**Moody’s Investors Service**

**Rating Action:** Moody's assigns Aa1 to Somerville, MA's GO Bonds and MIG 1 to GO BANs

08 May 2018

New York, May 08, 2018 -- Moody's Investors Service has assigned a Aa1 rating to Somerville, Massachusetts' $500,000 General Obligation Bonds, 2018 Series A (Minibond Program) and $11.6 million General Obligation Municipal Purpose Loan of 2018 Bonds, Series B; and a MIG 1 rating to the city's $140 million General Obligation Bond Anticipation Notes (BANs, dated June 8, 2018 and payable June 7, 2019). Concurrently, we have affirmed the Aa1 rating on the city's long-term issuer rating and outstanding GO bonds.

**RATINGS RATIONALE**

The Aa1 rating reflects the city's healthy financial position, large and growing tax base, and proximity to Boston and Cambridge. The city's recent tax base growth reflects development around the expansion of MBTA subway lines in the city, most notably, the Assembly Square Project. Challenges include management of increased debt levels and growing pension and OPEB liabilities.

The MIG 1 short term rating reflects the strong long-term credit profile, sufficient takeout management, a history of strong market access and adequate liquidity.

**RATING OUTLOOK**

Moody's does not usually assign outlooks to local government credits with this amount of debt outstanding.

**FACTORS THAT COULD LEAD TO AN UPGRADE**

Continued growth of fund balance and cash levels

Ability to maintain or reduce debt burden

Reduced budgeted appropriations of free cash

**FACTORS THAT COULD LEAD TO A DOWNGRADE**

Weakening of local economy or deterioration of tax base

Trend of operating deficits resulting in a material decline in reserves or liquidity

Increase in debt burden beyond current expectations

**LEGAL SECURITY**

The bonds and notes are secured by the city's general obligation limited tax pledge as not all debt service has been voted exempt from the tax levy limitations of Proposition 2.5

**USE OF PROCEEDS**

The BAN proceeds will renew $35.9 million in notes scheduled to mature. Bond proceeds will permanently finance the balance of maturing BANs. The balance of the BAN and bond proceeds will be applied to construction of a new high school and other city projects.

**PROFILE**

The City of Somerville has a population of 81,322 and is located in eastern Massachusetts, adjacent to Cambridge (Aaa/ Stable) and Boston (Aaa/ stable).

**METHODOLOGY**

The principal methodology used in the issuer rating and the general obligation ratings was US Local

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Somerville (City of) MA
Update to Credit Analysis

Summary
The city of Somerville (Aa1), Massachusetts benefits from its close proximity to the cities of Boston and Cambridge, its healthy financial position, and its large tax base that has grown significantly in recent years. Recent growth in the city's tax base largely reflects transit oriented development around MBTA's Assembly Square station on the Orange line and new stations on the Green line extension. Challenges include an increased debt burden as the city builds and improves infrastructure. In addition, while currently manageable the city's pension and OPEB liabilities are large.

Credit strengths
» Strong and growing economy adjacent to Boston and Cambridge
» Large and diverse tax base
» Historically strong fund balance
» City maintains and adheres to formal financial policies

Credit challenges
» Rising costs for education and debt service
» Large capital plan
» Large pension and OPEB liabilities

Rating outlook
Moody's does not usually assign outlooks to local government credits with this amount of debt outstanding.

Factors that could lead to an upgrade
» Continued growth of fund balance and cash
» Reduction of debt and/or pension burden
» Reduced reliance on free cash appropriations

Factors that could lead to a downgrade
» Weakening of local economy or deterioration of tax base
» Trend of operating deficits resulting in a material decline in reserves or liquidity
» Increase in debt burden beyond current expectations

