Miami-Dade County, FL - GARBs (Miami International Airport)

Issuer: Miami- Dade County, FL		
Affirmed	**Rating**	**Outlook**
Aviation Revenue Bonds (GARBs)	AA- *(upgraded from A+)*	Stable

Methodology:
U.S. General Airport Revenue Bond Rating Methodology
ESG Global Rating Methodology

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Rating Summary: The upgrade reflects Miami International Airport's ("MIA's" or "the Airport's") exceptionally strong recovery in enplanements during FY 2022, with passenger volumes now at 108.5% of their pre-COVID 19 pandemic ("pandemic") level. Additionally, the upgrade incorporates the financial resiliency of the Miami-Dade County Aviation Department ("MDAD" or "the Department"), with FY 2022 operating margin (46.0%), debt service coverage (DSC, 1.84 (x)), and liquidity (302.1 days cash) materially improved from the prior two, pandemic-impacted fiscal years.

MIA's large and growing air service area, anchored by the City of Miami ("the City"); its continuing role as the leading U.S. gateway to Latin America and the Caribbean; the recent, significant expansion of domestic service, including among low cost carriers (LCCs) and ultra-low cost carriers (ULCCs); and Department leadership's track record of managing multi-phase, large, and complex capital programs provide support for the current rating level. Offsetting these strengths are still elevated, though moderating, cost per enplanement (CPE) and debt per enplanement ratios, which expose MIA to future fluctuations in passenger volumes created by exogenous shocks, such as global health emergencies, and air carrier service decisions. While MIA, as an international gateway, remains dependent on international travel demand, notably to Latin America, a recent increase in domestic flights by new and incumbent air carriers, including LCCs and ULCCs, now helps to temper this reliance. MDAD projects the ratio of domestic to international passengers will be approximately 60%/40% in future years, down from the 50%/50% ratio experienced prior to the pandemic. International enplanements accounted for just over 40% of the total in FY 2022.

Aviation Revenue Bonds are special limited obligations of Miami-Dade County ("the County"), payable primarily from Net Revenues derived from the operation of MIA. The Miami-Dade Aviation Department ("MDAD" or "the Department"), an enterprise fund of the County, operates MIA, along with three general aviation airports and a training airport.

For FY 2022, MDAD reported total enplanements of 24.9 million, up 64.8% from FY 2021 (15.1 million). Such activity, which is to date an all-time high for MIA, significantly outperformed a highly conservative 15.8 million FY 2022 enplanement level projected by MIA's Traffic Engineer in November 2021. MDAD leadership credits the better than anticipated passenger volumes to a significant increase in LCC and ULCC service at MIA, in part due to the introduction of preferential gates under the new Airline Use Agreement (AUA). As opposed to common use gates, preferential gates are leased on a per gate, flat fee basis, thereby improving margins for air carriers operating under these arrangements. In addition, with global travel restrictions lifted in phases beginning in November 2021 and COVID-19 testing requirements for inbound passengers eliminated in June 2022, international enplanement levels rose sharply. At just over 10 million, FY 2022 international enplanements were up nearly 90% from FY 2021 and within 10% of the FY 2019 (11 million) level.

American Airlines and its affiliate Envoy Airlines (collectively "American") continue to account for a disproportionate (63.3%) share of traffic at MIA, with the Airport serving as American's primary gateway to Latin America and the Caribbean. While Southwest, JetBlue, Frontier and Spirit now compete with American in certain markets from MIA, American's commitment to its hub operation is demonstrated by continued, robust service levels and investment in infrastructure to support operations. Consequently, KBRA believes the risk of a potential de-hubbing by American is manageable at the current rating level.

Reflecting the gradual recovery in MIA's passenger traffic, MDAD generated Net Revenues of $303.7 million in FY 2021 on gross revenues of $753.3 million (40.4% operating margin). DSC was a solid 1.99(x), with $33.8 million of available Coronavirus Aid, Recovery and Economic Security Act (CARES) funds used to reduce FY 2021 principal and interest costs. As was expected, MIA's cost per enplaned passenger (CPE) remained elevated at $24.73 in FY 2021, consistent with Traffic Engineer projections.

FY 2022 operating performance was positively impacted by MIA's record level of enplanements. Gross operating revenues of $952.7 million were 124.4% of the amount conservatively budgeted ($766.0 million) for FY 2022, while current expenditures of $514.3 million slightly outperformed budget ($515.6 million) and were up only 9.0% from the prior year. As a result, MDAD generated Net Revenues of $438.4 million, or an operating margin of 46.0%. The FY 2022 operating margin was a significant improvement over the prior fiscal year (40.%) and more typical of the Department's financial performance prior to the pandemic. CPE also declined to a more manageable $19.44 in FY 2022, significantly outperforming the Traffic Engineer's pre-pandemic ($23.31) and post-pandemic ($24.47) forecast. DSC was healthy at 1.84(x), including the use of $30.0 million of American

Rescue Plan Act (ARPA) stimulus. In the absence of such federal support, DSC was still healthy at 1.63(x). Net Revenues remaining after a $15.0 million deposit to the Reserve Maintenance Fund, and the payment of debt service ($230.0 million) totaled $193.0 million. MDAD received airline approval to use a portion ($50 million) of this balance to fund its share of costs associated with a Transportation Security Administration (TSA) equipment replacement project and a U.S. Customs and Border Patrol (CBP) network upgrade.

Liquidity levels continued to strengthen in FY 2022, driven by the Department's practice of building reserves whenever possible from available funds. Unrestricted liquidity as calculated by KBRA totaled $ $425.7 million at FYE 2022, representing a solid 302.1 days of cash operating expenses, up from 298.4 days and 281.4 days in FY 2021 and FY 2020, respectively. Liquidity does not include remaining ARPA funds ($130.0 million) the Department expects to use in FY 2023 ($64.0 million) and FY 2024 ($66.0 million). The FY 2023 budget currently allocates $40.0 million of ARPA funds to debt service, with the remaining $24.0 million used to offset various operating costs.

