations. The city's Series 2009B variable rate bonds are supported by a letter of credit (LOC) from Barclays Bank PLC (A2 stable) that expires in May 2025. The city also has exposure to variable rate debt through the Philadelphia Authority for Industrial Development's (PAID) Series 2007B bonds. Liquidity is provided by an LOC from TD Bank, N.A. (A1 stable) for $52.2 million, which expires in May 2024.

Debt-related derivatives
In conjunction with the Series 2009B variable rate issuance, the city is party to a fixed payer swap with Royal Bank of Canada (Aa1) for a notional amount of $100 million. For the PAID variable rate bonds, the city has entered into two fixed payer interest rate swaps, one with JPMorgan Chase Bank, NA (Aa1), with a current notional amount of $39.1 million and one with Merrill Lynch Capital Services, Inc. (MLCS) with a current notional amount of $13 million. In the case of all three of its fixed payer swaps, the city (either directly or through PAID) makes semi-annual payments based on a fixed rate and the counterparties make monthly payments based on the SIFMA Municipal Swap Index.

In fiscal 2019, the city terminated all of its LIBOR-indexed swaps and no longer has any exposure to LIBOR in its debt portfolio.

In the case of all of the swaps, regularly scheduled payments are General Fund obligations of the city. Early termination is optional for the city only. Termination events include either the city or the counterparty's rating falling below Baa3. Any termination payment by the city would be subordinate to the general obligation debt service payments. The total value of the swaps was a negative $13.28 million as of June 30, 2022.

Pensions and OPEB

The city operates one defined-benefit plan: the City of Philadelphia Public Employees Retirement System (not including the pension plan for the Philadelphia Gas Works). The plan has been modified over the past several years to also incorporate a defined contribution component. It is a mature plan that has roughly 66,000 members, 28,000 active employees and 38,000 retirees. Favorably, in fiscal 2022, the city's Pension Board voted to enact its eleventh consecutive discount rate reduction - to 7.45% effective July 1, 2022 (fiscal year 2023), 7.40% effective for fiscal 2024, and 7.35% effective for fiscal 2025.

The city's reported net pension liability for 2022 is $4.85 billion, with a reported funded ratio of 56%. On a Moody's adjusted basis, however, utilizing a discount rate of 4.48%, the adjusted net pension liability (ANPL) increases to $8.45 billion, and the funded ratio declines to about 42%. While somewhat weak, this is considerable progress for the city, as the ratio of its plan assets to Moody's adjusted liability was just 27% as of five years ago. The city's three year average ANPL is a moderate 186% of its 2022 revenues.

The city has increased employee contribution requirements under current union contracts, and by 2018, the city had negotiated for all nonuniformed employees, excluding elected officials, to enter a stacked hybrid plan. As a result of improved employee contributions, and in addition to the city consistently contributing to the plan above the minimum municipal obligation (MMO), Philadelphia has been able to achieve positive net cash flow excluding investment returns in each of the last four fiscal years. This means that contributions into the system are exceeding benefit outflows, enabling the system to accumulate assets more rapidly. Less favorable is the city's somewhat weak asset / benefit coverage, though this ratio has also improved over time. The city's ability to maintain strong contribution levels will be central to its credit profile going forward.

Moody's considers the city's ability and willingness to contribute to its pension plan over and above the MMO a credit strength - rather than allow the pension system to backslide into further underfunding, Philadelphia is addressing its pension obligation far more proactively than it has done in the past. The city's contribution exceeded Moody's “treadwater” calculation by 197% as of fiscal 2022. The city continues to move deliberately towards its goal of being fully funded by 2033.

ESG considerations

Philadelphia (City of) PA's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 5

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

Philadelphia's ESG Credit Impact Score is neutral-to-low (CIS 2) reflecting neutral to low negative exposure to social and environmental risks, and a very strong overall governance profile, tempered by a neutral institutional framework and budget management. These factors, as well as the city's solid tax base growth and improving financials over the past decade, inform the city's rating.

Exhibit 6
ESG Issuer Profile Scores

ENVIRONMENTAL	SOCIAL	GOVERNANCE
E-2	S-2	G-2
Neutral-to-Low	Neutral-to-Low	Neutral-to-Low

Source: Moody's Investors Service

Environmental

Philadelphia's overall E issuer profile score is neutral to low (**E-2**), reflecting relatively low exposure to environmental risks across most categories, including physical climate risk, carbon transition, natural resources management, waste and pollution.

Social

The city's S issuer profile score is neutral to low (**S-2**) reflecting neutral to low exposure across most categories including demographics, education, housing, and access to basic services. The city does face challenges associated with high resident poverty and relatively modest resident wealth, which impacts the city's infrastructure needs as well as its revenue structure. The city has also grappled with increased gun violence over the past several years and its health and safety score is thus moderately negative.

Governance

Philadelphia's solid governance profile supports its rating as captured by a neutral G issuer profile score (**G-2**). This reflects the city's very strong credibility and effectiveness as well as its excellent transparency and disclosure. Actual financial performance has been invariably favorable to budget projections in the city's recent history, and though the city was hard-hit by the effects of the coronavirus pandemic, proactive budget adjustments were made to address revenue shortfalls. Given the historic slimness of the city's reserves, its budget management score is neutral. These governance strengths are somewhat offset by a neutral institutional structure, due primarily to the city's reliance on economically sensitive revenue streams. The city produces long range financial forecasts and capital plans and updates budget projections quarterly.

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 Rating 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.

Exhibit 7
Philadelphia (City of) PA

	Measure	Weight	Score
Economy			
Resident income ratio	76.9%	10.0%	Baa
Full value per capita	127,552	10.0%	Aa
Economic growth metric	-1.5%	10.0%	A
Financial Performance			
Available fund balance ratio	12.4%	20.0%	Baa
Liquidity ratio	45.3%	10.0%	Aaa
Institutional Framework			
Institutional Framework	Aa	10.0%	Aa
Leverage			
Long-term liabilities ratio	215.9%	20.0%	A
Fixed-costs ratio	13.0%	10.0%	Aa
Notching factors			
No notchings applied			
Scorecard-Indicated Outcome			A1
Assigned Rating			**A1**

Sources: US Census Bureau, Philadelphia (City of) PA's financial statements and Moody's Investors Service

Appendix

Exhibit 8
Key Indicators Glossary

	Definition	Typical Source*
Economy		
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
Financial performance		
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	
Leverage		
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 Investors Service
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 Investors Service
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	
Fixed costs		
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 Investors Service
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 Investors Service
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 Investors Service
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 City and Counties Methodology .
Source: Moody's Investors Service

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