

## CREDIT OPINION

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## City of Cambridge, MA

### Update to credit analysis

#### Summary

[Cambridge](#) (Aaa stable) benefits from high resident income and full (equalized) value per capita and a strong economy that continues to outperform the nation in GDP growth. The economy is driven by the presence of world renowned higher education institutions and the impressive biotechnology and pharmaceutical sectors. The city's financial position is very healthy with large reserves and liquidity that are maintained by formal policies and conservative fiscal management. The city's leverage as a percent of revenue and fixed costs ratio are average for the highest rating category and are likely to remain relatively stable given the city's capital plans and funding towards pension and OPEB liabilities.

#### Credit strengths

- » Healthy economy anchored by institutional presence
- » Strong reserves and liquidity as a percent of revenue
- » Ample operating flexibility given a large amount of unused levy capacity under the tax levy limit
- » Aggressive funding schedule towards the city's unfunded pension liability

#### Credit challenges

- » Taxpayer concentration in research and development
- » Maintaining service levels in line with community expectations

#### Rating outlook

The stable outlook reflects the city's strong fiscal management that is committed to maintaining a healthy financial position given conservative multiyear budget forecasting and adherence to formally adopted fiscal policies. The outlook also incorporates the significant institutional presence that helps to maintain a strong labor force and attract private investment in the city.

#### Factors that could lead to an upgrade

- » Not applicable

#### Factors that could lead to a downgrade

- » Significant growth in leverage as a percent of revenue

- » Material weakening of the economy
- » Large decline in reserves and liquidity as a percent of revenue

## Key indicators

Exhibit 1

### Cambridge (City of) MA

	2019	2020	2021	2022	Aaa Medians
<b>Economy</b>					
Resident income ratio (%)	148.8%	146.9%	N/A	N/A	173.2%
Full Value (\$000)	\$49,449,366	\$49,449,366	\$63,505,736	\$63,505,736	\$8,668,233
Population	116,632	117,822	N/A	N/A	36,139
Full value per capita (\$)	\$423,978	\$419,696	N/A	N/A	\$225,444
Economic growth metric (%)	N/A	0.5%	0.7%	N/A	-0.6%
<b>Financial Performance</b>					
Revenue (\$000)	\$774,203	\$799,551	\$842,183	\$887,598	\$101,271
Available fund balance (\$000)	\$450,267	\$445,492	\$441,368	\$435,189	\$60,284
Net unrestricted cash (\$000)	\$663,363	\$684,571	\$755,692	\$836,477	\$85,080
Available fund balance ratio (%)	58.2%	55.7%	52.4%	49.0%	62.5%
Liquidity ratio (%)	85.7%	85.6%	89.7%	94.2%	89.9%
<b>Leverage</b>					
Debt (\$000)	\$492,968	\$507,262	\$526,962	\$553,675	\$71,359
Adjusted net pension liabilities (\$000)	\$745,514	\$912,206	\$1,039,542	\$858,136	\$120,889
Adjusted net OPEB liabilities (\$000)	\$598,682	\$736,553	\$853,904	\$822,104	\$14,025
Other long-term liabilities (\$000)	\$39,517	\$42,710	\$44,180	\$46,840	\$3,650
Long-term liabilities ratio (%)	242.4%	275.0%	292.6%	257.0%	257.7%
<b>Fixed costs</b>					
Implied debt service (\$000)	\$33,911	\$35,942	\$36,326	\$36,961	\$4,843
Pension tread water contribution (\$000)	\$19,698	\$27,521	\$22,235	N/A	\$3,247
OPEB contributions (\$000)	\$22,733	\$22,193	\$23,460	\$24,151	\$517
Implied cost of other long-term liabilities (\$000)	\$2,893	\$2,881	\$3,059	\$3,099	\$244
Fixed-costs ratio (%)	10.2%	11.1%	10.1%	9.7%	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 Economic Growth metric cited above compares the five-year CAGR of real GDP for Boston-Cambridge-Newton, MA-NH Metropolitan Statistical Area to the five-year CAGR of real GDP for the US.

Sources: US Census Bureau, Cambridge (City of) MA's financial statements and Moody's Investors Service, US Bureau of Economic Analysis

## Profile

Cambridge is a large and diverse community that neighbors the City of [Boston](#) (Aaa stable) across the Charles River. The city's population was 117,822 as of 2020 census data and its economy is anchored by [Harvard University](#) (Aaa stable) and the [Massachusetts Institute of Technology](#) (MIT, Aaa stable). The city provides general governmental services including police and fire protection, parks and recreation, health and social services, libraries and culture, and maintenance of streets and highways.

