

SECTOR IN-DEPTH

4 March 2020



Rate this Research

TABLE OF CONTENTS

Transaction day growth has been slowing because of weakening car rental demand, despite strong O&D enplanement growth	2
Strong DSCR provides the first level of protection for most rated ConRACs; restricted cash balances further reduce risks posed by competing technologies	4
Structural features provide additional support if additional revenue is necessary to satisfy debt service obligations	5
Appendix A	7
Appendix B	8
Moody's related publications	9

Contacts

Ozlem Kose +1.212.553.1486
Associate Analyst
ozlem.kose@moodys.com

Earl Heffintrayer, CFA +1.214.979.6860
VP-Senior Analyst
earl.heffintrayer@moodys.com

Kurt Krummenacker +1.212.553.7207
Senior Vice President/Manager
kurt.krummenacker@moodys.com

CLIENT SERVICES

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

Airports – US

Airport rental car facilities can withstand disruptive transportation technologies

Despite strong passenger growth levels at US airports, growth of consolidated rental car facilities (ConRACs) utilization is not keeping pace. Competition from ride-sharing companies like Uber and Lyft, known as transportation network companies (TNCs), reduces the revenue potential of on-airport customer facility charge (CFC) rental car fees in many markets. While structural features, high debt service coverage levels and robust liquidity mitigate TNC-related risk for many, some ConRACs are exposed to greater risks from cost-reducing emerging technologies like autonomous vehicles, which are only expected to become competitive 10-15 years from now.

- » **Transaction days growth has been slowing because of weakening car rental demand, despite strong origination and destination (O&D) enplanement growth.** In fiscal year 2018, median transaction days growth rate was 3.8% compared to median passenger enplanements growth of 7.3% at the airports at which our rated ConRACs are located. In the same period, demand for rental cars has fallen as evidenced by transaction days per O&D enplanement declining to 0.40x from 0.46x in fiscal 2015, resulting in slower revenue growth.
- » **Strong debt service coverage ratio (DSCR) provides the first level of protection for most rated ConRACs; restricted cash balances further reduce risks posed by competing technologies.** Most ConRACs have strong DSCRs that provide margin to withstand slow erosion of rental car demand. However, the length of time that debt remains outstanding and escalating debt service requirements increase the risk of longer term erosion. High CFC cash balances can also be used to reduce debt when bonds can be called, which further reduces the risk from emerging technologies.
- » **Structural features provide additional support if additional revenue is necessary to satisfy debt service obligations.** Most of the 18 ConRACs we rate include provisions allowing them to increase CFC rates at the discretion of the airport director and/or to charge a contingent fee to rental car companies to provide additional funds to pay debt service in the event of a shortfall in CFC collections.

About consolidated rental car facilities

ConRACs are typically multilevel parking structures built by airports that allow different rental car companies to operate in one facility on airport property. The airport operators issue bonds to fund the construction of the facility, and the bonds are usually backed by some combinations of fees that are charged per car for each rental day (a CFC) and space rentals paid by the rental car companies. Rental car end-users pay CFCs, which rental car companies collect and then remit to the airport. ConRACs' fees, charges and operating terms are governed by leases and concession agreements with rental car companies.