Aviation Revenue Bonds outstanding at FYE 2022 totaled approximately $5.1 billion, or $203.54 per enplanement, down considerably from $355.25 in FY 2021 and $440.56 in in FY 2020. Of the approximately $3.0 billion of currently approved capital improvement plan (CIP) projects (through FY 2041), approximately $1.9 billion (65.0%) is expected to be debt financed, with remaining funds provided by Federal Aviation Administration (FAA) grants, Passenger Facility Charges (PFCs), and other sources. MDAD expects to use its $200.0 million Commercial Paper (CP) Program as interim financing for certain CIP projects, with Aviation Bonds to be issued every 12 to 24 months to replenish CP capacity and/or provide new money. Conservatively assuming the entire $1.9 billion was issued today, debt would increase to $280.90 per FY 2022 enplanement, debt per enplanement, based on FY 2022 levels, would increase to $280.90, still below actual debt per enplanement in both FY 2021 and FY 2020. KBRA notes that MDAD has historically been successful in garnering FAA grants to reduce CIP leverage and expects future FAA grants to be applied in a similar manner.

The Stable Outlook reflects KBRA's view that MIA's current level of enplanements, which is now well above pre-pandemic volumes, favorably positions the Department to maintain healthy operating performance, DSC and liquidity. While the $1.9 billion in expected future borrowing is significant, KBRA believes management will implement the CIP prudently, consistent with historical practice, and not materially pressure CPE and debt per enplanement metrics.

Key Credit Considerations

The rating was upgraded because of the following key credit considerations:

Credit Positives

- Large and growing air service area, anchored by the City, a vibrant center for tourism and trade.
- Advantageous geographic location as an international gateway to Latin America and the Caribbean.
- Healthy operating performance, liquidity and an effectively managed CIP.

Credit Challenges

- High, though moderating, CPE and debt per enplanement ratios.
- Some continued reliance on international traffic, which exposes MIA to foreign economic and health risks.

Rating Sensitivities

▪ Further strengthening of liquidity and debt service coverage, coupled with moderating leverage.	+
▪ An unexpected, severe decline in passenger traffic that pressures operating performance and liquidity. ▪ Issuance of additional debt not supported by a commensurate increase in resources for repayment.	-

Key Ratios

Key Airport Ratios FYE September 30 (dollars in millions)	2020	2021	2022
Airport Activity			
Top Carrier Market Share (American Airlines + American Eagle)	66.9%	60.1%	63.3%
MIA Enplanements	12,649,609	15,136,208	24,937,982
YOY Change		19.7%	64.8%
Operating Metrics			
Non-Aeronautical Revenues	$303,377,000	$ 391,706,000	$ 470,132,000
Per Enplanement	$23.98	$25.88	$18.85
Airline Payments as a % of Operating Revenue	45.0%	43.5%	48.1%
Debt, Leverage, and Affordability Metrics			
Debt Service Coverage (x)[1]	1.46	1.99	1.84
Debt Per Enplaned Passenger[1]	$424.87	$342.07	$203.54

Notes:

1. Includes Aviation Revenue Bonds only.

Rating Determinants (RD)	
1. Management	Favorable
2. Economics/Demographics of the Service Area	AA-
3. Airport Utilization	AA
4. Airport Debt/Capital Needs	A+
5. Airport Finances	AA-
6. Legal Mechanics and Security Provisions	A+

The following RDs have been updated to reflect new operating and financial information received since KBRA's last review. For more information on each determinant, please see KBRA's Surveillance Report dated November, 19, 2021.

RD 1: Management

MDAD operates MIA, three general aviation airports and one training airport (the "airport system"). MDAD, which operates as an enterprise fund of Miami-Dade County, was established in February 1973 as the successor organization to the Dade County Port Authority. MIA has operated at its current site since 1928, initially as a privately-owned facility. The County's Port Authority acquired the facility in 1946, and the reference to Port Authority Properties in the Trust Agreement remains in effect. MIA is an economic engine of the County and the State of Florida, with an estimated overall impact of $32.0 billion annually. Aviation and related sectors are responsible for over 275,000 direct and indirect jobs.

Governance

The Miami-Dade County Charter establishes a strong mayor form of government. The Mayor is elected county-wide to serve a four-year term and is limited to two terms in office. The Mayor, who is not a member of the Board of County Commissioners (BCC), serves as the head of County government. The Mayor is responsible for the management of all administrative departments and for carrying out policies adopted by the Commission. The Mayor appoints all department heads, including the Aviation Director. The Mayor has veto power over certain decisions made by the Commission, subject to a Commission override by a two-thirds vote. The BCC is the legislative body, consisting of 13 members elected from single-member districts to serve consecutive four-year terms, with elections staggered.

Management Experience

MDAD's current Director and Chief Executive Officer (CEO), Ralph Cutié was appointed by the County in September 2021 and is responsible for operations of the airport system, including MIA. A 32-year county veteran, Mr. Cutié has more than 35 years' experience in project control, critical path scheduling, project management, construction contracting and construction claims administration, among other related fields. Prior to his current appointment, he served as Assistant Director for Facilities Management and Engineering, overseeing the largest and most diverse division at MDAD. Mr. Cutié began his career at Miami-Dade Transit and held roles of increasing responsibility at the County's Office of Capital Improvements and Internal Services Department.

Ken Pyatt, the Department's Deputy Aviation Director assumed his position in July 2010, following a 36-year career with American during which he served as Managing Director of Passenger Services and Ramp operations at MIA. He also served as corporate liaison with the TSA.

The Chief Financial Officer, Sergio San Miguel, assumed his position in 2018, having served as Capital Finance Manager and Controller since 2009. As CFO, Mr. San Miguel manages and oversees the divisions of accounting, capital finance, financial planning and performance analysis, program controls, and strategic planning. Prior to joining MDAD, he served as Chief Financial Officer of Miami Dade Transit.

