

ISSUER COMMENT

22 November 2019

RATING

General Obligation (or GO Related) ¹

Aa3 No Outlook

Contacts

Jeff Garofano +1.212.553.1646
Associate Lead Analyst
jeff.garofano@moodys.com

Thomas Jacobs +1.212.553.0131
Senior Vice President/Manager
thomas.jacobs@moodys.com

CLIENT SERVICES

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

City of Norwich, CT

Annual Comment on Norwich

Issuer Profile

The City of Norwich is located in New London County in southeastern Connecticut, approximately 35 miles southeast of Hartford and 15 miles from the Rhode Island state line. New London County has a population of 270,772 and a moderate population density of 407 people per square mile. The county's median family income is \$85,198 (1st quartile) and the September 2019 unemployment rate was 3.3% (2nd quartile) ². The largest industry sectors that drive the local economy are local government, health services, and retail trade.

Credit Overview

The credit position for Norwich is high quality, and its Aa3 rating is on par with the US cities median of Aa3. Key credit factors include a healthy financial position, a solid tax base, and a moderate wealth and income profile. The city's credit position also reflects a low debt burden and a moderate pension liability.

Finances: Norwich has a healthy financial position overall that is consistent with its assigned rating of Aa3. The cash balance as a percent of operating revenues (28.3%) is slightly lower than the US median, but this metric grew between 2014 and 2018. Additionally, the fund balance as a percent of operating revenues (11.7%) is well below the US median. Connecticut local governments tend to have financial ratios lower than US medians because their financials typically incorporate school operations, which are predictable. Also, Connecticut local governments generally derive a majority of their revenues from stable property taxes.

Economy and Tax Base: The economy and tax base of Norwich are healthy and are consistent with city's Aa3 rating position. The total full value (\$2.7 billion) is slightly stronger than the US median, although this number decreased slightly from 2014 to 2018. On the other hand, the full value per capita (\$68,698) is slightly lower than that of other Moody's-rated cities nationwide. Lastly, the median family income of city residents is a moderate 88% of the US median level.

Debt and Pensions: The debt and pension liabilities of Norwich are manageable overall and are consistent with its assigned rating of Aa3. The net direct debt to full value (1.7%) is slightly higher than the US median, and it remained stable from 2014 to 2018. By contrast, the ratio of the city's Moody's-adjusted net pension liability to its operating revenues (1.3x) is favorably lower than the US median.

Management and Governance: Connecticut cities have an institutional framework score ³ of "Aa," or strong. Revenues are highly predictable and stable due to a large reliance on property taxes. Cities additionally benefit from high revenue-raising ability due to the absence of a statewide property tax cap. Expenditures primarily consist of personnel costs

(as well as education costs for those cities that manage school operations), and are highly predictable due to state-mandated school spending guidelines and employee contracts that dictate costs. Expenditure reduction ability is moderate, as it is somewhat constrained by union presence.

Sector Trends - Connecticut Cities

While Connecticut cities and towns have generally benefited from stable tax bases, populations are aging and new development is challenged by the high cost of living and doing business. Positively, resident wealth and income levels are high. Median financial reserves are lower than the national median, which represents a pressure for cities and towns in light of state funding uncertainty. Ongoing budgetary pressures at the state level threaten the stability of state revenues. Property tax revenues, the primary revenue source, will continue to rise slowly due to stabilizing real estate markets and the absence of a cap on local government levies.

EXHIBIT 1

Key Indicators ⁴ ⁵ Norwich

	2014	2015	2016	2017	2018	US Median	Credit Trend
Economy / Tax Base							
Total Full Value	\$2,936M	\$2,574M	\$2,670M	\$2,707M	\$2,711M	\$1,904M	Weakened
Full Value Per Capita	\$72,731	\$63,961	\$66,659	\$67,887	\$68,698	\$94,106	Weakened
Median Family Income (% of US Median)	90%	88%	85%	88%	88%	111%	Stable
Finances							
Available Fund Balance as % of Operating Revenues	9.1%	8.6%	11.4%	13.2%	11.7%	34.6%	Stable
Net Cash Balance as % of Operating Revenues	22.8%	23.2%	27.0%	29.9%	28.3%	39.6%	Improved
Debt / Pensions							
Net Direct Debt / Full Value	1.4%	1.7%	1.8%	1.9%	1.7%	1.1%	Stable
Net Direct Debt / Operating Revenues	0.35x	0.37x	0.38x	0.38x	0.34x	0.84x	Stable
Moody's-adjusted Net Pension Liability (3-yr average) to Full Value	4.9%	5.6%	5.9%	5.7%	6.2%	1.9%	Weakened
Moody's-adjusted Net Pension Liability (3-yr average) to Operating Revenues	1.20x	1.18x	1.21x	1.15x	1.26x	1.56x	Stable

