

SECTOR COMMENT

28 April 2022



Analyst Contacts

Alfred Medioli +1.212.553.4173
Senior Vice President/Mgr/RPO
alfred.medioli@moodys.com

Ted Hampton +1.212.553.2741 VP-Sr Credit Officer ted.hampton@moodys.com

Pisei Chea +1.212.553.0344 VP – Senior Analyst pisei.chea@moodys.com

Emily Raimes +1.212.553.7203 VP-Sr Credit Officer/Manager emily.raimes@moodys.com

Gregory W. Lipitz +1.212.553.7782 *VP-Sr Credit Officer/Manager* gregory.lipitz@moodys.com

Naomi Richman +1.212.553.0014
Senior Vice President
naomi.richman@moodys.com

Timothy Blake, CFA +1.212.553.4524 MD-Public Finance timothy.blake@moodys.com

CLIENT SERVICES

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

Public Finance – US

Puerto Rico bondholder recovery patterns echo major municipal bankruptcies

Bondholder recoveries in Puerto Rico's bankruptcy-like proceedings reinforce patterns seen in municipal bankruptcies over the past 15 years such as <u>Detroit</u> (Ba2 positive) and <u>Jefferson County, Alabama</u> (A3 stable). As in those cases, credit fundamentals in Puerto Rico have outweighed legal protections as a driver not only of default but also subsequent recovery. Legal provisions have certainly influenced recovery, but often in unpredictable ways. Also, some debt classes have avoided impairment altogether and pensioners have received better treatment than bondholders.

Overall, recoveries in the Puerto Rico case look to range from as little as 2% to around 80% among the various debt classes (see Exhibit on page 2), depending on factors such as breadth of revenue as well as bondholders' legal recourse and specific negotiating opportunities. The large variance in recoveries is evident from the likely minimal recovery on the Puerto Rico Public Finance Corp.'s (PFC) unsecured lease appropriation debt to the considerable one on the Puerto Rico Sales Tax Financing Corp.'s (COFINA) senior bonds. Several classes of debt, notably the University of Puerto Rico and the Puerto Rico Aqueduct and Sewer Authority (PRASA), did not default and remain unimpaired.

The Puerto Rico defaults comprise the largest amount by dollar volume of a municipal entity and component issuers in modern history. Recoveries on about 80% of defaulted principal across the commonwealth's various debt-issuing entities have been decided.¹ The latest round of recoveries settled in March — covering some 40% of principal or about \$24 billion — includes the status of general obligation (GO) debt, pension (Employees Retirement System) bonds, unsecured lease obligations, and debt issued under infrastructure and convention center financing entities. The fate of approximately \$50 billion in pension liabilities that we did not rate was also resolved.²

These recoveries came with the adoption of the most recent plan of adjustment (POA). That followed a long hiatus since the resolution of the COFINA sales tax and Government Development Bank (GDB) obligations between late 2018 and early 2019. (For more on the defaults, negotiations and pending recoveries, see <u>US municipal bond defaults and recoveries</u>, 1970–2021).

MOODY'S INVESTORS SERVICE U.S. PUBLIC FINANCE

Bondholder recoveries in Puerto Rico case vary widely

entity	Default date	Amount (millions)	Pledge	Recovery
Rico Public Finance Corp.	8/3/2015	\$1,200	Appropriation	2%-5%
Rico Infrastructure Financing Authority	1/1/2016	\$1,640	Rum excise tax	12% + CVI
ment Development Bank for Puerto Rico	5/1/2016	\$4,130	General resources	<35%
Rico GO/GO guarantee bonds	7/1/2016	\$17,650	General obligation	53% + CVI
Rico Highways and Transportation Authority nated bonds	7/1/2016	\$52	Highway revenues	Pending
Rico Sales Tax Financing Corp. (COFINA) senior bonds	6/1/2017	\$7,700	Sales tax	82%
Rico Sales Tax Financing Corp. (COFINA) subordinate bonds	6/1/2017	\$9,900	Sales tax	50%
Rico Industrial Development Co.	7/3/2017	\$156	Commercial rent payments	Pending
Rico Electric Power Authority (PREPA)	7/3/2017	\$8,960	Electric revenue	Pending
ees Retirement System bonds	7/3/2017	\$3,160	Employer pension contributions	10%
Rico Highways and Transportation Authority '68	7/3/2017	\$815	Highway revenues	18% + CVI
Rico Highways and Transportation Authority '98	7/3/2017	\$3,456	Highway revenues	2% + CVI
Rico Convention Center District Authority	7/3/2017	\$386	Hotel occupancy taxes	19% + CVI
Rico Aqueduct and Sewer Authority (PRASA)	Did not default	\$3,699	Water and sewer revenues	N/A
Rico Municpal Finance Agency	Did not default	\$470	Local government taxes	N/A
Rico Highways and Transportation Authority (Teodoro Moscoso	Did not default	\$99	Toll revenue	N/A
ity of Puerto Rico	Did not default	\$496	Tuition, fees and other revenue	N/A
liabilities (Moody's estimated ANPL)	N/A	\$51,000	N/A	N/A

CVI refers to contingent value instruments.

Sources: Plan of adjustment and Moody's Investors Service

Broadly, the recoveries to date are a reminder of the power of credit fundamentals — leverage, operational balance and economic capacity — over security features on paper. While legal security will influence recovery, credit fundamentals drive defaults and the pace of recovery, but only relative to other bonds. Legal pledges on bonds appear to offer no leverage, for example, against pension obligations, which often have no similar legal covenants or other protections.