As Capital Finance Manager, Oscar Aguirre is KBRA's primary contact at the Department. He is responsible for all aspects of management and administration of MDAD debt issuance. Mr. Aguirre has served in many different roles since joining the Department in 1988.

Recent Management Changes

A second Deputy Director for Administration Real Estate and Business Development, Basel Binns II, was appointed in March 2022. In this role, he is responsible for commercial operations and real estate management throughout the airport system, including MIA. He is also responsible for various administrative divisions, including human resources and information systems. Prior to joining MDAD, Mr. Binns served as Assistant Port Director for Business Development and Administration at Port Miami (2018 through 2022) and also held the role of senior legislative and policy aid to the Vice Chairperson of the Board of County Commissioners.

As of September 2022, a new Assistant Director for Operations, Denise Ridge, was appointed to replace her predecessor (Dan Agostino) who retired after an extensive career in the aviation industry. Ms. Ridge comes to her position with significant airport management experience, including at Massachusetts Port Authority. Like other members of MDAD's leadership team, she also held various positions at American.

ESG Management

KBRA typically analyzes Environmental, Social, and Governance (ESG) factors through the lens of how issuers plan for and manage relevant ESG risks and opportunities. More information on KBRA's approach to ESG risk management in public finance ratings can be found here. Over the medium-term, public finance issuers will likely need to prioritize ESG risk management and disclosure with the likelihood of expansions in ESG-related regulation and rising investor focus on ESG issues.

An update to Environmental Factors is below. A more detailed discussion of ESG factors, including Social and Governance factors, is provided in KBRA's Surveillance Report dated November 19, 2021.

Environmental Factors

The Miami-Dade Climate Action Strategy, released in late 2021, targets reducing MIA's greenhouse gas emissions by 50% by 2030. One action being taken by MIA is the expansion of its automated docking system, which can reduce idling time for airplanes and support vehicles, thereby decreasing airfield emissions. Another action listed in the Climate Action Strategy is to develop emission reduction plans with carriers with guidance from Airports Council International's Airport Carbon Accreditation Program.

Physical Climate Risk: Situated largely outside of the path of Hurricane Ian as it crossed the State in September 2022, MDAD received minimal impacts from and stayed open throughout the storm.

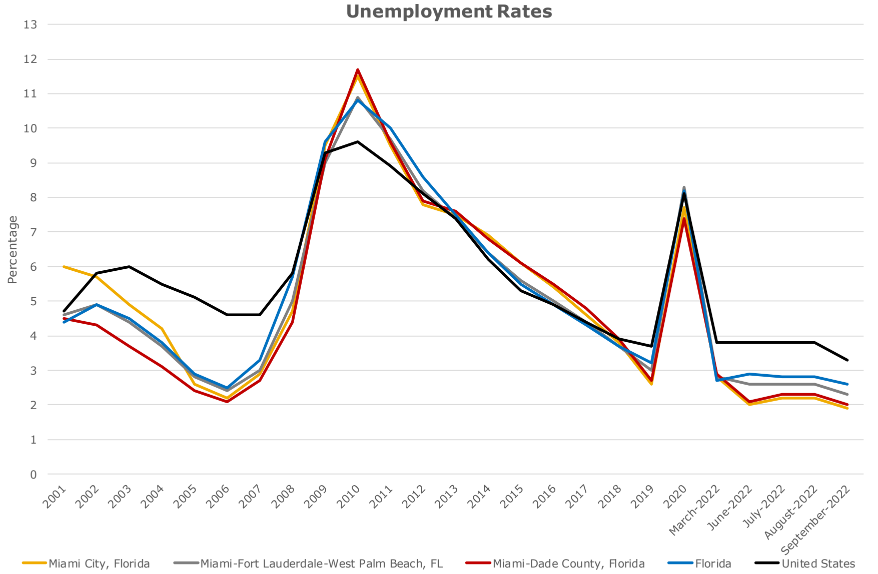
RD 2: Economics/Demographics of the Service Area

Fundamental credit strength is derived from the size and strategic geographic location of the air trade area (ATA), which encompasses over 3,100 square miles in southeastern Florida and consists of Miami-Dade and Broward counties with a collective population of around 4.7 million. This area includes the City, which is a center for international business and trading, culture, and tourism. The region has a substantial number of secondary residences, including both vacation properties and investment real estate, which also impact passenger demand.

Employment and Unemployment

The Miami-Fort Lauderdale-West Palm Beach, FL Metropolitan Area (the "MSA") and the City of Miami saw greater relative job losses in 2020 than the overall State and the U.S. Both the MSA and the City continue to make progress after unemployment rates peaked early during the pandemic – e.g., the MSA peaked at 13.7% in May 2020 and is down to 2.3% as of September 2022. The unemployment rate for the State (2.6%), City (1.9%), and MSA (2.3%) compare favorably as compared to the nation (3.3%).

Figure 1



	Miami City, Florida	Miami-Dade County, Florida	Miami-Fort Lauderdale-West Palm Beach, FL	Florida	United States
September-2022	1.9	2.0	2.3	2.6	3.3
August-2022	2.2	2.3	2.6	2.8	3.8
Great Recession Peak	11.5	11.7	10.9	10.8	9.6
Point Δ Since Great Recession Peak	-9.6	-9.7	-8.6	-8.2	-6.3

Source: U.S Bureau of Labor Statistics
Not Seasonally adjusted

RD 3: Airport Utilization

According to the Federal Aviation Administration (FAA), MIA's CY 2021 enplanement level made it the 10th busiest U.S. airport. Except for Los Angeles International Airport, MIA ranks higher than peer international gateways, such as John F. Kennedy International Airport (#13), Newark Liberty International Airport (#14), and San Francisco International Airport (#17). As of Nov. 2022, the Airport served 66 domestic and 100 international destinations non-stop.

