



**DIRECTIVE 2020-018**

April 22, 2020

Re: CONSIDERATION OF A REQUEST BY MIAMI UNIVERSITY TO PLEDGE FEES IN SUPPORT OF A BOND ISSUANCE NOT TO EXCEED \$125,000,000 TO BE USED TO FINANCE MULTIPLE CAPITAL PROJECTS

Ohio Revised Code §3345.11 enables a state university or college to issue general receipts obligation bonds in the manner provided by and subject to the applicable provisions of Ohio Revised Code §3345.12.

§381.390 of Am. Sub. H.B. 166 of the 133rd General Assembly requires that any new pledge of fees to secure bonds or notes of a state college or university be approved by the Chancellor of the Ohio Department of Higher Education.

Pursuant to Ohio Revised Code, Miami University has demonstrated the following:

- The proposed projects are essential to fulfilling institutional goals.
- The institution's Board of Trustees approved a resolution authorizing this bond issuance during their February 21, 2020 meeting.
- The institution's proposal complies with §3345.11 and §3345.12.

Agency staff reviewed the request and posted its recommendations to the Department of Higher Education's web site for purposes of providing a period of public comment before final approval by the Chancellor. The materials posted for comment and the request to pledge fees are attached to this document.

Based on my review of staff recommendations, I hereby approve the request to pledge student fees by Miami University in support of general receipts obligation bonds in an aggregate amount not to exceed \$125,000,000. Furthermore, any increase in fees to support this issuance shall not be exempt from any future restraint to increases in undergraduate instructional and general fees imposed by the General Assembly.

This directive will take effect immediately.

Randy Gardner  
Chancellor

mlc

## Miami University Fee Pledge

Miami University is requesting to pledge fees to support the issuance of up to \$125 million of debt. The University has a capital plan that identifies \$156 million in projects and financing costs over the next four years. This new debt will be used to build new academic facilities. Planned capital projects consist of constructing a new 170,000 gross square feet Clinical Health Sciences Facility, and a new 75,000 gross square feet in size Digital Innovation Building. The amount of debt issued takes into account various potential funding sources including gifts, local funding, and forthcoming FY21-22 state capital appropriation.

The timing for issuing this debt is based on near historically low interest rates. It takes into account the project schedules and when the multiple sources of funds will become available. Miami evaluates the possibility of refunding existing bonds based on potential savings of this new money. The new debt will be issued within 2020. Based on the current market, they anticipate that most of this issuance will be fixed rate, long-term debt (25 years). The principle payments will be funded from Educational and General (E&G) revenue and gifts from fund raising efforts. Miami anticipates the completed academic facilities will enhance E&G revenue.

Miami had \$612.245 million of outstanding debt at the end of FY 2019. Their Viability Ratio (assets to debt) was 124%. If this debt was issued in FY 2019 their ratio would be 101.1%. Their SB 6 Composite Score in FY 2019 is 4.7; with the additional new debt Miami's FY2019 composite score would remain at 4.7.

## Analysis

- 1) Does the request provide an overview and project descriptions with supporting documentation?  
Yes, Miami provided summaries of the two proposed capital projects.
- 2) Does the proposal provide a projected cost break down?  
The funding is tied to the overall capital plan and part of multi-year debt issuances to support the facilities projects. For planning purposes, Miami assumed 25 year debt at a fixed rate of 2.75%. The current schedule assumes principle payments will start in FY2022 in the amount of \$6.8 million. Final structure and debt service will be determined based on market conditions at issuance.
- 3) Does the proposal specify that the project(s) will have no direct impact on student tuition and fees?  
The University states that: "No direct impact on tuition or fees is anticipated as a result of this new debt."
- 4) Does the proposal include a financial ratio analysis?  
Composite Scores below:

FY2015	FY2016	FY2017	FY2018	FY2019	FY2019*
4.1	4.4	4.4	4.7	4.7	4.7

\* Composite score if debt had been issued in FY 19

- 5) Does the proposal provide a financial outlook and bond rating? Also, does the proposal discuss change in plant debt?
- Miami's current rating from FitchRatings is AA/Stable and from Moody's is Aa3/Stable.
  - Miami University had outstanding debt - \$612.245 million at the end of FY19. Their Viability ratio was 124.1%; it would decline to 103% if the issuance of \$125 million was included.

MIAMI UNIVERSITY  
FEE PLEDGE REQUEST  
\$125,000,000 SERIES 2020 BOND  
SUBMITTED February 27, 2020

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**1. A Single Campus Liaison or Contact**

Bruce Guiot, 513-529-8015, [guiotba@miamioh.edu](mailto:guiotba@miamioh.edu)

**2. Project Description**

Miami University requests the authority to pledge fees in support of a fixed rate Series 2020 general receipts bond issue of up to \$125 million in new money. This issue could be combined with the current and/or advance refunding of existing bonds that will be determined at the time of issuance based upon potential savings.

Between 2010-2017, Miami issued five new money debt series to fund a Housing and Dining Master Plan which created new accommodations, extensively renovated existing buildings, improved health and safety systems, and enhanced energy efficiency. This program is mostly complete and the remaining work will be funded from local sources.

This new debt will be used on academic facilities. No direct impact on tuition or fees is anticipated as a result of this new debt. Gifts are expected to be used to service the new debt. No additional debt beyond this Series 2020 bond is anticipated during the next two-three years. Academic facilities projects planned in that period are expected to be funded from state appropriations and local sources.

1. Clinical Health Sciences Facility \$96,000,000

The U.S. Department of Labor's Bureau of Labor Statistics and Ohio's Department of Job and Family Services 2026 Employment Projections identified health care professions "to be among the fastest growing occupational groups during the decade." In recognition of this trend, the recently completed Miami University strategic plan established health science fields as a priority, with a nursing major once again being offered on the Oxford campus and planning for a physician's assistant program now underway.

A committee of representatives from Biology, Chemistry, Kinesiology and Health, Gerontology, Nursing, and Speech Pathology and Audiology was formed to recommend how to advance the Clinical Health Sciences on the Oxford campus. The committee identified synergies among programs and a set of common goals including a focus on holistic human health

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and a desire for students to have an inter-professional experience that could be accomplished through a health district that includes an additional building to house new and growing programs in the health sciences. These programs include Nursing, Physician's Assistant, Speech Pathology and Audiology, and the University's existing Health Services Center.

The evaluation of the site analysis data in conjunction with future program goals has identified an optimal building site near Phillips Hall, the South Campus Parking Garage, the Recreational Sports Center, and the Goggin Ice Center. The site complements a vision of a new health district on the Oxford campus.

The building is expected to be about 170,000 gross square feet in size and offer state of the art opportunities for students and faculty in the clinical health sciences. Construction is expected to begin in the late spring or early summer of 2020 and be complete by the summer of 2022.

Gifts, Ohio capital appropriations, and local funds are expected to comprise a significant component of the cost. The cash flow timing of the gifts, which will likely be in the form of multiyear pledges, makes bond financing a critical part of the overall financial plan. Gifts are expected to be used for debt service. Near historically low interest rates help make the financial plan feasible at this time.

2. Digital Innovation Building \$60,000,000

This project will accommodate programming related to innovation, multidisciplinary project-based work, and instilling a sense of leadership and entrepreneurship in our students. The possibility of renovation or new construction has been evaluated and new construction is anticipated to better meet programming needs. A Programming Committee with representation from areas of STEM, data science, entrepreneurship, Interactive Media, and design thinking was convened in January 2019. The University has hired a Criteria AE firm to develop the program of requirements, assist in potential site selection, and provide conceptual design.

The building is expected to be about 75,000-80,000 gross square feet in size and offer state of the art opportunities for students and faculty. Construction is expected to begin in the late spring or early summer of 2021 and be complete by the summer of 2023.

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Gifts are expected to comprise a significant component of the cost. The cash flow timing of the gifts, which will likely be in the form of multiyear pledges, makes bond financing a critical part of the overall financial plan. Near historically low interest rates help make the financial plan feasible at this time.