Exhibit 1

ConRACs we rate

Issuer Name	Rating	Most recent DSCR	Ability to increase CFC rates	Ability to charge contingent rent
Charlotte (City of) NC Arpt. Ent. - Car Rental Fac.	A2 stable	1.88	Yes	Yes
Phoenix (City of) AZ Airport Enterprise - Car Rental Facility Bonds	A2 stable	1.68	Yes	Yes
Metro. Nashville Apt. Auth., TN - Cons. Rental Car Fac.	A2 stable	3.76	Yes	No
Hawaii (State of) - Airport System Customer Facility Charge	A2 stable	5.27	Yes	Yes
Atlanta (City of) GA Airport Enterprise (Consolidated Rental Car Facility Project)	A2 stable	1.62	Yes	No
MD Trans. Auth. - BWI Airport Consolidated Rental Car Fac.	A3 stable	1.49	Yes	Yes
Massachusetts Port Authority - ConRAC Proj.	A3 stable	2.56	Yes	Yes
City of Houston TX Airprt Enter - Car Rental Fac.	A3 stable	1.59	Yes	No
Austin (City of) TX - Airport Rental Car Special Facility	A3 stable	1.77	Yes	Yes
San Diego Co. Reg Apt Auth., CA CRCF	A3 stable	1.98	No	Yes
Hillsborough Cnty Aviation Auth, FL - ConRAC Proj.	A3 stable	2.43	Yes	Yes
San Antonio (City of) TX - Airport Consolidated Rental Car Special Facilities Project	A3 stable	1.46	Yes	Yes
Kenton Cnty. Airport Board, KY - Cons. Ground Trans. Fac.	A3 stable	2.75	Yes	Yes
Columbus Regional Airport Authority, OH - Customer Facility Charge Revenue Bonds	A3 stable	3.16	Yes	Yes
Chicago (City of) IL O'Hare Apt CFC Rev Bds	Baa1 stable	1.83	Yes	Yes
New Orleans Aviation Board, LA - Car Rentl Fac.	Baa1 stable	2.21	Yes	Yes
Rhode Island Airport Corp. Cons. Rental Car. Fac.	Baa1 stable	1.45	Yes	Yes
Alaska I.D.E.A - Airport Car Rental Fac.	Baa2 stable	1.18	Yes	No

Source: Moody's Investors Service

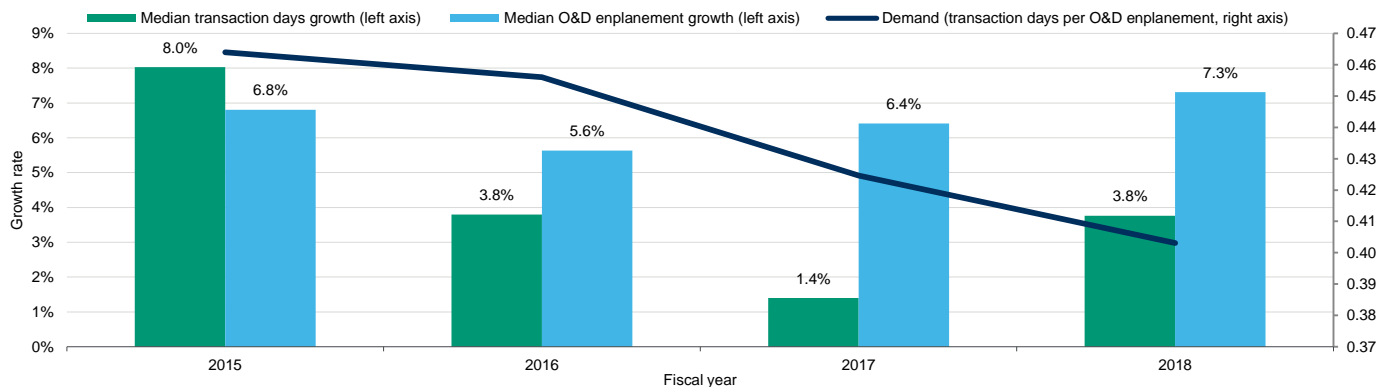
Transaction day growth has been slowing because of weakening car rental demand, despite strong O&D enplanement growth

Sustained economic growth and increasing airline seat capacity in the last two years has translated into strong enplanement levels at airports across the US. However, growth of rental car transactions has not grown at the same pace.¹

While we typically expect rental car transaction days to grow in parallel with passenger traffic, transaction growth has been considerably slower in the last three years (see Exhibit 2).² This divergence correlates with increased market penetration of TNCs such as Uber and Lyft, highlighting the growing competitive threat to ConRACs. We expect transaction days will continue to grow at a slower pace than enplanement growth.