Fiscal Year Enplanement Trend

For FY 2022, MDAD reported total enplanements of 24.9 million, up 19.7% from FY 2021 (15.1 million) and 9.9% from FY 2019. Such activity, which is to date an all-time high for MIA, significantly outperformed a highly conservative 15.8 million FY 2022 enplanement level projected by MIA's Traffic Engineer in November 2021. MDAD leadership credits the better than anticipated passenger volumes to a significant increase in LCC and ULCC service at MIA, in-part due to the implementation of a new AUA in 2018 (See Rating Summary and RD 4). Additionally, with global travel restrictions lifted in phases beginning in November 2021 and COVID testing requirements for inbound passengers eliminated in June 2022, international enplanement levels rose sharply to within 10% of the FY 2019 (11.0 million) level.

Figure 2

Monthly Airport Enplanement Activity (in thousands)

	FY 2019	FY 2020	Δ vs 2019	FY 2021	Δ vs 2019	FY 2022	Δ vs 2019	Δ vs 2021
October	1,627,749	1,682,849	3.4%	576,259	-64.6%	1,621,306	-0.4%	64.5%
November	1,876,299	1,817,152	-3.2%	781,457	-58.4%	1,936,393	3.1%	59.6%
December	2,037,071	2,104,815	3.3%	968,136	-52.5%	2,269,473	10.2%	57.3%
January	2,074,056	2,079,263	0.3%	910,689	-56.1%	2,033,523	-2.0%	55.2%
February	1,851,893	1,959,241	5.8%	830,824	-55.1%	1,913,357	3.2%	56.6%
March	2,092,849	1,191,444	-43.1%	1,222,288	-41.6%	2,341,611	10.6%	47.8%
April	1,867,426	73,137	-96.1%	1,418,309	-24.1%	2,216,043	15.7%	36.0%
May	1,905,583	132,728	-93.0%	1,679,369	-11.9%	2,263,693	15.8%	25.8%
June	1,912,653	316,758	-83.4%	1,776,747	-7.1%	2,121,304	9.8%	16.2%
July	1,965,026	426,414	-78.3%	1,916,314	-2.5%	2,248,912	12.6%	17.4%
August	1,912,586	432,472	-77.4%	1,693,150	-11.5%	2,103,103	9.1%	24.2%
September	1,561,883	433,336	-72.3%	1,362,666	-12.8%	1,869,264	16.4%	37.2%
Total Year	**22,685,074**	**12,649,609**		**15,136,208**		**24,937,982**		

Source: MDAD

The Department's Traffic Engineer updated its enplanement forecast in September 2022. From FY 2023 through FY 2027, MIA's enplanements are projected to increase at a 5-year CAGR of 1.5%, from 25.7 million to 27.4 million. Based upon recent trends in passenger traffic at the Airport, KBRA believes the Traffic Engineer's projections are achievable, with actual enplanements in certain fiscal years likely to outperform what is currently forecasted.

Low Cost and Ultra-Low Cost Service

Fort Lauderdale-Hollywood International Airport (FLL), which is a roughly 26.1-mile drive from MIA, had historically cannibalized a significant portion of MIA's domestic and international enplanements as it served as the primary South Florida airport for scheduled LCC and ULCC air service. Beginning in late CY 2020, this dynamic changed as Southwest, JetBlue and Spirit entered MIA, while Frontier Airlines, long the Airport's only low-cost option, dramatically expanded its service. Of the 66 non-stop domestic cities currently served from MIA, 25 markets (approximately 38%) have one or more LCC or ULCC options, a dramatic increase from just a few years prior. LCC and ULCC frequencies to popular Caribbean destinations have also been added, along with new service to select leisure and visiting family and relative (VFR) markets in Central America and Mexico. MDAD leadership believes that new or expanded LCC and ULCC service is bringing new passengers to the Airport, including those once served exclusively by competing facilities (e.g., FL), and is not cannibalizing MIA passengers already served by incumbent airlines. As such, KBRA believes the Airport is poised to retain, if not incrementally increase, its share of low-cost traffic, though notes the LCC and ULCC business model often results in more frequent changes to routes, flight frequencies, and aircraft gauge than is typical of their legacy counterparts.

American Airlines Operations

American, MIA's dominant air carrier, expanded its share of an increasing number of preferential gates to 91 from 77 in FY 2021. As of November 2022, it serves 138 cities nonstop from MIA, including 60 in the domestic U.S. and 78 abroad. While the majority of American's international service is concentrated in the Caribbean and Latin America, it also currently serves Barcelona, London, Madrid, Paris and Tel Aviv nonstop from the Airport. KBRA notes that only six of MIA's current nonstop domestic flights lack American service. Of the 41 Caribbean markets, just 2 are flow by carriers other than American.

Like other airlines, American periodically faced operational challenges in CY 2021 and early CY 2022 driven, in part, by its own labor supply constraints and an FAA shortage of qualified air traffic controllers at key centers, including Jacksonville Center. Despite these challenges, which have eased during the latter half of CY 2022, American continues to restore destinations and flight frequencies that were cut during the pandemic, as well as add new domestic and international routes where it sees unmet demand.

Given the continuing robustness of American's schedule at MIA, and the infrastructure it has developed to support operations there, KBRA continues to view the risk of de-hubbing manageable at the current rating level. In addition, the dynamics of the MIA market also suggest that in the unlikely event of a pull down in service by American, flights, frequencies and destinations would be quickly replaced. There is historical precedence at the Airport for new and/or incumbent airlines to backfill service surrendered by a retrenching hub carrier.

Value to Carriers

MIA continued to provide strong value to carriers in CY 2021, leading to new and/or resumed service to Seattle, Rome, Casablanca, and Brasilia, among others, in CY 2022. Despite a competitive operating environment in South Florida, American's yield at MIA was a healthy 3% higher than its systemwide yield at U.S. airports. In addition, American and all carriers at MIA achieved load factors that were 101% and 102%, respectively, of their systemwide averages.