After other large municipal bankruptcies, the Puerto Rico proceedings reinforce the concept that once fundamentals deteriorate, multiple security types within a governing entity are at risk, but that any specific security's default, bankruptcy or recovery remains unpredictable. As noted, a number of Puerto Rico's issuing entities did not default, possibly in the cases of the University of Puerto Rico and the PRASA to avoid putting federal aid at risk.

The Puerto Rico case underscores that defined-benefit pensioners are likely to do much better than bondholders in recovery in a municipal bankruptcy (or similar) process. Recovery (14% notional, 10% time-value adjusted) on Puerto Rico's Employees Retirement System (ERS) bonds is remarkably similar to the Detroit pension certificates of participation (COPs) despite very different bond pledges. The beneficiaries of Puerto Rico's defined-benefit pension plan may see little if any change in payout; some Detroit pensioners saw mild haircuts in addition to cuts in cost-of-living adjustments (COLAs). Proposed ERS haircuts were eliminated in the most recent POA, though COLAs and other benefit accruals may still be frozen for some.

While a legal pledge alone will not prevent a default when fundamentals deteriorate, the Puerto Rico proceedings show it can help bondholders in recovery in unanticipated ways. Holders of the \$193 million 2011B Ports Authority Project Revenue Bonds — a small subset of the debt issued by the Puerto Rico Infrastructure Financing Authority (PRIFA) — received a relatively high recovery of approximately 78% in a December 30, 2019 settlement. Although secured by two GDB letters of credit, the bonds were also general, unsecured obligations of the Puerto Rico Ports Authority. In the end, the claim gave bondholders leverage with the Ports Authority, which needed to satisfy creditors before it could embark on a public-private partnership (P3) for a cruiseship terminal.

Puerto Rico's lengthy recovery process demonstrates that time and delay matter in recovery because of the lost time value of money. This is perhaps why relatively quick default settlements in the municipal sector are more common than protracted court battles, particularly given the absence of legal precedent compared to the corporate sector. Although effective March 15, the recoveries on GO, PRIFA and Puerto Rico Convention Center District Authority (CCDA) bonds will take time because each settlement includes "contingent

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

MOODY'S INVESTORS SERVICE U.S. PUBLIC FINANCE

value instruments" (CVI) in addition to cash; the CVI depends on the commonwealth's future economic growth, which may now be further hindered by inflation and energy costs. The GO and PRIFA defaults initially occurred in 2016, CCDA in 2017, while the PFC leases first defaulted in 2015; all have been ongoing. And the lost time value is significant: the GO cash recovery is 74% on a nominal basis, but closer to 53% on an adjusted, present-value basis.

Similar to other cases, the Puerto Rico proceedings show GO pledges can no longer be assumed to offer the highest and broadest level of protection. Puerto Rico GO recoveries have been both slower and lower than the COFINA sales tax debt, which received 82% recovery on senior bonds and 64% on blended senior and subordinate debt, compared to 53% for all GO debt, possibly rising to 60% including CVI. Moreover, selective repudiation within a single class of debt is now a reality and threats of repudiation during the settlement process resulted in nine different ranges of GO recoveries based on issuance date and issuer.

The value of appropriation-contingent pledges in distress can be very weak because once an event of non-appropriation occurs, bondholders have no legal recourse. The lease appropriation debt issued by the PFC, which was the first to default in 2015, might get an adjusted recovery of as little as 2%, and likely no more than 5%.

Court ruling limits protection for special revenue pledges

The Puerto Rico litigation triggered a court decision with potential ripple effects across the municipal market. The 1st US Circuit Court of Appeals on March 28, 2019 ruled that the commonwealth would not be required to use "special revenues" to pay debt service on Puerto Rico Highways and Transportation Authority (PRHTA) bonds during the pendency of proceedings, essentially deferring to the government's determination of how best to fund its important services.

The US Supreme Court denied further review in January 2020. The special revenue exemption to the "automatic stay" is thus not automatic, per the decision. While special revenue status may bolster ultimate recoveries, it does not necessarily insulate the bonds from default or impairment.

The first circuit court decision is only binding in Puerto Rico, Maine, Massachusetts, New Hampshire and Rhode Island, but sets a precedent likely to influence judges in other jurisdictions.

Moody's related publications

Data Report

» US Public Finance: US municipal bond defaults and recoveries, 1970-2021, April 21, 2022

Endnotes

- 1 At the time of publication, recoveries on defaults for the Puerto Rico Electric Power Authority (PREPA) and Puerto Rico Highways and Transportation Authority (PRHTA) together just over \$13 billion in principal remained unresolved, though PRHTA recoveries based upon cash and "contingent value instruments" were proposed in the latest plan of adjustment.
- 2 As of the commonwealth's June 30, 2017 audited financial reporting, our adjusted net pension liability (ANPL) amounted to \$38 billion, \$727 million and \$12.3 billion for its governmental activities, business-type activities and component units, respectively.
- 3 Detroit's COPs were unconditional contractual obligations, while the ERS bonds had a now-terminated claim upon pension contributions.

© 2022 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 CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. 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 APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL ORLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER 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. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS 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, ASSESSMENTS, OTHER OPINIONS, AND 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, ASSESSMENTS, OTHER OPINIONS OR 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND 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 its 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

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY C RATING, ASSESSMENT, 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 credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.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 657AFSL 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 credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

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

REPORT NUMBER 1327139