Exhibit 2

Lower median transaction days per O&D enplanement growth rate and lower demand reflect increased TNC market penetration

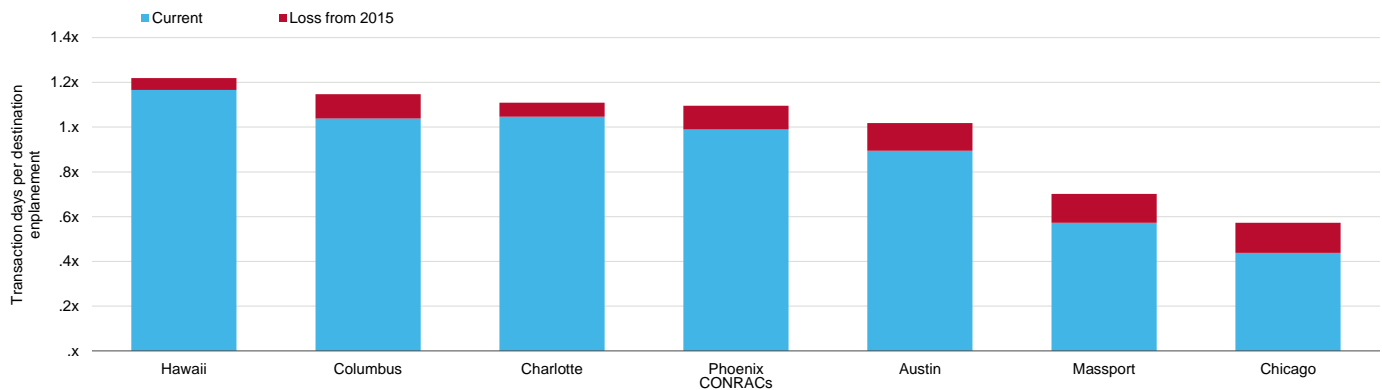


Source: Moody's Investors Service

The most accurate way to represent utilization, or demand, for rental cars is measuring transaction days per destination enplanements, or passengers who visit the airport and will potentially rent a car. However, only seven airports with rated ConRACs provided enplanement information that provides a breakdown between origination and destination statistics (see Exhibit 3).

Exhibit 3

All of the airports show decline in transaction days per destination enplanement
Current fiscal year compared to fiscal 2015



While the current fiscal year for Charlotte, Phoenix, Austin and Massport is 2019, it is 2018 for the rest.

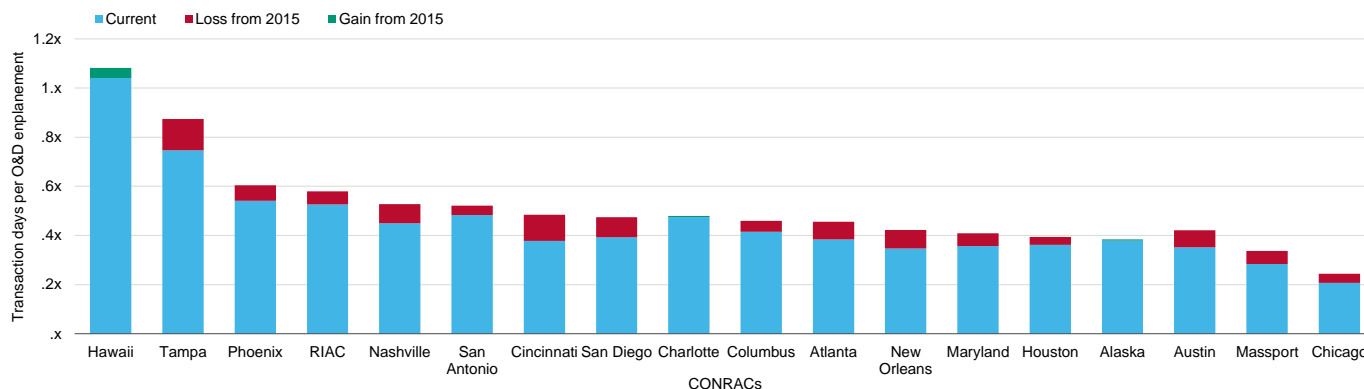
Source: Moody's Investors Service

Because few airports are able to provide information distinguishing between origination enplanement — passengers who start their journey at the airport without the use of car rental services — and destination enplanements, we assessed the demand with the next best measurement, which is transaction days per O&D enplanement. Apart from [Hawaii](#), transaction days per O&D enplanement in fiscal 2018 compared to fiscal 2015 was stable or declined in all the ConRACs we rate (see Exhibit 4).