Figure 3

Primary Airlines & Airline Yields in 2021			
	All Airports*	**MIA**	**Airline's Yield at MIA as % of Systemwide Avg**
American Airlines	$0.153	$0.157	103%

Primary Airlines & Load Factor in 2021			
	All Airports (%)	**MIA (%)**	**Airline's Load Factor at MIA as % of Systemwide Avg**
American Airlines	74.97%	76.01%	101%
All U.S. and Foreign Airline	69.86%	71.50%	102%

* Note: Domestic airports only.

Source: FAA | U.S. DOT Bureau of Transportation Statistics

RD 4: Airport Debt/Capital Needs

Capital Improvement Program

The County approved MDAD's current CIP in FY 2019 in an amount of up to $5.0 billion. Concurrent with that approval, the Department received additional bonding authorization of $5.0 billion. At present, the County's approved capital budget is $4.5 billion, which covers FY 2015 through FY 2041. The CIP Program includes 18 subprograms encompassing various airside and landside improvements, including runway rehabilitation and mitigation, improvements to cargo and non-terminal buildings, and the expansion and modernization of terminal infrastructure. A major, recently completed project was the MIA South and Central Terminal Baggage Handling System, which was implemented on-time and within budget (approximately $300.0 million). Other projects to be completed by FYE 2023 include the rehabilitation and reconfiguration of certain runways and taxiways ($152.0 million) and central base apron and utilities modifications and expansion ($108.0 million).

Within the $4.5 billion CIP budget, approximately $3.0 billion of projects have been approved. Of this approved amount, $2.3 billion were approved by MIA's air carriers through the Majority In Interest (MII) provision in the AUA. The remaining $638.0 million did not require airline approval. Roughly 65% ($1.9 billion) of approved projects are expected to be financed through the issuance of Aviation Revenue Bonds, with other sources, including PFCs and FAA grants used to fund the balance. KBRA notes that none of MDAD's $5.0 billion of new bonding authorization has yet been tapped to fund CIP projects. The $357.0 million of new money, Aviation Revenue Bonds issued in 2015 and 2019 were part of the Department's prior authorization.

Leverage

Aviation Revenue Bonds outstanding at FYE 2021 totaled approximately $5.2 billion, with a slightly lower $5.1 billion outstanding at FYE 2022. Double Barreled Aviation Bonds, which are paid from the Improvement Fund and benefit from an ultimate G.O. backstop of the County, totaled $175.7 million in FY 2022. The last issuance of Aviation Revenue Bonds and Double-Bareled Aviation Bonds occurred concurrently in December 2020 to refund then outstanding debt under their respective Trust Agreements.

Given the exceptionally strong FY 2022 enplanement levels, Aviation Revenue Bonds per enplanement declined to a more manageable $203.54 in FY 2022, from a very high $342.07 in FY 2021 and even higher $424.87 in FY 2020. Including the Double-Barreled Aviation Bonds, FY 2022 debt per enplanement increases only slightly, to $210.58. KBRA notes that debt per enplanement in the $200 range is not uncharacteristic of large, capital intensive hub airports rated in the 'AA' category.

As a percentage of FY 2022 unrestricted liquidity ($425.7 million), total debt, including Aviation Revenue Bonds and Double-Barreled Aviation Bonds, equaled an improved 6.1(x), or a slightly lower 5.9(x) if only Aviation Revenue Bonds are included. Such calculations are a marked improvement over FY 2021 (7.3x) and FY 2020 (7.1x), based upon total debt.

MDAD expects to bond finance $1.9 billion, approximately 65.0%, of the approximately $3.0 billion of currently approved CIP projects (through FY 2041), with remaining funds to be provided by FAA grants, PFCs and other sources. Consistent with historic practice, MDAD expects to use its $200.0 million Commercial Paper (CP) Program as interim financing for certain CIP projects, with Aviation Bonds every 12 to 24 months to replenish CP capacity and/or provide new money.

KBRA evaluated a scenario where the entire $1.9 billion of future debt was issued today. Debt per enplanement, based on actual FY 2022 volumes, would increase to $280.90, an amount which is still lower than actual debt per enplanement in both FY 2021 and FY 2020. KBRA acknowledges MDAD has a track record of prudently funding and implementing multi-phase, complex capital programs. Additionally, the Department has historically been successful in garnering FAA grants which it uses to ultimately reduce debt issued to fund CIP projects. KBRA expects future FAA grants will be applied in a similar manner.

RD 5: Airport Finances

Airline Use Agreement
MDAD's current AUAs with its airlines are substantially identical. AUAs were fully phased-in in fall 2020 and expire in CY 2033. Each AUA employs a residual methodology to calculate the landing fee, and a cost-based, equalized rate setting methodology for calculating rents and user fees for facilities, equipment, and services at the terminal. The landing fee is calculated such that Net Revenues, after deducting deposits to the Reserve Maintenance Fund, must equal at least 1.20x debt service requirements for that fiscal year. The Departments' FY 2023 operating budget holds the landing fee at the FY 2022 level ($1.62).

Under the AUA landing fee methodology, funds remaining in the MDAD's Improvement Fund are transferred to the Revenue Fund in the succeeding fiscal year, except for funds in the Improvement Fund that are required to pay debt, including debt service on Double Barreled Aviation Bonds and funds retained by the Department in the subaccounts of the Aviation Capital Account. The transferred Improvement Fund resources are considered revenues for purposes of meeting the rate covenant and may affect the charges collected under each AUA. MDAD has the authority to fund a discretionary capital account, known as the Reserve Maintenance Fund, in an amount up to $15 million, with annual adjustments for inflation. Such account has been funded at $15.0 million consistently since FY 2019, including throughout the pandemic. An increased deposit of $20.0 million is budgeted for FY 2023.

Update on Financial Relief for Airport Partners
In response to the pandemic, the County Board of Commissioners offered financial assistance to Airport partners between March 2020 and December 2021. Of the nearly $53.0 million in rent deferments provided to airlines and other tenants over this time period, nearly all had been repaid as of FYE 2022. Rather than deferments, MIA's concessionaires, including rental car companies, fixed based operators (FBOs) and Goodwill received waivers of Minimum Annual Guarantee (MAG) payments for 22-months under the County's Financial Relief Plan (FRP). Such relief totaled $190.6 million, with approximately $70.0 million ultimately recovered by the Department.