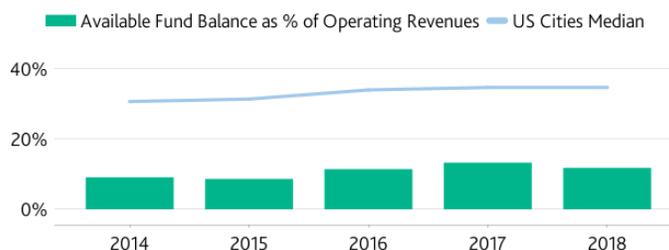
	2014	2015	2016	2017	2018	US Median
Debt and Financial Data						
Population	40,378	40,254	40,057	39,875	39,470	N/A
Available Fund Balance (\$000s)	\$10,981	\$10,399	\$14,879	\$17,681	\$15,564	\$8,028
Net Cash Balance (\$000s)	\$27,630	\$28,093	\$35,236	\$39,999	\$37,523	\$9,530
Operating Revenues (\$000s)	\$120,944	\$120,838	\$130,666	\$133,625	\$132,505	\$23,172
Net Direct Debt (\$000s)	\$42,123	\$44,794	\$49,380	\$50,220	\$45,604	\$19,139
Moody's Adjusted Net Pension Liability (3-yr average) (\$000s)	\$144,950	\$142,901	\$158,088	\$153,268	\$167,009	\$35,448

Source: Moody's Investors Service

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

EXHIBIT 2

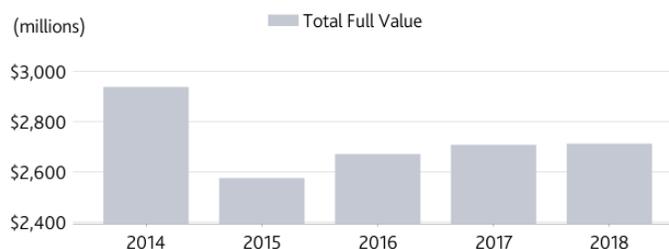
Available fund balance as a percent of operating revenues remained stable from 2014 to 2018



Source: Issuer financial statements; Moody's Investors Service

EXHIBIT 3

Full value of the property tax base decreased slightly from 2014 to 2018



Source: Issuer financial statements; Government data sources; Offering statements; Moody's Investors Service

EXHIBIT 4

Moody's-adjusted net pension liability to operating revenues remained stable from 2014 to 2018



Source: Issuer financial statements; Government data sources; Offering statements; Moody's Investors Service

Endnotes

- The rating referenced in this report is the issuer's General Obligation (GO) rating or its highest public rating that is GO-related. A GO bond is generally backed by the full faith and credit pledge and total taxing power of the issuer. GO-related securities include general obligation limited tax, annual appropriation, lease revenue, non-ad valorem, and moral obligation debt. The referenced ratings reflect the government's underlying credit quality without regard to state guarantees, enhancement programs or bond insurance.
 - The demographic data presented, including population, population density, per capita personal income and unemployment rate are derived from the most recently available US government databases. Population, population density and per capita personal income come from the American Community Survey while the unemployment rate comes from the Bureau of Labor Statistics.
- The largest industry sectors are derived from the Bureau of Economic Analysis. Moody's allocated the per capita personal income data and unemployment data for all counties in the US census into quartiles. The quartiles are ordered from strongest-to-weakest from a credit perspective: the highest per capita personal income quartile is first quartile, and the lowest unemployment rate is first quartile.
- The institutional framework score assesses a municipality's legal ability to match revenues with expenditures based on its constitutionally and legislatively conferred powers and responsibilities. See [US Local Government General Obligation Debt \(December 2016\)](#) methodology report for more details.
 - For definitions of the metrics in the Key Indicators Table, [US Local Government General Obligation Methodology and Scorecard User Guide \(July 2014\)](#). Metrics represented as N/A indicate the data were not available at the time of publication.
 - The medians come from our most recently published local government medians report, [Medians - Tax base growth underpins sector strength, while pension challenges remain \(May 2019\)](#) which is available on Moody's.com. The medians presented here are based on the key metrics outlined in Moody's GO methodology and the associated scorecard.

© 2019 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

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

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

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

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

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

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

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

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1201545

CLIENT SERVICES

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