## Detailed credit considerations

### Economy

Cambridge's economy benefits from the presence of Harvard and MIT which together enroll around 33,000 students and provide employment to almost 22,000 full-time positions (roughly 16% of the city's workforce). The city's economic growth as measured by the MSA's five year CAGR of real GDP compared to the US real GDP is a strong 0.7%. The city's largest industries are professional and business services and education and health services including the vibrant biotechnology and pharmaceutical sectors. The top 10

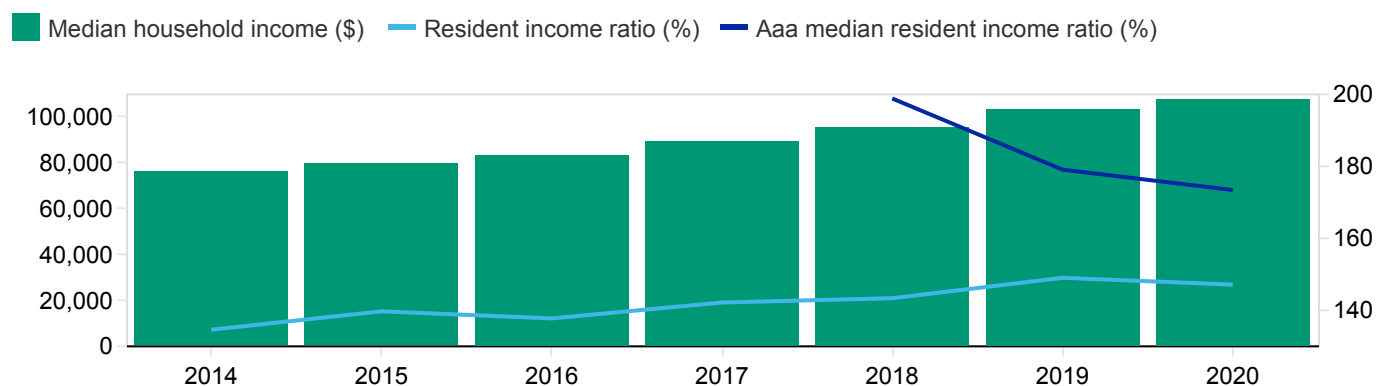
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taxpayers are concentrated and represent 26% of 2022 total assessed value. Although, MIT with its significant taxable property is the largest taxpayer representing 10.5% of AV.

The residential housing market remains strong as does class-A office and lab spaces. The city has reported a softening of the class-B space but believes that it remains suitable for entrepreneurial, innovation and tech-driven research and development type businesses. The potential economic impact on the city from increased remote work is still unknown but the ongoing demand for lab space which lends itself to in-person work stations should help mitigate any negative impact. There are at least eight projects totaling 1.6 million square feet in the development pipeline and 1.4 million square feet under construction that are in some capacity converting underperforming office and retail space into modern facilities equipped for research and development. The city is also positioned to remain very competitive to attract businesses to the city given very low residential and commercial tax rates of \$5.68 per \$1,000 of AV and \$10.38, respectively. While the state average residential and commercial tax rates are \$13.23 and \$16.28, respectively, and Boston and Waltham's tax rates are at least double that of Cambridge's.

The city's resident income and wealth are strong with a median household income adjusted for regional price parity of 146.9% of the US median (see exhibit). The city's wealth as measured by a 2022 \$596,997 full value per capita is very strong. Cambridge's unemployment rate is low at 2% (December 2022) and historically trends below the Commonwealth and US with rates of 3.2% and 3.3%, respectively.