Exhibit 4

Hawaii is the only ConRAC that we rate that shows an increase in transaction days per O&D enplanement

Fiscal 2015 and fiscal 2018 (fiscal 2019 in some cases)



Fiscal 2019 data is only available for Phoenix, RIAC, Nashville, San Diego, Charlotte, Austin, Atlanta and Massport. The current fiscal year for these ConRACs is 2019, while the fiscal year for the rest is 2018

Source: Moody's Investors Service

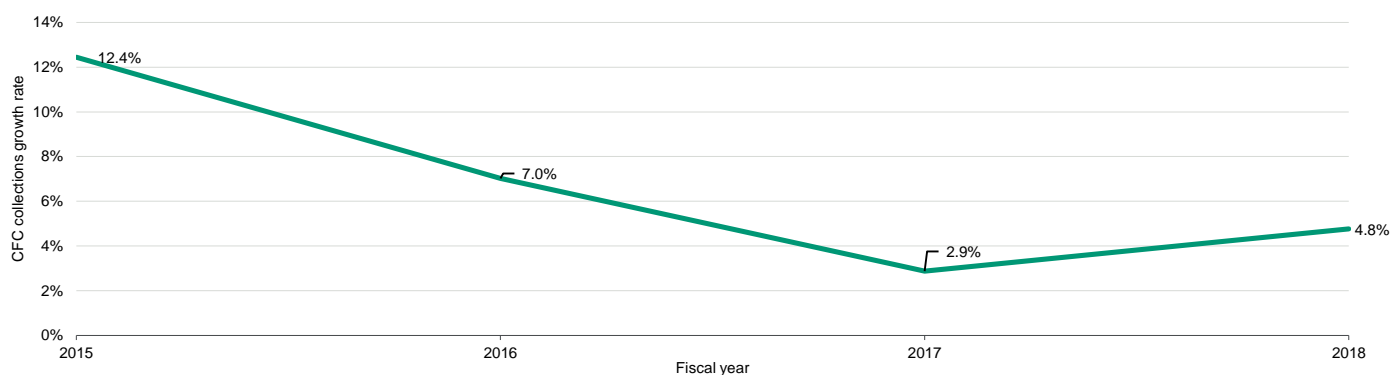
In many airports, origination enplanements grow proportionally to destination enplanements. However, the growth in destination enplanements in the airport where the Hawaii ConRAC is located has been higher than the growth in origination enplanements. This resulted in an increase in transaction days per O&D enplanement while transaction days per destination enplanement actually declined. This indicates that rental car demand at Hawaii has declined, similar to the other rated ConRACs.

The decline in rental car demand resulted in slowing growth of total CFC collections, which is the primary recurring revenue source for CFC bonds; CFCs are charged for each transaction day. While total CFC collections grew 12.4% in fiscal 2015, the growth rate dwindled to 4.8% in fiscal 2018 (see Exhibit 5).

Exhibit 5

Decline in rental car demand depressed revenue growth

Fiscal 2015 to fiscal 2018



Source: Moody's Investors Service

Strong DSCR provides the first level of protection for most rated ConRACs; restricted cash balances further reduce risks posed by competing technologies