Key indicators

<table>
<thead>
<tr>
<th>Exhibit 11</th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Somerville (City of), MA</td>
<td>2013</td>
<td>2014</td>
<td>2015</td>
<td>2016</td>
<td>2017</td>
</tr>
<tr>
<td>Economy/Tax Base</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Full Value ($000)</td>
<td>$9,237,328</td>
<td>$9,237,328</td>
<td>$10,446,575</td>
<td>$10,446,575</td>
<td>$12,444,120</td>
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<tr>
<td>Population</td>
<td>76,945</td>
<td>77,560</td>
<td>78,595</td>
<td>79,507</td>
<td>81,322</td>
</tr>
<tr>
<td>Full Value Per Capita</td>
<td>$120,051</td>
<td>$119,099</td>
<td>$132,917</td>
<td>$131,392</td>
<td>$133,023</td>
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<tr>
<td>Median Family Income (% of US Median)</td>
<td>112.8%</td>
<td>114.6%</td>
<td>120.1%</td>
<td>125.1%</td>
<td>125.1%</td>
</tr>
<tr>
<td>Finances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Revenue ($000)</td>
<td>$202,363</td>
<td>$207,573</td>
<td>$213,653</td>
<td>$218,847</td>
<td>$234,863</td>
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<tr>
<td>Fund Balance ($000)</td>
<td>$47,067</td>
<td>$46,535</td>
<td>$50,218</td>
<td>$54,685</td>
<td>$60,836</td>
</tr>
<tr>
<td>Cash Balance ($000)</td>
<td>$53,045</td>
<td>$52,472</td>
<td>$57,381</td>
<td>$61,665</td>
<td>$67,075</td>
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<td>Fund Balance as a % of Revenues</td>
<td>23.3%</td>
<td>22.4%</td>
<td>23.5%</td>
<td>25.0%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Cash Balance as a % of Revenues</td>
<td>26.2%</td>
<td>25.3%</td>
<td>26.9%</td>
<td>28.2%</td>
<td>28.8%</td>
</tr>
<tr>
<td>Debt/Pensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Direct Debt ($000)</td>
<td>$87,790</td>
<td>$103,796</td>
<td>$111,057</td>
<td>$120,177</td>
<td>$137,866</td>
</tr>
<tr>
<td>3-Year Average of Moody’s ANFL ($000)</td>
<td>$245,162</td>
<td>$285,882</td>
<td>$306,159</td>
<td>$326,737</td>
<td>$310,877</td>
</tr>
<tr>
<td>Net Direct Debt / Operating Revenues (x)</td>
<td>0.4x</td>
<td>0.5x</td>
<td>0.5x</td>
<td>0.5x</td>
<td>0.6x</td>
</tr>
<tr>
<td>Net Direct Debt / Full Value (%)</td>
<td>1.0%</td>
<td>1.1%</td>
<td>1.1%</td>
<td>1.2%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Moody’s - adjusted Net Pension Liability (3-yr average) to Revenues (x)</td>
<td>1.2x</td>
<td>1.4x</td>
<td>1.4x</td>
<td>1.5x</td>
<td>1.3x</td>
</tr>
<tr>
<td>Moody’s - adjusted Net Pension Liability (3-yr average) to Full Value (%)</td>
<td>2.7%</td>
<td>3.1%</td>
<td>2.9%</td>
<td>3.1%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

As of June 30 fiscal year-end

Source: Moody’s Investors Service; city’s audited financial statements

Profile
The City of Somerville has a population of 81,322 and is located in eastern Massachusetts, adjacent to Boston (Aaa/stable) and Cambridge (Aaa/Stable).

Detailed credit considerations

Economy and Tax Base: Proximity to Boston Continues to Spur Growth
Somerville’s tax base will likely continue to grow as Transit Oriented Development (TOD) adds significant value to the tax base. This will extend an already strong tax base, which is a notable strength of the city’s credit profile. New growth will continue to be healthy over the near term, given the city’s favorable location in the Greater Boston (Aaa stable) area with management citing multiple examples of large scale residential and commercial projects that have been permitted or are expecting to receive permits by the end of calendar year 2018.

The tax base is primarily residential (85% of 2017 assessed value) with a modest, but growing commercial presence (13%). The city’s assessed value has grown in each of the last 7 years including a strong 13.1% in fiscal 2017.

The increase in FY17 assessed value largely reflects the 145-acre multi-use Assembly Square Project located adjacent to the MBTA’s (Aa1/Stable) Orange Line and Interstate 93. The city is also working closely with developers along the Green Line extension on the

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Union Square development, which is expected to encompass over 2.3 million square feet, and other projects. Additional, projects are in the pipeline, in support of these projects the city will continue to upgrade and add infrastructure.

Somerville’s other strengths include the large institutional presence of higher education. Portions of Tufts University (Aa2/stable) lie within the city and Harvard (Aaa/ Stable) and MIT (Aa/ Stable) are both adjacent to the city. Students account for 20% of the population and contribute significantly to the city’s economic stability.

Financial Operations and Reserves: Strengthening Financial Position and Growing Reserves

Somerville’s financial position will likely remain stable in the near term given management’s conservative budgeting, and new property tax revenue from ongoing development which will help to finance growing debt service and growing education costs.

While the city is reducing its annual appropriation of free cash to its operating budget, it continues to generate surpluses to replenish this appropriation. The fiscal 2017 budget appropriated $2.5 million in free cash, a reduction from the prior year. In fiscal 2018 the city budgeted $2 million, and expects to reduce this to $1.5 million in fiscal 2019.

Fiscal 2017 ended with a $5 million surplus bringing the fund balance to $61 million. Somerville derives the majority of its revenues from property taxes (57.5%) and state aid, including aid for education (27.8%). The city's fiscal 2017 operating expenses totaled $230 million. The primary budget drivers were education (28%), public safety (18%), and pensions (12%).

The adopted 2018 budget increased 4.6%, education is the main budget driver. As fiscal year 2018 nears completion the city expects to modestly add to fund balance, though at levels somewhat lower than in fiscal 2017. In fiscal 2018 management expects the sewer and water funds to perform at similar levels as in fiscal 2017.