Exhibit 2

**Resident Income**

Source: Moody's Investors Service

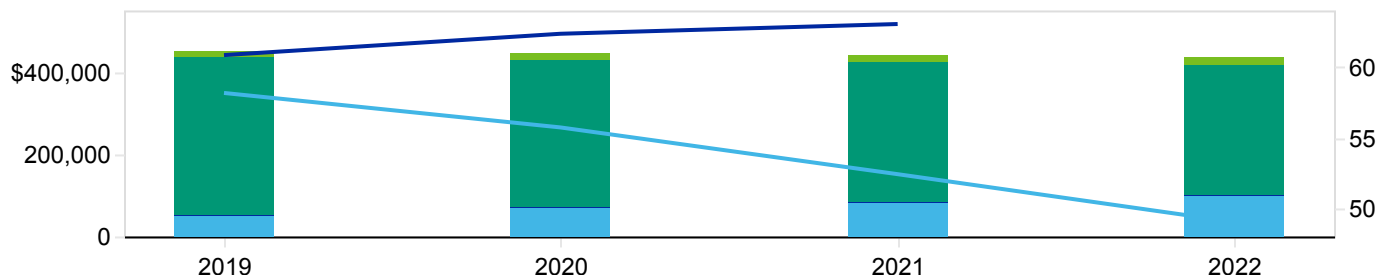
**Financial operations**

The city's financial position is likely to remain stable over the next few years because of conservative multiyear budget planning. Across all governmental funds and business-type activities, the city closed fiscal 2022 (the latest audit ending June 30, 2022) with an available fund balance and net unrestricted current assets of \$435.2 million representing 49% of revenue (see exhibit). Cambridge also had \$261.5 million in restricted governmental reserves not counted in our available reserves ratio. The city's reserves have declined over the last five years from a high 58% of revenue due to a planned draw down for one-time capital projects and other uses. The reserve level is likely to level off over the next few years and remain comparable but on the lower end of the highest rating median as a percent of revenue.

Exhibit 3

**Fund Balance**

■ General fund 
 ■ Other governmental funds 
 ■ Internal service funds 
 ■ Business-type activities  
— Available fund balance ratio (%) 
 — Aaa median available fund balance ratio (%)



As of June 30 fiscal year-end  
 Source: Moody's Investors Service

Cambridge's governmental activities provide 98% of the city's revenue base with property taxes representing 57% of fiscal 2022 governmental revenue. The city's water fund is the only enterprise fund providing the remaining revenue source. The city has ample unused tax levy capacity totaling \$201 million equal to 23% of annual revenue that provides for significant operating flexibility under the tax levy limits of Proposition 2 ½. More than most Massachusetts communities. The largest expenditures are education and public safety representing 27% and 17%, respectively, of total governmental costs.

The fiscal 2023 budget increased by 6.5% or \$48.8 million over the fiscal 2022 adjusted operating budget. The budget drivers included 2.5% increase in salaries, 3% increase in health insurance and 12.1% increase in pension contributions and a \$2 million allocation to the OPEB trust fund. The budget was balanced with a 7.5% tax levy increase and \$19 million use of reserves. Year to date operations are trending on budget with a positive variance expected in local receipts for meals and hotel taxes as well as charges for services.

The city's fiscal 2024-27 budget projections indicate balanced annual operations using conservative assumptions. The expense projections include a 3% increase in salaries in fiscal 2024 and 2.5% annually thereafter, pension contribution will increase by 12.1% annually through 2025 and education costs increase by the value of a 6.5% property tax levy increase as a funding source for the budget. The revenue projections include funding of state aid in line with the current budget recommendation for next year and flat thereafter, and an average annual tax levy increase of 8.5%. Other budget projections include over \$26 million annually in capital costs with \$15.2 million of reserves used each year as a funding source. The city also plans to provide a Universal Pre-K program for all four year olds beginning in fiscal 2025 that will add \$20 million (roughly 2% of FY22 revenue) to the operating budget.

**Liquidity**

Cambridge's net unrestricted cash and investments at the end of fiscal 2022 was \$836.5 million representing a high 94.2% of revenue. The liquidity position at the end of fiscal 2023 is not likely to materially change.

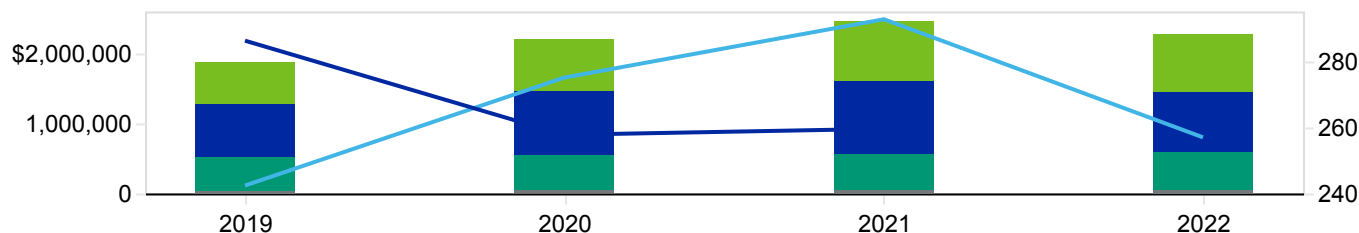
**Leverage**

Cambridge's leverage is average for the highest rating category and will likely remain relatively unchanged over the next few years given a large capital plan while continuing to aggressively fund the pension plan and make annual deposits into the OPEB trust. The city ended fiscal 2022 with a long-term liabilities ratio of 257% of revenue (see exhibit). The city's debt accounts for 24% of the total leverage ratio while adjusted net pension liability and adjusted net OPEB liability represent 38% and 36%, respectively. The leverage ratio increases to 262% of revenue when adding the current 2023 bond issue to the long-term liabilities.