Following the expiration of the FRP, the Department offered concessionaires the option to modify their existing lease agreements ("modified agreements"). Upon signing a modified agreement, MDAD extended the term of the existing lease by either one or two years from the original expiration date. Under provisions common to each modified agreement, the MAG concept has been completely removed, replaced with a "greater of" tiered rent or monthly percentage of gross sales fee; the percentage of gross sales fee was lowered retroactively to March 2020 by 2%. Concessionaires may return unused space without penalty, though are required during the term of their lease, once international enplanements return to the FY 2019 level (11.0 million), to invest a minimum of $75 per square foot to refresh their occupied space. Security deposits were waived for most of 2021. However, beginning on January 1, 2023, a security deposit of 15% of rent plus total applicable taxes will become effective. A living wage requirement was also introduced as part of the extended FRP, while the competitive pricing provision was removed. KBRA notes that all but two very small concessionaires signed a modified agreement.

Figure 4

Miami-Dade County Aviation Department Financial Operations and Debt Service Coverage Fiscal Years Ending September 30 (dollars in thousands) (Cash Basis)							Budget	Budget to Actual
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2022**	**2022**
Revenues								
Deposits from Improvement Fund	$ 87,220	$ 97,709	$ 91,293	$ 97,591	$ 58,043	$ 47,572	$ -	
MIA Aviation Fees	379,779	379,777	390,395	248,624	301,586	435,002	378,658	114.9%
Commercial Operations:								
Total Commercial Revenues	271,738	273,653	278,630	160,832	173,292	266,574	201,661	
Total Rental Revenues	138,665	139,188	139,031	99,216	179,195	166,358	151,548	
Other Revenues	35,749	41,473	48,108	43,329	39,219	37,200	34,130	
Gross Revenues	913,151	931,800	947,457	649,592	751,335	952,706	765,997	124.4%
Current Expenditures	429,974	454,871	480,910	452,022	471,836	514,331	515,638	99.7%
Less CARES Act Grant	-	-	-	(72,085)	(2,690)	-	-	
Less CRRSAA Grant					(21,580)	-	-	
Less ARPA Act Grant							(51,500)	
Adjusted Current Expenses	429,974	454,871	480,910	379,937	447,566	514,331	464,138	110.8%
Net Revenues	**483,177**	**476,929**	**466,547**	**269,655**	**303,769**	**438,375**	**301,859**	145.2%
Less Deposit to Reserve Maintenance Fund	(30,000)	(20,000)	(15,000)	(15,000)	(15,000)	(15,000)	-	
Net Revenues Available for Debt Service	453,177	456,929	451,547	254,655	288,769	423,375	301,859	140.3%
Gross Debt Service Requirements	363,068	359,326	359,940	368,616	318,150	340,333	340,333	
Less PFC Deposits	(63,000)	(58,000)	(55,000)	(82,000)	(110,000)	(80,000)	(80,000)	
Less Improvement Fund Used for DS					(19,500)		(30,000)	
Less Excess DB 2010 Service Used for DS					(9,727)			
Less FAA CARES Act Grant Used for DS				(112,014)	(33,815)			
Less FAA ARPA Act Grant Used for DS	-	-	-	-	-	(30,000)	-	
Net Debt Service Requirements	300,068	301,326	304,940	174,602	145,108	230,333	230,333	
Debt Service Coverage	**1.51x**	**1.52x**	**1.48x**	**1.46x**	**1.99x**	**1.84x**	**1.31x**	
Enplaned Passengers ('000)	21,603	22,220	22,685	12,650	15,136	24,938	15,850	157.3%
Cost Per Enplanement (dollars)	**$19.83**	**$19.20**	**$19.23**	**$21.74**	**$24.73**	**$19.44**	**$24.47**	**79.4%**

Source: MDAD and KBRA calculations.

Operating Performance

FY 2021

MDAD generated Net Revenues of $303.8 million in FY 2021 on gross revenues of $753.3 million, or an operating margin of 40.4%. While gross revenues increased by a healthy 15.7% over FY 2020, to $751.3 million, current expenditures, adjusted to include $24.3 million of federal stimulus offsets, grew at a higher 17.8% rate. KBRA notes that the expenditure growth rate was influenced by austere budget measures implemented by the Department in FY 2020, resulting in an expense base that was 21.0% lower than FY 2019, inclusive of CARES and CRSSA funds. Non-aeronautical revenues, including concessions and rental cars, totaled $391.7 million, approximately 52.1% of gross revenues, with payments from the airlines representing a lower 43.5% share.

Figure 5

Miami-Dade County Aviation Department Financial Operations Statistics FYE September 30 (dollars in thousands)						
	2017	**2018**	**2019**	**2020**	**2021**	**2022**
Operating Margin	52.9%	51.2%	49.2%	41.5%	40.4%	46.0%
Airline Payments	$ 379,779	$ 379,777	$ 390,395	$ 248,624	$ 301,586	$ 435,002
As % of Gross Revenues	46.0%	45.5%	45.6%	45.0%	43.5%	48.1%
Non-Aeronautical Revenues	$ 446,152	$ 454,314	$ 465,769	$ 303,377	$ 391,706	$ 470,132
Per Enplanement	$20.65	$20.45	$20.53	$23.98	$25.88	$18.85
As % of Gross Revenues[1]	48.9%	48.8%	49.2%	46.7%	52.1%	49.3%
Current Expenditure Per Enplanement	$ 19.90	$ 20.47	$ 21.20	$ 35.73	$ 31.17	$ 20.62

1. Difference between Airline Payments and Non-Aeronautical Revenue are Deposits from Improvement Fund.
Source: MDAD and KBRA calculations.