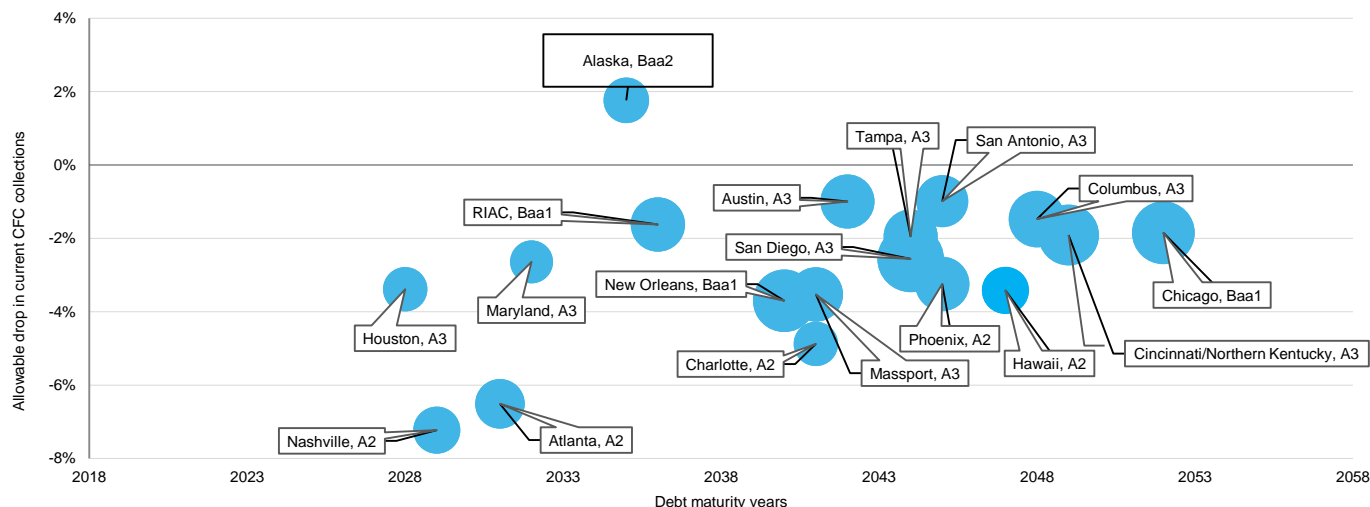
Strong DSCR at most facilities (Exhibit 1) provides the ability to withstand continued erosion of rental car demand and still make debt service payments. However, the longer that debt remains outstanding and if debt service requirements increase throughout the life of the bonds, the greater the risk that longer term credit quality erosion grows (see Exhibit 6). In addition to competition from TNCs, the rental car industry's exposure to disruption from [automated vehicles](#) over the long term makes this risk more acute. We believe that the autonomous driving landscape will evolve radically in the next several years. However, the shift to fully autonomous vehicles that

require no manual intervention would require consumer acceptance, regulatory approvals and technological advancements which will take at least 10-15 years from now.

Among ConRACs we rate, Nashville and Atlanta can withstand the greatest compounded annual drop in usage — more than 6.5% — before needing to raise CFC rates or rely on contingent rent, given their short remaining life of debt. Nashville also has one of the strongest DSCR, 3.8x in fiscal 2019, among the ConRACs we rate (see Exhibit 6).

Exhibit 6

While Nashville can withstand the greatest drop in CFC collections to satisfy its debt service obligations at maturity, only Alaska will require an increase in collections because of its escalating debt service profile



examples of the ConRACs that implemented rate increases in the last three years for reasons specific to each ConRAC. Houston raised its rates to compensate for a decline in transaction days and Cincinnati/Northern Kentucky to finance its construction project.

An excessive increase in CFC rates weakens credit quality of ConRACs because higher CFC rates provide less room for future increases and may reduce competitiveness. Even though the CFC rate increases were material at both Houston and Cincinnati/Northern Kentucky — 33% and 25%, respectively — leaving less room for future rate increases, demand for rental cars continued to increase in both of the ConRACs, demonstrating that rental car transactions are price inelastic to CFC rates.

The ability to charge rental car companies contingent rent in the event of CFC shortfalls is more common for recently financed rental car facilities (see Exhibit 1). This feature is governed under a rental car facility lease and license/concession agreement with rental car companies. Even though none of the ConRACs we rate has called on this feature yet, we believe that the rental car companies have an incentive to pay the required contingent rent to be able to continue to operate in the airport facility. The rental car sector is dominated by three companies — [Avis Budget Car Rental, LLC](#) (Ba3 stable), [Enterprise Holdings, Inc.](#) (ERAC USA Finance LLC: Baa1 stable) and [The Hertz Corporation](#) (B2 stable). We view these companies to have sufficient credit quality to make contingent rate payments.

Appendix A

Exhibit 7

US ConRAC sector medians

	2015	2016	2017	2018	2019
Transaction days (millions)	3.06	3.33	3.42	3.43	4.02
Transaction day growth rate	8.0%	3.8%	1.4%	3.8%	2.0%
O&D enplanement growth rate	6.8%	5.6%	6.4%	7.3%	5.9%
Transaction day/O&D enplanement (x)	0.46	0.46	0.42	0.40	0.42
CFC collections growth rate	8.0%	7.3%	2.8%	4.1%	2.1%
Debt service coverage ratio by net CFC collections (x)	1.68	1.85	1.88	1.87	1.77
Debt per net CFC collections (x)	7.37	7.28	6.98	7.23	5.69

Fiscal 2019 medians reflect only eight of 18 rated ConRACs.