Attachment A: Board Resolutions  
Attachment B: Project Timetables

**3. Schedule of Project Capital Costs and Resources**

Attachment C: Schedule of Project Costs and Resources

**4. Debt Service Schedule**

Miami University anticipates issuing \$125 million in new bonds in 2020. Timing of the issuance will depend on capital market conditions. Maturities are expected to range between 1-25 years.

The debt service for the projects will be funded from Educational & General revenue, with gifts from fund raising efforts tied to the projects expected to cover a significant portion of the debt service. Completion of the facilities is intended to enhance E&G revenue.

Attachment D: Debt Service Schedule

**5. Pro Forma Analysis**

Attachment E: Pro Forma Analysis

**6. University Bond Rating**

Fitch:	AA	Stable Outlook	(February 2020)
Moody's:	Aa3	Stable Outlook	(May 2019)

Attachment F: Bond Rating Letters

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**Attachment A: Board Resolutions**

**Attachment B: Project Time Tables**

**Attachment C: Schedule of Project Costs and Resources**

**Attachment D: Debt Service Schedule**

**Attachment E: Pro Forma Analysis**

**Attachment F: Ohio Senate Bill 6 Ratios**

**Attachment G: Bond Rating Letters**



Finance and Audit  
February 20, 2021

**SERIES RESOLUTION R-2020-xx**

**PROVIDING FOR THE AUTHORIZATION, ISSUANCE AND SALE OF NOT TO EXCEED \$125,000,000 OF GENERAL RECEIPTS REVENUE BONDS, SERIES 2020, OF MIAMI UNIVERSITY, APPROVING A SUPPLEMENTAL TRUST AGREEMENT AND AUTHORIZING THE FISCAL OFFICER TO TAKE CERTAIN ACTIONS.**

WHEREAS, Resolution 2004-8 adopted by this Board on September 26, 2003 (the "General Bond Resolution"), and the Amended and Restated Trust Agreement dated as of October 1, 2003, as amended (the "Trust Agreement"), by and between the University and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee") provide for the issuance from time to time of Bonds of the University, with each issuance to be authorized by a Series Resolution adopted by the Board; and

WHEREAS, the General Bond Resolution was adopted and the Trust Agreement was authorized by the Board pursuant to the Act which authorizes the University to issue its Bonds to pay costs of certain capital facilities, defined as "auxiliary facilities," "education facilities" and "housing and dining facilities" in Section 3345.12 of the Revised Code and collectively called "University Facilities" in the General Bond Resolution and in this Resolution; and

WHEREAS, the University has determined, and hereby confirms, that it is necessary and appropriate to issue its General Receipts Revenue Bonds to fund (i) the renovation and construction of academic facilities, including, but not limited to, Bachelor Hall and Upham Hall which are located on the Oxford campus; (ii) the acquisition, construction, equipping and/or furnishing of a new health sciences building and a new digital innovation multidisciplinary building at the Oxford campus; (iii) other eligible capital projects approved by the Board; and (iv) payment of a portion of the costs associated with such issuance (the above-listed projects are collectively referred to as the "Series 2020 University Facilities Project" or "Project"); and

WHEREAS, for the above purposes, the University has determined to issue not to exceed \$125,000,000 in aggregate principal amount of General Receipts Revenue Bonds (the "Series 2020 Bonds") to pay a portion of the costs of the Project, including the reimbursement to the University of moneys advanced to finance the cost of University Facilities in anticipation of being reimbursed from the proceeds of such Series 2020 Bonds; and

WHEREAS, the Board anticipates that it will authorize the issuance of the University's refunding bonds (the "General Receipts Revenue Refunding Bonds") to refund all or a portion of its outstanding Bonds; and

WHEREAS, the Board hereby determines that it is in the best interest of the University to provide for maximum flexibility in structuring the Series 2020 Bonds to achieve maximum cost savings, and therefore, has provided that certain terms of the Series 2020 Bonds, including combining all or a portion of the Series 2020 Bonds with all or a portion of the General Receipts

Revenue Refunding Bonds, shall be determined in the Certificate of Award authorized pursuant to Section 5 hereof (the "Certificate of Award");

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF MIAMI UNIVERSITY, as follows:

**Section 1. Definitions and Interpretations.** Where used in this Resolution, in the Supplemental Trust Agreement authorized hereby and in the Certificate of Award, and in addition to words and terms defined elsewhere in this Resolution (including its preambles), the Supplemental Trust Agreement authorized hereby, the General Bond Resolution or the Trust Agreement, the following terms shall have the following meanings:

*"Act"* means Sections 3345.11 and 3345.12 of the Ohio Revised Code.

*"Annual Bond Service Charge"* for any Fiscal Year (as defined in the Trust Agreement) means, in connection with the Series 2020 Bonds, an amount equal to the scheduled principal and interest due on the Series 2020 Bonds in that Fiscal Year.

*"Bond Counsel"* means Dinsmore & Shohl LLP or such other firm of nationally recognized experts on the issuance of state and local obligations designated as such by the Fiscal Officer.

*"Bond Purchase Agreement"* means the Bond Purchase Agreement between the Original Purchaser and the University to be dated as of its date of execution.

*"Bond Year"* means the annual period relevant to the application of Section 148 of the Code to the Series 2020 Bonds.

*"Certificate of Award"* means the Certificate of Award authorized by Section 5 hereof.

*"Code"* means the Internal Revenue Code of 1986, as amended, the regulations (whether proposed, temporary or final) under that Code or the statutory predecessor of that Code, and any amendments of, or successor provisions to, the foregoing and any official rulings, announcements, notices, procedures and judicial determinations regarding any of the foregoing, all as and to the extent applicable. Unless otherwise indicated, reference to a section of the Code includes that section and such applicable regulations, rulings, announcements, notices, procedures and determinations pertinent to that section.

*"Debt Service"* means principal of and interest and any redemption premium on the Series 2020 Bonds.

*"Delivery Date"* means the date on which the Series 2020 Bonds are delivered to the Original Purchaser in exchange for payment.

*"Fiscal Officer"* means the Senior Vice President for Finance and Business Services and Treasurer of Miami University.

*"General Counsel"* means the chief legal officer of the University.

*"Interest Payment Dates"* means the first day of March and September in each year, commencing September 1, 2020 or such other date as may be provided in the Certificate of Award.

*"Issuance Date"* means the date of physical delivery of the Series 2020 Bonds by the University or the date of the "fast closing" in exchange for the purchase price of the Series 2020 Bonds.

*"Letter of Instructions"* means a letter addressed to the Trustee dated the Issuance Date and signed by the Fiscal Officer.

*"Original Purchaser"* means the investment banking firm selected by the Fiscal Officer.

*"Proceeds"* means any Original Proceeds from the sale of the Series 2020 Bonds and any Transferred Proceeds, as defined in Regulations 1.148-8(d)(2).

*"Securities Depository"* means initially The Depository Trust Company (a limited purpose trust company), New York, New York.

*"Series 2020 Bonds"* means the series of General Receipts Revenue Bonds authorized by this Resolution and issued pursuant to this Resolution, the General Bond Resolution, the Trust Agreement and the Certificate of Award.

*"Series 2020 University Facilities Project"* or *"Project"* means the University has determined, and hereby confirms, that it is necessary and appropriate to issue its General Receipts Bonds to fund (i) renovation and construction of housing facilities, dining facilities and other auxiliary buildings and related improvements including, but not limited to, Bachelor Hall and Upham Hall which are located on the Oxford campus; (ii) the acquisition, construction, equipping and/or furnishing of a new health sciences building and a new digital innovation multidisciplinary building at the Oxford campus; (iii) other eligible capital projects approved by the Board; and (iv) payment of a portion of the costs associated with such issuance.

*"Series 2020 Resolution"* or *"Resolution"* means this Resolution authorizing the issuance and sale of the Series 2020 Bonds.

*"Special Record Date"* means the date established by the Trustee in connection with the payment of any overdue interest on any Bond pursuant to Section 4(e)(ii) of this Resolution.

*"Supplemental Trust Agreement"* means the Supplemental Trust Agreement between the University and the Trustee, authorized pursuant to Section 7.01 of the Trust Agreement and this Resolution.