FY 2022

Record enplanement levels at MIA positively impacted FY 2022 operating performance, with the margin improving to 46.0%, a level more characteristic of the Department's financial results prior to the pandemic (FY 2020). Gross operating revenues of $952.7 million were 124.4% of the amount conservatively budgeted ($766.0 million) for FY 2022, while current expenditures of $514.3 million slightly outperformed budget ($515.7 million) and were up only 9.0% from the prior year. No federal stimulus was ultimately used to defray operating costs in FY 2022, though $51.5 million had been originally budgeted. Airline payments as a percentage of gross revenues ticked up slightly, to 48.1%, as passenger traffic surged. Approximately 90% of MIA's concessions have now fully reopened, though there is some variability depending upon terminal and concession type.

Following a $15.0 million deposit to the Reserve Maintenance Fund and the payment of Aviation Revenue Bond debt service ($230.3 million), Net Revenues totaled $193.0 million. Of this balance, the Department received airline approval to spend approximately $50.0 million towards costs related to a Transportation Security Administration (TSA) equipment replacement project and a U.S. Customs and Border Patrol (CBP) network upgrade. Remaining Net Revenues were incorporated into the calculation of revenue in MDAD's FY 2023 operating budget.

FY 2023 Operating Budget

For FY 2023, based upon a September 2022 enplanement forecast of 25.8 million passengers, the Department conservatively budgets gross revenues of $910.0 million, with current expenses, net of ARPA funds ($24.0 million), budgeted at $549.5 million. As a percentage of budgeted FY 2023 gross revenues, the FY 2023 Net Revenues ($360.5 million) would be approximately 40.0%. KBRA notes that MDAD leadership builds its annual operating budget based upon prudent revenue and expense assumptions to yield DSC just slightly above the 1.20(x) rate covenant. Actual operating performance is then typically well in excess of budgeted levels.

Debt Service Coverage

Aviation Revenue Bond DSC calculated under the Trust Agreement increased to 1.99(x) in FY 2021. This was due to an 80.6% increase in rental revenue as result of the collection of previously deferred rents; the application of $110 million in PFCs; transfers of $19.5 million from the Improvement Fund, and $9.7 million of funds made available through the refunding of Series 2010 Double Barrel Aviation Bonds. Though the amount of federal stimulus used to support operations ($24.3 million) and offset debt service ($33.9 million) declined in FY 2021, these funds were still helpful in offsetting a portion of lost revenues as a result of the pandemic.

FY 2022 Aviation Bond DSC was healthy at 1.84(x), including the application of $80.0 million of PFCs and $30.0 million of ARPA stimulus. KBRA notes that unlike the prior two fiscal years, no stimulus funds were needed to support operations given the outperformance (124.4%) of gross revenues to budget. In the absence of federal support, DSC was still healthy at 1.63(x).

Consistent with Department practice, the FY 2023 budget conservatively projects a 1.26(x) coverage level, just above the 1.20(x) rate covenant. As noted above, actual DSC is typically well ahead of budget and KBRA expects this will continue in FY 2023. The Department plans to apply $40.0 million of ARPA funds as an offset to principal and interest in FY 2023, reducing requirements from $370.0 million to $270.0 million.

Cost per Enplaned Passenger

MIA's CPE remained elevated at $24.73 in FY 2021, though in-line with the Traffic Engineer's forecast ($24.81). In FY 2022, CPE declined to a more manageable $19.44 as enplanement levels exceeded pre-pandemic volumes. Actual FY 2022 CPE impressively outperformed both the pre-pandemic ($23.31) and post-pandemic ($24.47) forecasts of the Traffic Engineer.

The Department is budgeting for a CPE of $18.06 in FY 2023, based upon $436.0 million of total airline payments and an original enplanement forecast of 24.1 million passengers. With the September 2022 revision to the enplanement forecast (25.8 million passengers), the FY 2023 CPE is likely to be lower.

System Liquidity

Unrestricted liquidity, which includes the Revenue Fund, Reserve Maintenance Fund and Improvement Fund, totaled $354.8 million in FY 2021, up by a healthy 21.1% from FY 2020. Unrestricted liquidity grew by an additional 20%, to $425.7 million, in FY 2022. On a days cash expense basis, FY 2022 unrestricted liquidity was solid at 302.1, up from 289.4 in FY 2021 and 281.4 in FY 2020. KBRA notes that while restricted cash is generally not available for operating uses, it does provide the Department with flexibility to fund capital projects and support debt. Of the $844.3 million of total restricted funds, the Aviation Revenue Bonds debt service account totals $232.9 million (27.6%), while accumulated PFCs total $205.5 million (24.3%). Construction bond funds, which are included in restricted cash, totaled $93.3 million at FYE 2022.

Figure 6

Miami-Dade County Aviation Department Cash Balances FYE September 30 (dollars thousands)	2017	2018	2019	2020	2021	2022
Unrestricted Cash						
Revenue Fund	$ 99,083	$ 104,493	$ 89,071	$ 89,133	$ 109,348	$ 102,160
Reserve Maintenance Fund	81,479	79,544	81,204	68,107	87,480	117,881
Improvement Fund	158,093	162,273	172,077	135,689	158,013	205,645
Total Unrestricted Cash	**338,655**	**346,310**	**342,352**	**292,929**	**354,841**	**425,686**
					21.1%	**20.0%**
Restricted Cash						
Passenger Facility Charge (PFCs)	227,410	253,596	290,177	271,339	217,132	205,514
Construction Bond Funds	72,592	68,747	197,134	162,458	99,866	93,261
Commercial Paper Series C	19,680	27,675	-	-	3,459	5,004
AA Escrow	8,025	7,947	8,122	8,199	8,203	8,247
Improvement Fund - Airline Approved Capital Projects	50,675	51,132	52,680	52,235	2,622	60,000
Environmental Funds	51,276	51,004	50,583	50,952	47,068	41,938
Total Restricted Cash	**429,658**	**460,101**	**598,696**	**545,183**	**378,350**	**413,964**
Restricted Cash - Debt Service Related						
GARB Debt Service Account	234,575	234,269	252,964	263,756	211,622	232,586
Double Barreled Debt Service Account	21,218	21,472	21,980	22,095	17,461	19,982
GARB Reserve Account	161,884	161,794	164,943	164,573	164,372	164,921
Double Barreled Reserve Account	16,069	16,329	16,636	16,829	12,778	12,800
Redemption Account	54	55	56	55	57	57
Capitalized Interest Account 2019A	-	-	6,887	-	-	-
Total Restricted Cash	**433,800**	**433,919**	**463,466**	**467,308**	**406,290**	**430,346**
			1,062,162			
Total Restricted Funds	**863,458**	**894,020**		**1,012,491**	**784,640**	**844,310**
Total Funds	**1,202,113**	**1,240,330**	**1,404,514**	**1,305,420**	**1,139,481**	**1,269,996**

