

**NEW ISSUE – BOOK-ENTRY ONLY**

*In the opinion of Squire Patton Boggs (US) LLP, Bond Counsel, under existing law (i) assuming continuing compliance with certain covenants and the accuracy of certain representations, interest on the Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax, and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Interest on the Bonds may be subject to certain federal taxes imposed only on certain corporations. For a more complete discussion of the tax aspects, see “TAX MATTERS” herein.*

**\$68,160,000**

**STATE OF OHIO**

**HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS**

**(CASE WESTERN RESERVE UNIVERSITY PROJECT)**

**SERIES 2019A**

**Dated:** Date of Issuance

**Due:** As shown on Inside Cover

The \$68,160,000 State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2019A (the “Series 2019A Bonds” or the “Bonds”), when, as and if issued, will be special obligations of the State of Ohio issued by the Ohio Higher Educational Facility Commission (the “Commission”) pursuant to a Trust Agreement, dated as of March 1, 2019 (the “Trust Agreement”), between the Commission and The Bank of New York Mellon Trust Company, N.A. (the “Trustee”). The Bonds are being issued to (i) refund certain outstanding State of Ohio Higher Educational Facility revenue bonds and (ii) pay costs of issuance of the Bonds. The Bonds will be payable from the revenue and other money pledged by the Trust Agreement, which include the payments required to be made by Case Western Reserve University (the “University”) under a certain Lease between the Commission and the University.



The Bonds will initially be issued in a FRN Mode. **This Offering Circular is intended to provide information regarding the Bonds only when the Bonds bear interest in the initial FRN Mode.** The Bonds will be subject to mandatory tender on April 1, 2022, and during the initial FRN Mode interest will be payable on the first Business Day of each month, commencing May 1, 2019. The Bonds are issuable as registered bonds without coupons and initially will be registered only in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”), which will act as securities depository for the Bonds. The Bonds will be issuable only under the book-entry system maintained by DTC through brokers and dealers who are, or act through, Direct Participants or Indirect Participants, and purchasers of the Bonds will not receive physical delivery of bond certificates. Principal of and premium, if any, on the Bonds will be payable to the registered owner upon presentation and surrender at the designated corporate trust office of the Trustee in Cleveland, Ohio, and interest will be transmitted by the Trustee on each interest payment date to the registered owner as of the applicable record date preceding that interest payment date, all as more fully described herein.

The Bonds will mature and be subject to mandatory redemption, extraordinary optional redemption, optional redemption and purchase in lieu of redemption prior to maturity as described herein.

**The Bonds do not represent or constitute a debt or pledge of the faith and credit of the Commission or the State of Ohio (the “State”), will not be secured by an obligation or pledge of any money raised by taxation, and do not grant to the Holders any rights to have the State or any political subdivision thereof levy any taxes or appropriate any funds for the payment of Bond Service Charges on the Bonds. The Commission has no taxing power.**

The Bonds are offered when, as and if issued by the Commission and accepted by J.P. Morgan Securities LLC, acting on behalf of itself and as representative of the other underwriter named below (collectively, the “Underwriters”), subject to the opinion on certain legal matters relating to their issuance of Squire Patton Boggs (US) LLP, Bond Counsel. Certain legal matters will be passed upon for the University by Peter M. Poulos, Esq., its General Counsel and Deputy Secretary, and by Thompson Hine LLP, its counsel, and for the Underwriters by their counsel, Forbes, Fields & Associates, Co., L.P.A. Raymond James Associates, Inc. is financial advisor to the University. It is expected that the Bonds will be available for delivery through DTC on or about March 27, 2019.