Source: Moody's Investors Service

Appendix B

Exhibit 8

Financial metrics for all ConRACs that we rate

	Charlotte	Nashville	Atlanta	Hawaii	Phoenix	Massport	Houston	Maryland	Austin	San Diego	Tampa	San Antonio	Cincinnati/ Northern Kentucky	Columbus	Chicago	New Orleans	RIAC	Alaska
Fiscal Year	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
Fiscal Year	A2	A2	A2	A2	A2	A3	A3	A3	A3	A3	A3	A3	A3	A3	Baa1	Baa1	Baa1	Baa2
Outlook	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable	Stable
GARB Reference Rating	Aa3	A1	Aa3	A1	Aa3	Aa2	Aa3	NA	A1	A1	Aa3	A1	A1	NA	A2	A2	Baa1	A1
GARB Outlook	Stable	Stable	Stable	Positive	Stable	Stable	Stable	NA	Stable	Stable	Stable	Stable	Stable	NA	Stable	Stable	Stable	Stable
Operational Metrics																		
CFC Rate	\$4.00	\$4.50	\$5.00	\$4.50	\$6.00	\$6.00	\$4.00	\$3.75	\$5.95	\$9.00	\$5.95	\$5.50	\$7.50	\$6.50	\$8.00	\$7.95	\$6.00	\$4.22
Transaction Days (000s)	3,338	3,176	8,042	16,123	8,128	5,500	4,321	3,518	2,822	4,560	7,480	2,381	1,573	1,694	4,855	2,172	1,046	1,020
Transaction Day Growth	3.5%	5.4%	-0.4%	3.0%	4.0%	-0.2%	4.5%	-2.7%	11.6%	2.0%	6.2%	11.5%	7.7%	5.2%	-1.8%	1.4%	7.8%	0.0%
O&D Enplanements (000s)	6,781	6,563	20,044	15,496	15,047	18,497	11,936	9,852	7,353	11,260	10,014	4,928	4,161	4,080	23,481	6,269	2,119	2,687
O&D Enplanement Growth	3.8%	9.8%	5.2%	2.4%	4.8%	5.2%	6.8%	5.1%	15.0%	10.7%	9.0%	11.2%	13.9%	7.8%	4.7%	8.9%	17.1%	0.6%
Transaction Days/O&D Enplanement (x)	.49x	.48x	.4x	1.04x	.54x	.3x	.36x	.36x	.38x	.4x	.75x	.48x	.38x	.42x	.21x	.35x	.49x	.38x
Transaction Days/Visiting Enplanement (x)	1.12x	NA	NA	1.17x	.99x	.6x	NA	NA	.95x	NA	NA	NA	NA	1.04x	.44x	NA	NA	NA
Airport Utilization (x)	2.48x	3.45x	3.06x	10.91x	3.18x	3.79x	1.67x	1.67x	3.39x	3.41x	3.19x	1.99x	1.91x	1.94x	2.38x	4.16x	1.31x	5.37x
Compound Annual Loss to Make Last Debt Service Payment	-4.9%	-7.2%	-6.5%	-3.4%	-3.2%	-3.5%	-3.4%	-2.6%	-1.0%	-2.6%	-1.9%	-1.0%	-1.9%	-1.5%	-1.8%	-3.7%	-1.6%	1.8%
# of Years	22	10	12	30	26	22	9	14	23	25	26	27	31	30	36	22	23	17
Financial Metrics																		
CFC Collections (\$000s)	13,351	14,290	39,918	72,554	48,751	33,003	17,285	13,194	16,793	41,037	44,381	12,765	11,930	10,444	38,837	17,269	7,460	5,058
CFC Collection Growth	3.5%	5.4%	-1.5%	3.0%	4.0%	-0.2%	10.0%	-2.7%	11.3%	12.3%	5.9%	19.6%	36.1%	4.1%	-0.7%	1.4%	17.6%	-5.9%
MADS/Current Debt Service	.99x	.65x	1.01x	.98x	1.x	1.14x	1.16x	1.x	1.6x	1.x	1.46x	1.42x	1.52x	2.05x	1.48x	.99x	1.24x	1.58x
Debt Service Coverage Ratio by Gross CFC Collections (x)	3.08x	2.39x	2.26x	5.27x	2.29x	2.35x	1.59x	1.49x	1.87x	1.91x	2.43x	1.46x	2.75x	3.16x	1.83x	2.26x	1.38x	1.18x
Debt Service Coverage Ratio by Net CFC Collections (x)	1.88x	2.13x	1.72x	5.27x	1.57x	2.35x	1.59x	1.49x	1.86x	1.91x	2.43x	1.46x	2.75x	3.16x	1.83x	2.21x	1.38x	1.18x
Debt Service Coverage Ratio by Bond Ordinance (x)	3.34x	2.39x	2.51x	5.25x	2.55x	2.65x	1.89x	1.64x	2.14x	2.21x	2.43x	1.54x	2.75x	3.16x	1.83x	5.48x	1.38x	1.18x
Debt Outstanding (\$000s)	55,985	35,893	161,655	249,805	165,885	194,575	80,385	84,560	141,060	305,285	383,325	162,705	104,795	95,715	502,175	82,565	80,286	55,000
Debt per Transaction Day (\$)	17	11	20	15	20	35	19	24	50	67	51	68	67	56	103	38	77	54
Debt per net CFC Collections (x)	7.02x	2.83x	5.33x	3.44x	4.96x	5.9x	4.65x	6.41x	8.41x	7.44x	8.64x	12.75x	8.78x	9.16x	12.93x	4.89x	10.76x	10.87x
Total CFC Balances	33,117	20,187	65,422	198,271	101,910	80,793	41,303	20,724	39,256	76,984	47,793	19,709	8,209	8,474	109,540	29,317	32,000	1,000
CFC Balances/MADS (x)	7.49x	5.18x	3.59x	13.99x	4.79x	5.07x	3.26x	2.28x	2.62x	3.51x	1.8x	1.58x	1.25x	1.25x	3.49x	3.86x	4.78x	.15x
CFC Balances/Debt	.59x	.56x	.4x	.79x	.61x	.42x	.51x	.25x	.28x	.25x	.12x	.12x	.08x	.09x	.22x	.36x	.4x	.02x
Structural Considerations																		
Final maturity	2041	2029	2031	2047	2029	2041	2028	2032	2042	2044	2044	2045	2049	2048	2052	2040	2036	2035
Ability to Charge Contingent Rent	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Rate Covenant (x)	1.25x	1.25x	1.25x	1.4x	1.25x	1.3x	1.25x	1.25x	1.25x	1.25x	1.25x	1.25x	1.25x	1.25x	1.25x	1.35x	1.25x	1.25x
Amount of rate covenant from rolling coverage	.25x	.25x	.25x	.25x	.25x	.3x	.25x	.15x	NA	.25x	.25x	.25x	.25x	.25x	.25x	.25x	.25x	.25x
CFC Unlimited?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: Moody's Investors Service