*"Tax Certificates"* means, collectively, the Certificate Regarding Issuance, Use of Proceeds and Arbitrage Compliance of the University to Bond Counsel and the Trustee and the Certificate Under Sections 103(b)(2) and 148 of the Internal Revenue Code of 1986, as amended, of the University.

*"Trustee"* means The Bank of New York Mellon Trust Company, N.A., as successor to J.P. Morgan Trust Company, National Association as trustee under the Trust Agreement.

“2020 University Facilities Costs of Issuance Fund” or “2020 Costs of Issuance Fund” means the fund established and held by the University used to pay certain costs related to the issuance of obligations for the Project that constitute “costs of facilities” as defined in the Act.

“2020 University Facilities Project Fund” or “2020 Project Fund” means the fund established and held by the University used to pay costs of the Project that constitute “costs of facilities” as defined in the Act.

Unless the context shall otherwise indicate, words importing the singular number shall include the plural number, and vice versa, and the terms “hereof,” “herein,” “hereby,” “hereto,” “hereunder,” and similar terms, mean this Resolution and the Supplemental Trust Agreement. References to sections, unless otherwise stated, are to sections of this Resolution.

**Section 2. Authority.** This Resolution is adopted pursuant to the General Bond Resolution, the Trust Agreement and the Act.

**Section 3. Authorization, Designation and Purpose of Series 2020 Bonds.** It is hereby declared to be necessary to, and the University shall, issue, sell and deliver, as provided and authorized by this Resolution, General Receipts Bonds of the University, which shall be designated “Miami University General Receipts Revenue Bonds, Series 2020” (or such other designation set forth in the Certificate of Award) in the maximum original aggregate principal amount of not to exceed \$125,000,000 (the actual original aggregate principal amount to be as provided by the Certificate of Award), for the purpose of paying a portion of the costs of the University Facilities that comprise the Series 2020 University Facilities Project and paying a portion of the costs associated with the issuance. For that purpose, the proceeds from the sale of the Series 2020 Bonds shall be allocated and deposited as provided in Section 6 of this Resolution.

**Section 4. Terms and Provisions Applicable to the Series 2020 Bonds.**

(a) **Form and Numbering.** The Series 2020 Bonds shall be issued, unless otherwise subsequently provided in the Supplemental Trust Agreement entered into pursuant to the Trust Agreement, only in the form of fully registered Bonds, substantially in the form set forth in Exhibit A to the Supplemental Trust Agreement with such changes as may be necessary to reflect the terms of the Series 2020 Bonds set forth in the Certificate of Award. The Series 2020 Bonds shall be fully registered and numbered as determined by the Fiscal Officer in such manner as to distinguish each Series 2020 Bond from each other Series 2020 Bond.

The Series 2020 Bonds shall be initially issued only to a Securities Depository to be held in a book entry system and: (i) the Series 2020 Bonds shall be registered in the name of the Securities Depository or its nominee, as registered owner, and immobilized in the custody of the Securities Depository; and (ii) the Series 2020 Bonds as such shall be transferable or exchangeable in accordance with Section 2.06 of the Trust Agreement, provided, however that so long as a book entry system is used for the Series 2020 Bonds, they may only be transferred to another Securities Depository or to another nominee of a Securities Depository without further action by the University pursuant to subparagraph (e)(iii) of this Section. Notwithstanding Section 2.06 of the Trust Agreement, the University may, and may require the Trustee to, transfer the Series 2020 Bonds from one Securities Depository to another Securities Depository at any time.

(b) Terms.

(i) Denomination and Dates. The Series 2020 Bonds shall be issued in the denomination of \$5,000 and any integral multiple of \$5,000, and shall be dated as of the Delivery Date or such other date as may be provided in the Certificate of Award. Each Series 2020 Bond shall have only one principal maturity date, except for interim certificates or receipts which may be issued pending preparation of definitive Bonds.

(ii) Interest. The Series 2020 Bonds shall bear interest from the later of (i) their date or (ii) the most recent date to which interest has been paid or provided for, payable on the Interest Payment Dates at the respective rates per annum set forth in the Certificate of Award.

(iii) Maturities. The Series 2020 Bonds shall mature on March 1 and/or September 1 in the years and in the principal amounts as provided in the Certificate of Award, with the initial maturity and final maturity as set forth in section (c) below.

(iv) Prior Redemption.

(A) The Series 2020 Bonds may be subject to redemption at the option of the University prior to their stated maturities on the redemption dates and at the redemption prices specified in the Certificate of Award. The Fiscal Officer may determine in the Certificate of Award that some or all of the Series 2020 Bonds are not to be callable prior to stated maturity. The Fiscal Officer further may determine in the Certificate of Award that a premium shall be payable to the bondholder upon early redemption of a Series 2020 Bond and that such premium may be calculated in a manner to make the bondholder whole for the loss of the investment or may be calculated as a percentage of the principal amount to be redeemed.

(B) The Series 2020 Bonds of one or more maturities may be subject to mandatory redemption pursuant to Mandatory Sinking Fund Requirements by the University at a redemption price equal to 100% of the principal amount redeemed, plus accrued interest to the date of redemption, on September 1 in the years and in the principal amounts provided in the Certificate of Award.

(v) Construction Period. Due to the complexity of the Series 2020 University Facilities Project, it is reasonably expected that the Series 2020 University Facilities Project, which involves a substantial amount of construction expenditures, will take longer than three (3) years to complete. In connection therewith, the University shall obtain a certificate from a licensed architect or engineer.

(c) Maturities: Bond Service Charges. The first maturity or mandatory sinking fund payment and the final maturity of the Series 2020 Bonds shall not be later than the dates specified in the Certificate of Award. Principal shall be payable in each year from the first maturity or mandatory sinking fund payment year to the final maturity year either at stated maturity or pursuant to Mandatory Sinking Fund Requirements. The weighted net interest cost on the Series 2020

Bonds shall not exceed 5% per annum. Annual Bond Service Charges on all the Series 2020 Bonds shall be in accordance with the Certificate of Award.

(d) Redemption Prior to Maturity.

(i) If fewer than all of the outstanding Series 2020 Bonds are called for optional redemption at one time, the Series 2020 Bonds to be called shall be designated by the Fiscal Officer in his sole discretion and in any manner the Fiscal Officer determines, without regard to the order of their maturities or their interest rates. If fewer than all of the outstanding Series 2020 Bonds of one maturity and interest rate are to be called for redemption, the selection of the Series 2020 Bonds, or portions of those Series 2020 Bonds (in integral multiples of \$5,000), of that maturity to be called for redemption shall be made in the manner provided in the Supplemental Trust Agreement. If optional redemption of any Series 2020 Bonds at a redemption price above 100% of the principal amount to be redeemed is to take place on any applicable mandatory sinking fund redemption date, the selection of the Series 2020 Bonds to be optionally redeemed shall be selected prior to the selection of the Series 2020 Bonds to be redeemed by mandatory sinking fund redemption.

(ii) Notice of call for redemption of Series 2020 Bonds, setting forth the information provided for in Section 3.03 of the Trust Agreement, shall be given by the Trustee on behalf of the University. Failure to receive notice by mailing, or any defect in that notice, as to any Series 2020 Bond shall not affect the validity of the proceedings for the redemption of any other Series 2020 Bond.

(e) Places and Manner of Payment and Paying Agents.

(i) The principal of and any redemption premium on Series 2020 Bonds shall be payable when due only to the registered owners, upon presentation and surrender of the Series 2020 Bonds at the principal corporate trust office of the Trustee.