Management reports that the fiscal 2019 budget will be modestly larger than the 2018 budget with revenues slightly outpacing expense growth. Revenue drivers will be property taxes and expense will be driven by education with State Aid for education expected to grow by only 1% in fiscal 2019. Management expects appropriation of free cash to decline to $1.5 million.

The 10 year forecast shows budgetary surpluses that average 3-5% of annual revenues, which is in line with the city’s goal to generate a 5% margin. The assumptions are fairly conservative and include a 4-6% average annual increase in revenue, driven by strong property tax receipts related to new development. Forecasts include 1.5% annual increases in state aid. The average annual increase in total expenditures is 3.3%, driven by education (5% annual growth), employee benefits (4.2%), and debt service.

Management’s ability to at least maintain fund balance at current levels to offset the growing debt burden and education will be important to the city’s credit profile going forward.

LIQUIDITY

Year-end General Fund cash continues to grow incrementally and was $68 million (2017) up 10% from the prior year, or a healthy 28.8% of revenues, in fiscal 2017.

Debt and Pensions: Significant Increases in Debt and Large Capital Plan Will Increase debt Burden; Large But Manageable Pension and OPEB Liabilities

The debt burden is manageable but will increase as the city implements its large $692 million 10 year capital plan. Following the current issuance, the direct debt burden will be 2% of equalized value (full value). The overall debt burden incorporating overlapping debt of the Massachusetts Water Resources Authority (Aa1 stable) and the Massachusetts Bay Transportation Authority (Aa2 stable) is nearly 5%.

Additional support to manage the debt burden comes from various stabilization reserves held as committed General Fund balance to which the city has been adding every year and will draw down over time to reduce debt service costs. Reserves may be boosted further by developer impact fees if the city receives approval for legislation which it is currently promoting in the legislature. Somerville’s proposed legislation would provide for the first developer impact fee in the Commonwealth of Massachusetts.

Ongoing debt issuance will include additional funding for the city’s portion of the high school (excluded from prop. 2 1/2). The remainder of its commitment to the $50 million Green Line extension, as well as multiple sewer/water and utility projects. Long term bonds will be issued in tranches beginning in fiscal 2019 through 2026.
DEBT STRUCTURE
All debt is fixed rate and amortization of outstanding principal is slower than average, with 61% repaid within ten years. Debt service costs of $11 million in fiscal 2017 comprised 4.8% of expenditures. The city remains in compliance with its policy to maintain debt service (that falls under the limits of Proposition 2 ½) under 6% of annual expenditures.

DEBT-RELATED DERIVATIVES
The city is not party to any interest rate swaps or other derivative agreements.

PENSIONS AND OPEB
Somerville maintains a single employer defined benefit pension plan for substantially all city employees, with the exception of teachers and qualified staff who are covered under the state plan. On a GASB basis the plan is 61% funded with an NPL of $140 million and they are making their full ADC equal to an elevated, but manageable 6.4% of General Fund expenditures. The fiscal 2017 three-year average adjusted net pension liability (ANPL), under Moody’s methodology for adjusting reported pension data, is a modest $311 million, or an average 1.3 times General Fund revenues and 2.5% of equalized value. The current actuarial assumptions include a very high 8% discount rate, down from 8.25% in 2016, management indicates it is currently performing an actuarial study and is assessing whether to continue to lower the discount rate. Management reported a 5 year investment return average of 9.82%. Moody’s uses the adjusted net pension liability to improve comparability of reported pension liabilities. The adjustments are not intended to replace the city’s reported liability information, but to improve comparability with other rated entities.

In February of 2012, the city established a trust fund for its OPEB liability, which has been funded by annual appropriations and has a current balance of $1.8 million. The city funded 50% of the OPEB cost in fiscal 2017, representing $10.3 million or 4% of General Fund expenditures. The total Unfunded Actuarially Accrued Liability (UAAL) is $302.3 million as of June 30, 2017.

Total fixed costs for fiscal 2017, including debt service, required pension contributions and retiree healthcare payments, represented $32.7 million, or 16% of expenditures. When including the additional General Fund supported debt issuances over the next several years, total fixed costs will increase to approximately 20% of expenditures, a level that is slightly elevated for the rating category but still manageable.

Management and Governance
Management is strong, as evidenced by a growing and healthy fund balance, adherence to formally adopted fiscal policies, and multi-year budget forecasting and capital planning.

Massachusetts Cities have an Institutional Framework score of Aa, which is high. Institutional Framework scores measure a sector's legal ability to increase revenues and decrease expenditures. Massachusetts cities major revenue source, property taxes, are subject to the Proposition 2 1/2 cap which can be overridden with voter approval only. However, the cap of 2.5% still allows for moderate revenue-raising ability. Unpredictable revenue fluctuations tend to be minor, or under 5% annually. Across the sector, fixed and mandated costs are generally greater than 25% of expenditures. However, Massachusetts has public sector unions, which can limit the ability to cut expenditures. Unpredictable expenditure fluctuations tend to be minor, under 5% annually.
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REPORT NUMBER 1122797

Somerville (City of) MA: Update to Credit Analysis
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