Moody's related publications

Outlook

- » [Airports – US: 2020 outlook positive as strong demand and low fuel costs drive higher airline capacity](#), December 2019

Sector In-Depths

- » [Airports - US: Fiscal 2018 Medians: Economic growth, lower fares continue to underpin financial performance](#), November 2019
- » [Airports - US: Fixed revenue, strong DSCRs will fortify US airports through a mild recession](#), September 2019
- » [Airports - US: Parking and CFC bonds face credit pressure from Uber, Lyft, but airports are protected](#), April 2018
- » [Automotive – Global: Autonomous driving efforts pick up pace; GM ahead with Honda investment in Cruise](#), October 2018
- » [Airports - US: Construction Risk Is Low for ConRACs](#), February 2016

Sector Comment

- » [Cross-Sector – Global: Waymo's self-driving milestone highlights mixed credit implications of mobility shift](#), October 2018

Endnotes

- ¹ Enplanements are the number of people who depart from an airport on a flight.
- ² A transaction day represents one day utilization of a rental car.
- ³ The California Civil Code currently restricts CFCs to no more than \$9 per day for no more than 5 days.

© 2020 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/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S 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 INVESTORS SERVICE 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 INVESTORS SERVICE 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 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 \$2,700,000. 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.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 credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit 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.

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

REPORT NUMBER

1208855