Exhibit 4

**Total Primary Government - Long Term Liabilities**

■ Governmental Debt ■ Business-Type Activity Debt ■ Adjusted net pension liabilities  
 ■ Adjusted net other post-employment liabilities ■ Other long-term liabilities — Long-term liabilities ratio (%)  
 — Aaa median long-term liabilities ratio (%)



As of June 30 fiscal year-end

Source: Moody's Investors Service

The city's fiscal 2023-27 public investment program's total capital spending equals \$609.4 million reflecting an increase of \$84.9 million over the prior year's plan. The increase in spending is in part because of an increase in sewer and stormwater projects. Bond proceeds of \$231.3 million is projected to be the largest funding source.

**Legal security**

The general obligation limited tax bonds are backed by the city's full faith and credit general obligation limited tax pledge because debt service has not been voted excluded from the tax levy limits of Proposition 2 ½.

**Debt structure**

The entire debt portfolio of \$599.9 million is fixed rate with 84% of principal retired in 10 years. Final maturity on the city's debt is 2042.

**Debt-related derivatives**

Cambridge does not have debt-related derivatives.

**Pensions and OPEB**

Cambridge's pension and OPEB liabilities are larger than its debt burden and though manageable at this time, represent a potential future credit challenge. The city participates in the Cambridge Retirement Plan, a multi-employer defined benefit plan and makes annual required contributions. The latest actuarial report assumes a 7.1% discount rate that was reduced from 7.25% the prior year and maintains a funded date of 2026. Annual pension contributions are scheduled to increase by 12.1% annually until 2026. The city's teachers participate in the Massachusetts Teachers Retirement System in which the city receives on-behalf payments toward that liability that is covered by the Commonwealth. Moody's 2022 adjusted net pension liability of \$858.1 million uses a 3% discount rate assumption.

The city also funds its OPEB liability on a pay-go basis plus annual budgeted deposits into an OPEB trust. The OPEB plan fiduciary net position is 3.68% of the total OPEB liability as of the end of fiscal 2022. The Moody's 2022 adjusted net OPEB liability of \$822.1 million uses a 3.1% discount rate assumption.

The 2022 fixed costs ratio of 9.7% is very favorable and will likely remain low. Additionally, the city's annual pension contributions for the last five years have been significantly higher than the Moody's tread water indicator, which is the amount required to keep the unfunded liability from increasing if all actuarial assumptions are realized, a reflection of the commitment to meet the 2026 pension funding date.

## ESG considerations

### Cambridge (City of) MA'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

The City of Cambridge's ESG credit impact score is neutral-to-low (**CIS-2**), reflecting moderately negative environmental exposure, very low exposure to social risks and a strong governance profile that supports the city's credit rating, resilience and capacity to respond to shocks.

Exhibit 6

#### ESG Issuer Profile Scores

ENVIRONMENTAL

# E-3

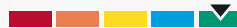
## Moderately Negative



SOCIAL

# S-1

## Positive



GOVERNANCE

# G-1

## Positive



Source: Moody's Investors Service

### Environmental

Cambridge's E environmental issuer profile score is moderately negative (**E-3**). While carbon transition, natural capital, and water and pollution risks are modest, the city is exposed to physical climate risks associated with the city's location including exposure to sea level rise and extreme weather events including hurricanes and nor-easters.

### Social

Cambridge's S social issuer profile is positive (**S-1**). The city benefits from favorable educational attainment, a strong labor force and positive health and safety. City residents also have access to basic services and the city benefits from stable demographics. Housing affordability is a neutral to low risk but is a growing challenge.

### Governance

Cambridge's G governance issuer profile score is positive (**G-1**). The city has a favorable institutional structure, transparency and disclosure. The city also consistently approves and releases its budgets and audited financial statements in a timely manner. Cambridge's budget management and policy credibility and effectiveness are strong and is reflected in its healthy financial position and trend of balanced operations.

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

### Cambridge (City of) MA

	Measure	Weight	Score
<b>Economy</b>			
Resident income ratio	146.9%	10.0%	Aaa
Full value per capita	596,977	10.0%	Aaa
Economic growth metric	0.7%	10.0%	Aaa
<b>Financial Performance</b>			
Available fund balance ratio	49.0%	20.0%	Aaa
Liquidity ratio	94.2%	10.0%	Aaa
<b>Institutional Framework</b>			
Institutional Framework	Aa	10.0%	Aa
<b>Leverage</b>			
Long-term liabilities ratio	257.0%	20.0%	A
Fixed-costs ratio	9.7%	10.0%	Aaa
<b>Notching factors</b>			
Additional Strength in Local Resources	0.5		
Scorecard-Indicated Outcome			Aa1
<b>Assigned Rating</b>			<b>Aaa</b>

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

## Appendix

Exhibit 8

### 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 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
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 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	
<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 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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