(ii) Interest on any Series 2020 Bond due on each Interest Payment Date shall be payable by check or draft which the Trustee shall cause to be mailed on the Interest Payment Date to the person who is the registered owner of the Bond (or one or more predecessor Bonds) at the close of business on the Regular Record Date applicable to that Interest Payment Date, at the address then appearing on the Register. If and to any extent, however, that the University shall make neither payment nor provision for payment of interest on any Series 2020 Bond on any Interest Payment Date, that interest shall cease to be payable to the person who was the registered owner of that Bond (or of one or more predecessor Bonds) as of the applicable Regular Record Date; when moneys become available for payment of that interest the Trustee shall, subject to Section 2.05 of the Trust Agreement, establish a Special Record Date for the payment of that interest which shall be not more than 15 or fewer than 10 days prior to the date of the proposed payment, and the Trustee shall cause notice of the proposed payment and of the Special Record Date to be mailed to the person who is the registered owner of that Bond on a date not fewer than 10 days prior to the Special Record Date, at the address as then appears on the Register, and thereafter that interest shall be payable to the person who is the registered owner of that Bond (or a predecessor Bond) at the close of business on the Special Record Date.

(iii) Notwithstanding any other provision of this Resolution or any provision of the General Bond Resolution, the Trust Agreement, the Supplemental Trust Agreement or any Series 2020 Bond to the contrary, with the written approval of the University, the Trustee may enter into an agreement with a Securities Depository, or the nominee of a Securities Depository that is the registered owner of a Series 2020 Bond in the custody of that Securities Depository providing for making all payments to that registered owner of principal of and interest and any premium on that Series 2020 Bond or any portion of that Series 2020 Bond (other than any payment of its entire unpaid principal amount) at a place and in a manner (including wire transfer of federal funds) other than as provided above in this Resolution, without prior presentation or surrender of the Series 2020 Bond, upon any conditions which shall be satisfactory to the Trustee and the University. That payment in any event shall be made to the person who is the registered owner of that Series 2020 Bond on the date that principal and premium is due, or, with respect to the payment of interest, as of the applicable Regular Record Date or Special Record Date or other date agreed upon, as the case may be. The Trustee will furnish a copy of each of those agreements, certified to be correct by an officer of the Trustee, to other authenticating agents and paying agents for Series 2020 Bonds, if any, and to the University. Any payment of principal, premium, or interest pursuant to such an agreement shall constitute payment thereof pursuant to, and for all purposes of, this Resolution and the Supplemental Trust Agreement.

(iv) Alternate Paying Agents may be designated in the Certificate of Award by the Fiscal Officer.

(f) Execution and Authentication. The Series 2020 Bonds shall be executed and authenticated in the manner provided in the Trust Agreement. Alternate Authenticating Agents may be designated by the Fiscal Officer in the Certificate of Award.

(g) Multiple Series; Combine with General Receipts Revenue Refunding Bonds. The Series 2020 Bonds may be issued in one or more series as approved by the Fiscal Officer and all or a portion of the Series 2020 Bonds may be combined with and issued as part of the same series of Bonds authorized by a separate Series Resolution, including, but not limited to the General Receipts Revenue Refunding Bonds.

#### **Section 5. Sale of Series 2020 Bonds.**

(a) General. The Fiscal Officer is authorized to determine:

- (i) that the Series 2020 Bonds shall be issued;
- (ii) the Principal Amount of Series 2020 Bonds to be issued provided that the aggregate amount of Series 2020 Bonds shall not to exceed \$125,000,000;
- (iii) the interest rates on the Series 2020 Bonds;
- (iv) the amount of any original issue discount and/or premium on the Series 2020 Bonds;
- (v) the maturities of the Series 2020 Bonds, as limited by Section 4(c) herein;

(vi) the optional and mandatory redemption dates, if any, and redemption prices for the Series 2020 Bonds; and

(vii) the purchase price for the Series 2020 Bonds.

The Series 2020 Bonds shall be sold by the Fiscal Officer to the Original Purchaser on such terms not inconsistent with this Resolution as are provided in the Certificate of Award and the Bond Purchase Agreement.

The Fiscal Officer is authorized and directed to execute the Certificate of Award and the Bond Purchase Agreement, in order to provide for the definitive terms and terms of sale of the Series 2020 Bonds as provided in this Resolution, and to award and provide for sale of the Series 2020 Bonds to the Original Purchaser. The Bond Purchase Agreement shall not be materially adverse to the University as shall be approved by the Fiscal Officer, his execution of the Bond Purchase Agreement to constitute conclusive approval of any such changes on behalf of the University. The Certificate of Award shall be incorporated in and form a part of the Supplemental Trust Agreement.

(b) Official Statement. The Fiscal Officer is authorized and directed, on behalf of the University, and in his official capacity, to prepare or cause to be prepared, a preliminary official statement relating to the original issuance of the Series 2020 Bonds; to determine, and to certify or otherwise represent, when such preliminary official statement is "deemed final" for purposes of Securities and Exchange Commission Rule 15c2-12(b)(1); and to use and distribute, or authorize the use and distribution of such preliminary official statement in connection with the original issuance of the Series 2020 Bonds until an official statement is prepared. All actions previously taken by the Fiscal Officer in this regard relating to a preliminary official statement are hereby approved, ratified and confirmed.

The Fiscal Officer is further authorized and directed, on behalf of the University, and in his official capacity, to prepare or cause to be prepared an official statement, and any necessary supplements thereto, relating to the original issuance of the Series 2020 Bonds; to determine, and to certify or otherwise represent, when such official statement is a final official statement for purposes of Securities and Exchange Commission Rule 15c2-12(b)(3) and (4); to use and distribute, or authorize the use and distribution of such official statement, and any supplements thereto, in connection with the sale of the Series 2020 Bonds; and to sign and deliver the official statement.

The Fiscal Officer is further authorized and directed, on behalf of the University, and in his official capacity, to sign and deliver such certificates in connection with the accuracy of the preliminary official and the final official statements and any supplements thereto as may, in his judgment, be necessary or appropriate.

(c) Further Authorization. The Fiscal Officer is further authorized and directed, on behalf of the University, and in his official capacity, to sign and deliver on the Issuance Date, such other certificates, agreements and documents as may be reasonably necessary in the opinion of Bond Counsel to complete the sale of the Series 2020 Bonds. The General Counsel in her official

capacity is hereby authorized and directed to sign and deliver on the Issuance Date a legal opinion in form and substance acceptable to Bond Counsel.

**Section 6. Allocation of Proceeds of Series 2020 Bonds.**

(a) Allocation. All of the proceeds from the sale of the Series 2020 Bonds shall be received and accepted for by the Fiscal Officer or by his authorized representative for that purpose, and shall be allocated, deposited and credited as follows:

(i) To the Bond Service Account in the Bond Service Fund, any portion of the proceeds representing accrued or capitalized interest, if any;

(ii) To the 2020 Costs of Issuance Fund an amount, to be determined by the Fiscal Officer, to pay the costs of issuance of the Series 2020 Bonds; and

(iii) To the 2020 Project Fund, hereby established, the balance of the proceeds, to be applied to pay costs of the 2020 University Facilities Project as determined by the Fiscal Officer and as described in the preambles.

(b) 2020 Project Fund.

(i) The 2020 Project Fund shall be held by the University in a separate deposit account or accounts (except when invested as provided below) set up in a bank or banks that are members of the Federal Deposit Insurance Corporation, and used to pay costs of the Series 2020 University Facilities Project that constitute "costs of facilities" as defined in the Act (the "Project Costs").

(ii) The Fiscal Officer shall apply the 2020 Project Fund pursuant to the provisions of this Section 6 to the payment of the Project Costs, including, without limitation, the reimbursement of the University for moneys heretofore advanced to pay Project Costs in anticipation of the issuance of the Series 2020 Bonds.

(iii) Moneys to the credit of the 2020 Project Fund, pending their application as above set forth, shall be subject to a lien and charge in favor of the holders of the Series 2020 Bonds, and the University covenants that it will not cause or permit to be paid from the 2020 Project Fund any moneys except in compliance with the provisions of this Resolution, the Trust Agreement and the Supplemental Trust Agreement.

(iv) Moneys on deposit in the 2020 Project Fund may be invested by or at the direction of the Fiscal Officer in Eligible Investments (as defined in the Supplemental Trust Agreement) maturing or redeemable at the option of the holder prior to the time needed for the purposes thereof. The investments and the proceeds of their sale shall constitute part of the 2020 Project Fund, and earnings from any of those investments shall be credited to the 2020 Project Fund. The investments may be sold, exchanged or collected from time to time by or at the direction of the Fiscal Officer.