**J.P. MORGAN**

**BARCLAYS**

*This cover page contains certain information for quick reference only. It is not a summary of this Offering Circular. Investors must read the entire Offering Circular to obtain information essential to the making of an informed investment decision. This Offering Circular has been prepared by Case Western Reserve University in connection with the original offering for the sale of the Bonds. The information contained in this Offering Circular speaks only as of its date.*

March 13, 2019

**\$68,160,000**  
**STATE OF OHIO**  
**HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS**  
**(CASE WESTERN RESERVE UNIVERSITY PROJECT)**  
**SERIES 2019A**

<u>Maturity</u>	<u>FRN Rate Mandatory Purchase Date</u>	<u>FRN Rate Adjustment Date</u>	<u>Earliest Optional Redemption Date</u>	<u>FRN Index</u>	<u>FRN Index Percentage</u>	<u>FRN Spread</u>	<u>Price</u>	<u>CUSIP Number</u> †
10/1/2044	4/1/2022	First Business Day of each month	10/1/2021	One-Month LIBOR	70%	0.42%	100%	67756DTJ5

*The FRN Index, FRN Spread, FRN Index Percentage, FRN Rate Mandatory Purchase Date and FRN Rate Adjustment Date for the initial FRN Period for the Bonds were determined by the Underwriters, in consultation with the University, and are set forth on this inside front cover page of this Offering Circular. The monthly FRN Rate determined on the FRN Rate Determination Date will be in effect beginning on the immediately subsequent FRN Rate Adjustment Date. The Bonds are FRN Rate Hard Put Bonds for the initial FRN Period.*

†CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by S&P Capital IQ on behalf of The American Bankers Association. This data is not intended to create a database and does not serve in any way as a substitute for the CUSIP services provided by CUSIP Global Services. CUSIP numbers are included herein solely for the convenience of the purchasers of the Bonds. None of the Commission, the University nor the Underwriters shall be responsible for the selection or correctness of the CUSIP numbers set forth herein.

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## REGARDING USE OF THIS OFFERING CIRCULAR

**In connection with this offering, the Underwriters may overallocate or effect transactions that stabilize or maintain the market price of the Bonds at a level above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time.**

The Bonds are exempt from registration under the Securities Act of 1933 and from registration under the securities laws of the State of Ohio. No dealer, broker, salesman or other person has been authorized by the Commission, the University or the Underwriter to give any information or to make any representations with respect to the Bonds, other than those contained in this Offering Circular, and, if given or made, such other information or representations must not be relied upon as having been authorized by the Commission, the University or the Underwriter. This Offering Circular does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Bonds by any person in any state, possession or territory, in which it is unlawful for such person to make such offer, solicitation or sale. The information contained herein has been obtained from the Commission (with respect to the Commission), the University, DTC and other sources that are believed to be reliable, but is not guaranteed as to accuracy or completeness, and is not to be construed as a representation of the Underwriters. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Offering Circular nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the parties referred to above or any related parties since the date hereof. This Offering Circular is not to be construed as an agreement or contract with the Commission. Capitalized terms used in this Offering Circular and not otherwise defined have the meanings set forth in APPENDIX C – “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT.” All quotations from summaries and explanations of provisions of law and documents herein do not purport to be complete, and reference is made to such laws and documents for full and complete statements of their provisions. The Trust Agreement provides that the Bonds may bear interest from time to time, subject to the terms of the Trust Agreement at any of the following interest rates: Daily Rate; Two Day Rate; Weekly Rate; Short Term Rate; Long Term Rate; FRN Rate; VRO Rate; Window Rate; Flexible Rate; Direct Purchase Rate; and Fixed Rate. Other than the FRN Rate, the other interest rates provided for in the Trust Agreement and the provisions of the Trust Agreement relating to those interest rates are not described in this Offering Circular. **This Offering Circular is intended to provide information regarding the Bonds only when the Bonds bear interest in the initial FRN Mode.**

The Underwriters have provided the following sentence for inclusion in this Offering Circular. The Underwriters have reviewed the information in this Offering Circular in accordance with, and as part of, their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