Source: MDAD

As noted above, MDAD has used federal funds received under various stimulus programs to support payroll and utilities costs, as well as to defray debt carrying charges on outstanding Aviation Revenue Bonds. The $207.0 million of CARES funding provided to MIA in FY 2020, the most of any airport in Florida, has been fully spent. Of the $160 in ARPA grants received, approximately $130.0 million remains available, with $64.0 million earmarked for operations and debt service in FY 2023. The remaining $66.0 million will be applied to the FY 2024 budget.

Stress Case

Given MIA's outperformance of base case enplanement projections in both FY 2021 and FY 2022, KBRA did not update the most recent CPE stress case included in its November 2021 Surveillance Report. In KBRA's view, the stress case remains highly conservative and illustrates the resiliency of the Airport even under suboptimal operating conditions.

RD 6: Legal Mechanics and Security Provisions

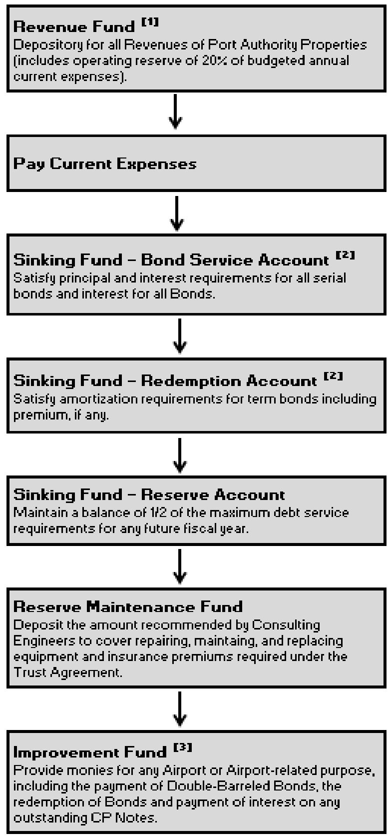
Bond Security

Under the Trust Agreement, Aviation Revenue Bonds are special limited obligations of the County, payable solely from a pledge of the net revenues derived from the Port Authority Properties (MIA, three general aviation airports and one training airport). Aviation Revenue Bonds do not a full faith and credit obligation of Miami-Dade County. PFCs do not constitute revenues and are not currently pledged to the payment of any Aviation Revenue Bonds, but the County has and plans to continue to use PFCs to pay debt service. Amounts held under the Trust Agreement in the Construction Fund, the Revenue Fund, the Sinking Fund, the Reserve Maintenance Fund, and the Improvement Fund are pledged to the Bonds, subject to certain limitations.

Flow of Funds

The chart below summarizes the application of Revenues under the Trust Agreement:

Figure 7



[1] The Trust Agreement authorizes the Board to designate a lesser percentage by resolution. Currently, the Board budgets 16.0% of the budgeted current expenses as an operating reserve.

[2] Requirements payable from Revenues may be reduced to the extent such requirements are satisfied from other sources outside the Trust Agreement set aside and deposited into the Bond Service Account or Redemption Account for such purpose.

[3] Certain monies are transferred annually from the Improvement Fund to the Revenue Fund pursuant to the terms of the Airline Use Agreement. Such transferred deposits to the Revenue Fund are treated as Revenues under the Trust Agreement.

Source: Miami-Dade County Trust Agreement

Rate Covenant

Net Revenues, net of deposits to the credit of the Reserve Maintenance Fund of the amounts recommended by the Traffic Engineers, must equal at least: (a) 120% of Aviation Revenue Bond debt service requirements, excluding any deposit into the Reserve Account; and (b) any required deposit into the Reserve Account and payments required to be paid during such fiscal year to providers of reserve facilities in connection with draws on those facilities. PFCs associated with certain, eligible debt financed projects, may used to meet the rate covenant.

If the rate covenant is not met in any fiscal year, the County covenants that before November 15th of the following fiscal year, it will request a Traffic Engineer recommendation as to a revision in rates and charges. If the County complies with the Traffic Engineer recommendation in respect of rates and charges, it will not constitute an event of default if the rate covenant is not met. At that point, holders of a majority of outstanding Bonds may institute court action to compel the County to revise rates and charges. The County covenants that it must adopt rates and charges in compliance with any court judgment.

Additional Bonds Test

Additional Aviation Revenue Bonds may be issued after demonstrating either (i)1.20(x) coverage of pro-forma MADS by Net Revenues for 12 consecutive months out of the preceding 18-months, certified by the Aviation Director; or (ii) 1.20(x) coverage of pro-forma debt service by Net Revenues, estimated by the Traffic Engineer for the succeeding five fiscal years. If interest on the Additional Aviation Revenue Bonds is capitalized, the five fiscal year period would begin in the first fiscal year after capitalized interest has been exhausted.

Debt Service Reserve Fund (DSRF) Requirement

The Trust Agreement provides for a common debt service reserve account. The DSRF requirement is equal to one-half of MADS and the DSRF may be funded over a 60-month period. Approximately 83% of the reserve requirement is met with restricted cash and investments, with the balance derived from reserve account surety policies.

Bankruptcy Risk Assessment

Please refer to the November 2021 Surveillance Report for the bankruptcy risk assessment. There have been no changes over the past year.