(v) Any balance remaining in the 2020 Project Fund after the Fiscal Officer has certified to the Trustee that payment of Project Costs has been accomplished or provided

for to the satisfaction of the University shall be deposited in the Bond Service Account and used for payment of principal on the Series 2020 Bonds, or expended for costs of University Facilities with the approval of the Board if that payment or expenditure shall not, in the opinion of Bond Counsel to the University, adversely affect the exclusion of interest on the Series 2020 Bonds from gross income for federal income tax purposes.

(c) 2020 Costs of Issuance Fund.

(i) The 2020 Costs of Issuance Fund shall be held by the University in a separate deposit account or accounts set up in a bank or banks that are members of the Federal Deposit Insurance Corporation, and used to pay costs of issuance of the Series 2020 Bonds that constitute "costs of facilities" as defined in the Act (the "Costs of Issuance").

(ii) The Fiscal Officer shall apply the 2020 Costs of Issuance Fund pursuant to the provisions of this Section 6 to the payment of the Costs of Issuance, including, without limitation, the reimbursement of the University for moneys heretofore advanced to pay Costs of Issuance in anticipation of the issuance of the Series 2020 Bonds.

(iii) Moneys to the credit of the 2020 Costs of Issuance Fund, pending their application as above set forth, shall be subject to a lien and charge in favor of the holders of the Series 2020 Bonds, and the University covenants that it will not cause or permit to be paid from the 2020 Costs of Issuance Fund any moneys except in compliance with the provisions of this Resolution, the Trust Agreement and the Supplemental Trust Agreement.

(iv) Moneys on deposit in the 2020 Costs of Issuance Fund may be invested by or at the direction of the Fiscal Officer in Eligible Investments (as defined in the Supplemental Trust Agreement) maturing or redeemable at the option of the holder prior to the time needed for the purposes thereof. The investments and the proceeds of their sale shall constitute part of the 2020 Costs of Issuance Fund, and earnings from any of those investments shall be credited to the 2020 Costs of Issuance Fund. The investments may be sold, exchanged or collected from time to time by or at the direction of the Fiscal Officer.

(v) Any balance remaining in the 2020 Costs of Issuance Fund after the Fiscal Officer has certified to the Trustee that payment of Costs of Issuance has been accomplished or provided for to the satisfaction of the University shall be deposited in the Bond Service Account and used for payment of principal on the Series 2020 Bonds, or expended for costs of University Facilities with the approval of the Board if that payment or expenditure shall not, in the opinion of Bond Counsel to the University, adversely affect the exclusion of interest on the Series 2020 Bonds from gross income for federal income tax purposes.

**Section 7. Tax Covenants; Rebate Fund.** This Board hereby finds and determines that all proceeds from the sale of the Series 2020 Bonds will be needed for the purposes set forth in Section 6 hereof.

(a) This Board hereby covenants for and on behalf of the University, that it will restrict the use of the proceeds of the Series 2020 Bonds in such manner and to such extent, if any, and

take such other actions as may be necessary, in view of reasonable expectations at the time of issuance of the Series 2020 Bonds, so that the Series 2020 Bonds will not constitute obligations the interest on which is subject to federal income taxation or "arbitrage bonds" under Sections 103(b)(2) and 148 of the Internal Revenue Code of 1986, as amended (the "Code"), and regulations prescribed under such Sections, provided that, at the discretion of the Fiscal Officer, the University may issue Series 2020 Bonds which are subject to federal income taxation. However, if the Series 2020 Bonds are designated as some type of tax-advantaged bond on which the interest is excludable from gross income for federal income tax purposes ("Tax-Advantaged Bonds"), the Board will take, or cause to be taken, all activities required to maintain the status of said Series 2020 Bonds as Tax-Advantaged Bonds, and will not take, or permit to be taken, any actions which would jeopardize the status of the Series 2020 Bonds as Tax-Advantaged Bonds. The Fiscal Officer or any other officer of the University having responsibility with respect to issuance of the Series 2020 Bonds is hereby authorized and directed to give an appropriate certificate for inclusion in the transcript of proceedings with respect to the Series 2020 Bonds, setting forth the facts, estimates and reasonable expectations pertinent under said Sections 103(b)(2) and 148 of the Code and regulations prescribed under such Sections.

(b) Rebate Fund. There is hereby created the Series 2020 Bonds Rebate Fund (the Rebate Fund), to be in the custody of the Trustee, which shall be continuously invested in Eligible Investments by the Trustee at the oral direction (confirmed in writing) of the Fiscal Officer. The Rebate Fund shall be held, administered and disposed of in accordance with the provisions of the Supplemental Trust Agreement and/or the Tax Certificates. Amounts credited to the Rebate Fund are not General Receipts and shall be free and clear of any lien under the Supplemental Trust Agreement or under the Trust Agreement.

**Section 8. Credit Enhancement; Other Agreements.** If he determines it to be in the best interest of the University in order to achieve maximum cost savings on the Series 2020 Bonds, the Fiscal Officer may obtain credit enhancement for all or any portion of the Series 2020 Bonds.

The Fiscal Officer is authorized to enter into such agreements and to make such changes to the Supplemental Trust Agreement and the Series 2020 Bond form as may be required in connection with such credit enhancement. The Fiscal Officer is further authorized to enter into such agreements and execute such certificates as may be required in connection with the issuance, sale and delivery of the Series 2020 Bonds.

**Section 9. Supplemental Trust Agreement.** The Chairman of the Board or the President of the University, and the Fiscal Officer, or any one or more of them, are authorized and directed to execute and deliver to the Trustee, in the name of and on behalf of the University, and the Secretary to the Board is authorized and directed to attest, a Supplemental Trust Agreement pursuant to the Trust Agreement and in connection with the issuance of the Series 2020 Bonds.

**Section 10. Open Meeting.** It is found and determined that all formal actions of this Board concerning and relating to the adoption of this Resolution were taken in an open meeting of this Board, and that all deliberations of this Board and of any of its committees that resulted in those formal actions were taken in meetings open to the public, in full compliance with applicable legal requirements including Section 121.22 of the Revised Code.

BOARD OF TRUSTEES OF MIAMI UNIVERSITY

By: \_\_\_\_\_  
Theodore O. Pickerill  
Secretary to the Board of Trustees

Adopted: \_\_\_\_\_, 2020

I attest that this is a true and accurate copy of the original resolution R-2020-\_\_\_\_ passed by the Miami University Board of Trustees on \_\_\_\_\_, 2020 and remains in effect.

Theodore O. Pickerill  
Secretary to the Board of Trustees  
\_\_\_\_\_, 2020

15883839.2

Finance and Audit  
February 21, 2020

**Resolution R2020- xx  
Authorization to Seek Ohio Department of Higher Education Approval for Bond  
Issue**

WHEREAS, the Board of Trustees has approved the issuance of bonds for future construction projects with an estimated cost not to exceed \$125 million; and

WHEREAS, the approval of the Ohio Department of Higher Education is required prior to the issuance of new debt;

NOW, THEREFORE, BE IT RESOLVED: that the Board of Trustees hereby authorizes the Senior Vice President for Finance and Business Services and Treasurer to request approval of the Ohio Department of Higher Education to issue bonds in an amount not to exceed \$125 million; and

BE IT FURTHER RESOLVED: that, upon approval of the Ohio Department of Higher Education, the Senior Vice President for Finance and Business Services and Treasurer is hereby authorized to take all actions necessary to execute the issuance of bonds in an amount not to exceed \$125 million.

**ATTACHMENT B**

**Project Timeline  
Miami University  
2020 Bond Proposal**

Project Name:	YEAR 2020			YEAR 2021			YEAR 2022			YEAR 2023														
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Clinical Health Sciences facility																								
Digital Innovation (estimated)																								

Color Code Legend	
Bid Phase	
Construction phase	

<b>ATTACHMENT C</b>
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**Schedule of Costs and Resources  
Miami University  
2020 Bond Proposal**

	Clinical Health Sciences Facility	Digital Innovation Building
<b>Project Costs:</b>		
Construction	\$70,125,000	\$50,000,000
Design & Administration	\$5,675,000	\$5,000,000
Harris Hall Renovation (swing space)	\$6,200,000	
Owner's Costs	\$7,000,000	
Contingency	\$7,000,000	\$5,000,000
Total:	\$96,000,000	\$60,000,000
<b>Project Sources of Funds:</b>		
2020 Bonds*	\$15,500,000	\$50,000,000
State Capital Appropriation	\$21,000,000	
Gifts*	\$50,000,000	\$10,000,000
Reserves for Renewal and Replacement	\$9,500,000	
Total:	\$96,000,000	\$60,000,000

\* Bonds will be used to finance the construction. Gifts will be used for debt service.

**ATTACHMENT D****Debt Service Schedule  
Miami University  
2020 Bond Proposal**

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total P+I</u>
FY2021	0	3,412,764	3,412,764
FY2022	2,175,000	4,744,825	6,919,825
FY2023	2,230,000	4,634,700	6,864,700
FY2024	2,340,000	4,520,450	6,860,450
FY2025	2,465,000	4,400,325	6,865,325
FY2026	2,590,000	4,273,950	6,863,950
FY2027	2,720,000	4,141,200	6,861,200
FY2028	2,860,000	4,001,700	6,861,700
FY2029	3,010,000	3,854,950	6,864,950
FY2030	3,160,000	3,700,700	6,860,700
FY2031	3,325,000	3,538,575	6,863,575
FY2032	3,495,000	3,368,075	6,863,075
FY2033	3,675,000	3,188,825	6,863,825
FY2034	3,860,000	3,000,450	6,860,450
FY2035	4,060,000	2,802,450	6,862,450
FY2036	4,270,000	2,594,200	6,864,200
FY2037	4,490,000	2,375,200	6,865,200
FY2038	4,720,000	2,144,950	6,864,950
FY2039	4,960,000	1,902,950	6,862,950
FY2040	5,215,000	1,648,575	6,863,575
FY2041	5,480,000	1,381,200	6,861,200
FY2042	5,735,000	1,129,500	6,864,500
FY2043	5,965,000	895,500	6,860,500
FY2044	6,210,000	652,000	6,862,000
FY2045	6,465,000	398,500	6,863,500
FY2046	<u>6,730,000</u>	<u>134,600</u>	<u>6,864,600</u>
Total	102,205,000	72,841,114	175,046,114

Issuance Type                      Fixed rate  
Average Life                        15.672 years  
All Inclusive Cost                    2.75%

For illustrative purposes.  
Final structure and debt service will be determined  
based on market conditions at issuance.

Attachment D

**Miami University  
General Receipts Revenue Bonds**

**Summary of Outstanding Net Debt Service Requirements - by Series (Annual)**

Fiscal Year Ending	Series 2017 <sup>1</sup>	Series 2015 <sup>1</sup>	Series 2014 <sup>1</sup>	Series 2012 <sup>1</sup>	Series 2011 <sup>1</sup>	Series 2010A <sup>1</sup>	Gross Combined Debt Service	U.S. Govt Interest Subsidy <sup>2</sup>	Net Combined Debt Service	Principal Outstanding
6/30/2020	13,879,875	5,666,010	9,997,988	8,700,288	11,974,163	10,326,602	60,544,924	(2,062,202)	58,482,723	578,520,000
6/30/2021	13,871,125	5,664,049	9,997,113	8,699,613	11,962,038	10,249,891	60,443,828	(1,990,885)	58,452,943	545,315,000
6/30/2022	13,874,625	5,660,302	9,999,613	8,697,363	11,972,663	10,162,296	60,366,860	(1,910,986)	58,455,874	510,625,000
6/30/2023	13,849,875	5,659,722	9,999,863	8,701,613	11,957,013	10,071,601	60,239,865	(1,825,126)	58,414,739	474,435,000
6/30/2024	13,851,000	5,657,262	9,997,363	8,701,938	11,960,613	9,972,124	60,140,298	(1,729,787)	58,410,511	436,680,000
6/30/2025	13,836,750	5,667,781	9,996,488	6,348,538	8,132,738	9,861,588	53,843,881	(1,625,865)	52,218,016	403,625,000
6/30/2026	13,836,125		9,996,488	6,350,238	8,131,363	9,747,311	48,061,524	(1,517,418)	46,544,106	374,855,000
6/30/2027	13,866,875		9,996,613	6,350,638	8,133,363	9,625,180	47,972,667	(1,403,090)	46,569,577	344,655,000
6/30/2028	7,632,625		9,996,113	6,351,463	8,124,463	9,499,220	41,603,883	(1,282,561)	40,321,321	319,420,000
6/30/2029	7,631,125		7,732,238	6,350,788	8,134,063	9,362,082	39,210,294	(1,156,704)	38,053,590	295,325,000
6/30/2030	7,629,875		7,735,113	6,351,388	8,130,313	9,220,041	39,066,729	(1,024,292)	38,042,436	270,085,000
6/30/2031	7,633,250		7,735,988	6,350,825	8,132,563	9,071,960	38,924,585	(884,950)	38,039,635	243,655,000
6/30/2032	7,630,750		7,731,363	6,348,563	8,130,063	8,914,918	38,755,656	(739,364)	38,016,292	215,995,000
6/30/2033	7,631,875		7,731,331	6,348,163	8,129,781	8,763,068	38,594,218	(587,253)	38,006,964	187,025,000
6/30/2034	7,631,000		7,732,425	6,349,563	8,133,750	8,585,393	38,432,131	(428,285)	38,003,846	156,675,000
6/30/2035	7,632,500		7,731,175	6,348,544	8,133,500	8,406,049	38,251,767	(262,179)	37,989,589	124,895,000
6/30/2036	7,630,750		7,727,700	7,464,225	8,130,375	8,219,187	39,172,237	(88,657)	39,083,580	90,535,000
6/30/2037	7,630,000		7,734,100	7,460,625	8,133,375		30,958,100		30,958,100	62,970,000
6/30/2038	7,631,125		7,734,600	7,463,363			22,829,088		22,829,088	42,540,000
6/30/2039	7,633,500		7,733,900				15,367,400		15,367,400	28,845,000
6/30/2040	7,629,875		7,731,600				15,361,475		15,361,475	14,530,000
6/30/2041	7,634,375						7,634,375		7,634,375	7,445,000
6/30/2042	7,631,125						7,631,125		7,631,125	
	225,340,000	33,975,126	182,769,169	135,737,731	165,536,194	160,048,509	903,406,729	(20,519,604)	882,887,125	

<sup>1</sup> Principal comes due on the preceding September 1.

<sup>2</sup> U.S. Government interest subsidy calculated at a rate of 32.83% assuming 6.2% federal sequestration for the 9/1/19 payment (U.S. FY 2019) and 32.935% assuming 5.9% federal sequestration thereafter.

**ATTACHMENT E**

**Estimated Pro Forma Analysis  
Miami University  
2020 Bond Proposal**

Project: Clinical Health Sciences

	<u>Bond Value</u>	<u>Bond Term</u>	<u>Assumptions</u>	<u>FY2021</u>	<u>FY2022</u>	<u>FY2023</u>	<u>FY2024</u>	<u>FY2025</u>	<u>FY2026</u>	<u>FY2027</u>	<u>FY2028</u>	<u>FY2029</u>	<u>FY2030</u>
<u>Expenditures</u>													
Debt Service	\$125,000,000	25 years	new money	3,412,764	6,919,825	6,864,700	6,860,450	6,865,325	6,863,950	6,863,950	6,861,700	6,864,950	6,860,700
<u>Revenue Source</u>													
Educational & General Budget (see footnote 1)				3,412,764	6,919,825	6,864,700	6,860,450	6,865,325	6,863,950	6,863,950	6,861,700	6,864,950	6,860,700

Footnote 1: no additional fees will be required.

**Miami University**  
**Fee Pledge Request - \$125,000,000**  
**February 2020**

**V. Financial Ratio Analysis <sup>(1)</sup>**

Through the 1997 enactment of Senate Bill 6, the 122<sup>nd</sup> General Assembly established a standardized method for monitoring the financial health of Ohio’s state-assisted colleges and universities. Subsequently, the administrative rules used to guide the implementation of S.B. 6 identified three financial ratios to evaluate an institution’s fiscal health. The rules also established threshold factors for ranges of ratios, and created a weighted score of the threshold factors, termed the *composite score*, which provides a summary statistic to evaluate an institution’s financial stability. The ratios and composite score are described in greater detail below, including how Miami University performed when these measures are applied to its FY2015, FY2016, FY2017, FY2018, and FY2019 audited financial statements—the most up-to-date financial data available.

The FY2019 data shown in *italics* reflect the ratios and composite score when \$125,000,000 in new debt and a pro rata amount of interest on the new bonds is added to the actual FY2019 calculations. The ratios do not take into account the impact of the new debt on the university’s future retirement of existing debt obligations or future changes in revenues and expenses. No further adjustments to the FY2019 calculations as a result of this request have been made as it is presumed the university’s total debt outstanding and related debt service will either decrease or remain the same. The calculations do not reflect the impact of any potential advance refundings.

**1. Viability Ratio**

The viability ratio is defined as expendable net assets divided by plant debt. This ratio is a measure of an institution’s ability to retire its long-term debt using available current resources. A viability ratio in excess of 100% indicates that the institution has expendable fund balances in excess of its plant debt. Pursuant to this analysis, a viability ratio of 60% or greater is considered good, while a ratio below 30% might be a cause for concern. Miami University’s viability ratios for FY2015, FY2016, FY2017, FY2018, and FY2019 are as follows:

<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u><i>FY2019</i></u>
0.92	0.98	0.94	1.11	1.24	1.03

(1) Financial Ratios for FY 2015 and FY2016 are presented excluding the impact of the implementation of GASB Statement No. 68 *Accounting and Financial Reporting for Pensions* and an amendment of this statement, GASB No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*.

## 2. Primary Reserve Ratio

The primary reserve ratio is defined as expendable net assets divided by total operating expenses. This ratio is one measure of an institution's ability to continue operating at current levels without future revenues. Pursuant to this analysis, a ratio of 10% or greater is considered good, while a ratio below 5% would be a cause for concern. Miami University's primary reserve ratios for FY2015, FY2016, FY2017, FY2018, and FY2019 are as follows:

<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u>FY2019</u>
102.0%	100.9%	105.4%	114.3%	118.2%	117.6%

## 3. Net Income Ratio

The net income ratio represents the change in total net assets divided by total revenues. This ratio is an important measure of an institution's financial status in terms of current year operations. A negative net income ratio results when an institution's current year expenses exceed its current year revenues. A positive net income ratio indicates that the institution experienced a net increase in current year fund balances. Miami University's net income ratios for FY2015, FY2016, FY2017, FY2018, and FY2019 are as follows:

<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u>FY2019</u>
16.9%	10.6%	15.5%	15.0%	12.4%	12.0%

## 4. Composite Score

The ratios are translated into a single composite score by assigning individual scores to ranges of ratios, weighting the individual scores, and summing the weighted scores. The primary reserve score is weighted more heavily than is the viability ratio, which in turn is weighted more heavily than the net income ratio. This scoring process effectively emphasizes the need for campuses to have strong expendable fund balances, manageable plant debt, and a positive operating balance.

The minimum acceptable composite score is any score above 1.75. Institutions with composite scores at or below this level merit special monitoring, and would be placed on fiscal watch if the ratio analysis yielded a composite score at or below this level for two consecutive years. The highest possible score is a 5.0. Miami University's composite scores have been above the minimum threshold:

<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>	<u>FY2019</u>
4.1	4.4	4.4	4.7	4.7	4.7

# FitchRatings

## Fitch Affirms Miami University, OH Revs at 'AA'; Outlook Stable

Fitch Ratings - New York - 11 February 2020:

Fitch has assigned an Issuer Default Rating (IDR) of 'AA' to Miami University, and has affirmed the 'AA' ratings on approximately \$578.5 million of the university's outstanding general receipts revenue bonds.

The Rating Outlook is Stable.

### SECURITY

General receipts revenue bonds are secured by a pledge of the university's general receipts, which are primarily composed of tuition and fees, net auxiliary revenues, revenues from educational activities, unrestricted gifts and investment income.

### ANALYTICAL CONCLUSION

The 'AA' IDR and bond rating reflect Fitch's expectation that Miami will maintain very strong credit quality despite slowing revenue growth trends that are expected to continue. The university has very strong demand with a broad student draw, excellent cost management resulting in robust cash flow, and decreasing capex needs after a period of heightened campus and strategic investment. These strengths give Miami ample flexibility to address revenue challenges including unfavorable population growth trends in key markets and constraints on tuition rate increases. MU's financial profile also supports the 'AA' rating; the university has a strong leverage position for its operating profile, and a large resource base offsets its relatively high debt load.

### KEY RATING DRIVERS

#### Revenue Defensibility:: 'a'

Very Strong Demand but Slowing Revenue Growth

Miami has very strong student demand with generally stable enrollment, a wide draw and very high student quality. However, unfavorable regional population trends and limitations on tuition increases for Ohio residents will constrain revenue growth. Strategic investment in new programs and Miami's nearly 40% non-resident student base should support continued but more modest revenue growth compared to robust historical trends.

# Attachment 6

Other funding sources add stability to Miami's revenue base but would not fully counter potential volatility in net student fees, which account for 78% of revenues.

## **Operating Risk:: 'aa'**

### **Robust Cash Flow Supports Capital and Debt Costs**

Fitch expects the university will maintain robust cash flow, which should support capital and strategic investments while limiting new debt. Miami has a track record of exceptional cost management and is currently accelerating a longer-term cost reduction strategy to offset the expected slowdown in revenue growth. Capital spending needs are manageable and should not drive an increase in leverage. The university invested heavily in campus facilities in recent years and now has good flexibility to address most spending requirements from cash flow.

## **Financial Profile:: 'aa'**

### **Large Resource Base Supports Debt Load**

Miami's financial position has improved steadily over time, and its resource base provides a strong cushion to weather changes in its business environment. Available funds (cash and investments across the university and foundation, less certain restricted net assets and unspent bond proceeds) equal a strong 74% of adjusted debt (including Fitch-adjusted pension liabilities). Fitch expects Miami's leverage position will hold generally steady due to slowing capital debt issuance, front-loaded principal amortization and efforts by the state to contain costs and liabilities related to its defined benefit pension plans.

## **Asymmetric Additional Risk Considerations**

No asymmetric additional risk considerations affected the ratings.

## **RATING SENSITIVITIES**

Developments That May, Individually or Collectively, Lead to a Negative Rating Action:

--Intensifying pricing constraints or pressure driving sustained declines in net tuition-per-FTE or total net student revenues could weaken financial performance and the rating over time if not offset by development of new revenue sources and continued proactive cost management. A decline in cash flow margins toward the 12%-15% range or lower could also trigger negative rating action.

# Attachment 6

--Deterioration of Miami's leverage position such that available funds-to-adjusted debt falls sustainably below about 55%, potentially driven by a notable and unexpected expansion of capital and/or debt plans without commensurate resource growth.

Developments That May, Individually or Collectively, Lead to a Positive Rating Action:

--Although unlikely in the medium term, improvement in the university's leverage position such that available funds-to-adjusted debt would consistently exceed 100% or better through a stress scenario could support positive rating action over time.

## CREDIT PROFILE

MU is the second oldest public university in the state of Ohio, opened in 1824. The university serves nearly 20,000 students, primarily traditional full-time undergraduates and approximately 40% from outside Ohio, at its well-maintained main campus in Oxford, OH. The university serves over 24,000 students in total at Oxford, at its two regional campuses in Hamilton and Middletown, OH, learning center in West Chester, OH and campus in Luxembourg.

### Revenue Defensibility

The university maintains generally stable enrollment, with fall 2019 FTE totaling 22,094 at all campuses and 18,642 at Oxford. Enrollment at Oxford, which drives financial results, fell slightly (less than 1%) in fall 2019, after a long trend of incremental growth, due to softer international enrollment and an increasing trend of early graduations. However, Fitch expects continued stable enrollment over time based on larger incoming classes and strong retention.

A strong enrollment track record drives Fitch's opinion of very strong student demand despite more moderate admissions metrics including acceptance and matriculation rates around 80% and 20%, respectively. These metrics reflect some self-selection among applicants due to Miami's strong reputation and differentiated role within Ohio as a well-known liberal arts institution, as well as competition for non-resident students with other highly regarded institutions. In addition, the university has maintained a trend of larger incoming classes in recent years while maintaining very high student quality and retention rates.

Miami's very strong market position along with strategic program development should support generally stable enrollment despite a shrinking traditional student population in Ohio and in certain key out-of-state regions. Key strategies to offset unfavorable demographic trends include developing new programs and tracks, offering four-year degrees at the regional campuses and diversifying the school's international student draw.

Incremental growth in new programs and continued moderate tuition increases should drive continued though slower growth in net student revenues, which account for 78% of operating revenue. Growth in in-state student fees is constrained somewhat by the Miami Tuition Promise program, which guarantees flat tuition, room and board and other fees for four years for first-time undergraduates and ties increases between cohorts to inflation. The regulatory environment also limits pricing power, as the legislature has in recent years imposed explicit

## Attachment 6

freezes or in-practice constraints on tuition and fee rates that would have applied to Miami had it not already implemented a four-year price guarantee. Other sources including state appropriations (11% of revenue), gifts and investment returns (including a sustainable endowment draw) help stabilize Miami's revenue base. However, these sources are unlikely to fully counter potential volatility in net student fee revenues.

Miami has produced robust and very consistent operating cash flow margins ranging from 19% to 22% over the past five years. Margins may compress slightly in coming years as revenue growth slows, but Fitch expects the university will maintain very strong financial performance based on its demonstrated cost management capabilities and effective financial planning. To align expense growth with expectations for slower revenue growth going forward, the university recently accelerated a previously five-year plan to achieve further cost savings and maintain operating flexibility.

The university has invested heavily in capital improvements over the past five years, especially in replacing and renovating housing and dining facilities to support its freshman and sophomore residency requirement. Capital investment has totaled 270% of depreciation over this period, driving Miami's average age of plant down toward 12 years in 2019 compared to 14 years in 2015. After accelerating certain debt-funded projects for its housing and dining master plan as part of the series 2017 issuance, the pace of debt issuance is now set to slow. Work to address deferred maintenance needs, including further needs related to the housing and dining master plan, will continue, but MU has made substantial progress and now has flexibility to cover annual spending requirements largely from cash flow.

### Financial Profile

Miami's resource base has grown over time from retained cash flow, fundraising and investment returns. Available funds totaled \$902 million at June 30, 2019, up approximately 21% since 2015 despite heavy capital investment over that period. These resources provide a sound cushion relative to adjusted debt of 74%. The university's adjusted debt was \$1.2 billion in 2019, effectively flat to 2015 levels due to significant amortization that offset the series 2017 new money issuance. Adjusted debt consists of \$659 million of general receipts bonds, premium and capital leases, and approximately \$554 million of Fitch-adjusted net pension liability.

Fitch expects the university's leverage position will remain generally stable due to continued strong cash flow and fundraising efforts, an expected slower rate of capital debt issuance and an aggressive amortization schedule for existing debt. Potential new money debt plans over the next two years are moderate, related to academic projects expected to total around \$150 million. Miami does not expect material drawdowns of available funds for capital or strategic projects, and Fitch does not expect the university's participation in two of Ohio's statewide multiemployer plans to affect its overall leverage position materially. Plan reforms in recent years, including eliminating COLAs, lowering benefits and shifting statutory contributions to pensions from OPEB, have contained liabilities and raised the likelihood of funding improvement if assumptions are met.

Liquidity and debt service coverage are sound and present no asymmetric risk to the university's financial profile. Available funds covered operating expenses by a strong 138% in fiscal 2019, and Miami's robust cash flow generates solid debt service coverage consistently above 2x despite its front-loaded principal amortization and resulting higher carrying costs.

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In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

## ESG Considerations

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of 3 - ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity.

For more information on Fitch's ESG Relevance Scores, visit [www.fitchratings.com/esg](http://www.fitchratings.com/esg).

RATING ACTIONS		
ENTITY/DEBT	RATING	PRIOR
Miami University (OH)	LT IDR AA  New Rating	
Miami University (OH) /General Revenues/1 LT	LT AA  Affirmed	AA 

Additional information is available on [www.fitchratings.com](http://www.fitchratings.com)

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## Rating Action: Moody's affirms Miami University's (OH) Aa3; outlook stable

07 May 2019

New York, May 07, 2019 -- Moody's Investors Service has affirmed Miami University's (OH) Aa3, affecting \$603 million of debt. The fixed-rate bonds have a final maturity in 2041. The outlook is stable.

### RATINGS RATIONALE

The Aa3 reflects Miami University's favorable profile as a large, academically strong public university with stable student demand. At the rating, absolute wealth is substantial with total cash and investments of the university and affiliated foundation of \$1.4 billion, which provides strong coverage of debt and operating expenses. Along with its sizable wealth, Miami has ample liquidity providing 285 monthly days cash on hand for fiscal year 2018, which is well above similarly rated peers. Prospects for continuing to accrue financial reserves and liquidity at levels comparable to peers are aided by the university's consistently excellent financial operations, with fiscal 2018 representing the sixth consecutive year in which operating cash flow margins exceeded 20%.

The rating is tempered by an elevated 0.9x debt to operating revenue and presence of a large pension obligation through participation in two state administered, multiple employer defined benefit pension plans. In addition, about 60% of Miami's students are from Ohio, a state with a stagnant number of high school graduates. Furthermore, in fall 2018, the university implemented a four-year freeze on each new cohort's tuition, fees, and room/board. This is expected to result in moderation of growth in net student revenue, which accounts for about three-quarters of total operating revenue. Favorably, Miami demonstrates strong financial management practices and is undertaking actions to help sustain its robust operating performance.

### RATING OUTLOOK

The stable outlook reflects our expectation of continued favorable student demand, excellent operations, and ample balance sheet reserves and liquidity.

### FACTORS THAT COULD LEAD TO AN UPGRADE

- Substantial increase in financial reserves greater than peers, strengthening coverage of debt
- Meaningful improvement of revenue diversity, particularly fundraising

### FACTORS THAT COULD LEAD TO A DOWNGRADE

- Materially weakening in operating performance on a sustained basis
- Deterioration in student demand resulting in stagnant to declining net tuition revenues

### LEGAL SECURITY

All bonds are on parity and secured by a pledge of General Receipts, including virtually all legally available revenues with the exception of state appropriations and restricted gifts. In fiscal 2018, pledged revenues equated to \$598 million. The bonds are further secured by the university's covenant in the General Bond Resolution to fix, make, adjust and collect fees, rates, rentals and charges and other items of General Receipts to produce General Receipts at least sufficient to pay debt service. There is no debt service reserve fund.

### PROFILE

Established in 1809, Miami University is a large, public university recognized for its exceptionally strong commitment to undergraduate teaching. Miami is an academically rigorous university with uncommonly high graduation and retention (92%) rates for a public university. Approximately 93% of its full-time equivalent (FTE) students are undergraduates, though it offers select graduate programs. Its main campus is in the City of Oxford, Ohio, approximately 35 miles north of Cincinnati and maintains two regional campuses and several centers.

### METHODOLOGY

The principal methodology used in these ratings was Higher Education published in December 2017. Please see the Rating Methodologies page on [www.moodys.com](http://www.moodys.com) for a copy of this methodology.

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## REGULATORY DISCLOSURES

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the credit rating action on the support provider and in relation to each particular credit rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on [www.moody's.com](http://www.moody's.com).

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