**PORTIONS OF THIS OFFERING CIRCULAR CONTAIN “FORWARD-LOOKING STATEMENTS” AS DEFINED IN THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995. AS A GENERAL MATTER, FORWARD-LOOKING STATEMENTS ARE THOSE FOCUSED UPON FUTURE PLANS, OBJECTIVES OR PERFORMANCE AS OPPOSED TO HISTORICAL MATTERS AND INCLUDE STATEMENTS OF ANTICIPATED EVENTS OR TRENDS AND EXPECTATIONS AND BELIEFS RELATING TO MATTERS NOT HISTORICAL IN NATURE. SUCH FORWARD-LOOKING STATEMENTS ARE SUBJECT TO UNCERTAINTIES AND FACTORS, INCLUDING THOSE RELATING TO THE UNIVERSITY’S OPERATIONS AND ITS ABILITY TO REPAY ITS DEBT, ALL OF WHICH ARE DIFFICULT TO PREDICT AND MANY OF WHICH ARE BEYOND THE UNIVERSITY’S CONTROL. SUCH UNCERTAINTIES AND FACTORS COULD CAUSE THE ACTUAL RESULTS TO DIFFER MATERIALLY FROM THOSE MATTERS EXPRESSED IN OR IMPLIED BY SUCH FORWARD-LOOKING STATEMENTS. THOSE UNCERTAINTIES AND FACTORS INCLUDE, IN ADDITION TO THOSE MENTIONED ELSEWHERE HEREIN, INTEREST RATES, THE UNIVERSITY’S ENROLLMENT AND TUITION, AND GIFTS, GRANTS AND BEQUESTS MADE TO THE UNIVERSITY.**

This Offering Circular has been prepared in connection with the original offering for sale of the Bonds.

**\$68,160,000**  
**STATE OF OHIO**  
**HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS**  
**(CASE WESTERN RESERVE UNIVERSITY PROJECT)**  
**SERIES 2019A**

**INTRODUCTION**

This Offering Circular, including the cover page, the table of contents and the Appendices, is provided to furnish information in connection with the issuance by the Ohio Higher Educational Facility Commission (the “Commission”) of \$68,160,000 State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2019A (the “Series 2019A Bonds” or the “Bonds”). The Bonds are being issued pursuant to a Trust Agreement, dated as of March 1, 2019 (the “Trust Agreement”), between the Commission and The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”), to finance and refinance certain facilities of Case Western Reserve University (the “University”). The Bonds will be issued for the purpose of (i) refunding the currently outstanding amount of State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2014A (the “2014A Bonds” or the “Refunded Bonds”) and (ii) paying the costs of issuance of the Bonds and for such other uses as are permitted under the Lease (as defined below) and Chapter 3377 and Sections 9.98 through 9.983 of the Ohio Revised Code (collectively, the “Act”).

The Bonds will be dated their date of issuance and will mature as set forth on the inside cover page. The Bonds will be subject to redemption and purchase in lieu of redemption prior to maturity as described herein under “THE BONDS – Redemption.”

The proceeds of the sale of the Bonds will be used for the purpose of paying costs of and relating to:

(i) refunding the 2014A Bonds, which 2014A Bonds were issued to pay costs relating to the refunding of the Commission’s State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) 2008 Series B (the “2008 Bonds”), which 2008 Bonds were issued to pay costs relating to the refunding of the Commission’s State of Ohio Higher Educational Facility Revenue Bonds (Case Western Reserve University 2004 Project) Series B (the “2004 Bonds”), which 2004 Bonds were issued to pay costs relating to the construction of student residential facilities (the North Residential Village), the construction and development of athletic fields (including seating and related facilities), construction of parking facilities, the renovation of and construction of an addition to the former Mt. Sinai Complex and the West Quad (medical, research, classroom, administrative and related facilities), the construction of a new building for the Cleveland Center for Structural Biology, the renovation and expansion of the School of Medicine’s Animal Resource Center, the construction of the Case Medical Sciences Learning Center, the acquisition and construction of a new research building, including the acquisition and construction of the Wolstein Research Building for biomedical and other research, and renovation and replacement of systems for campus facilities including windows, HVAC systems, roofs, elevators, Americans with Disabilities Act facilities and other improvements (including relocating existing buildings), and the construction, furnishing and equipping of an approximately 26,500 square foot academic building for the Mandel Center for Non-Profit organizations, all together with related equipment, furnishings, appurtenances and site improvements and the acquisition of real property in connection with these facilities and for other University purposes (collectively, the “Project”);

(ii) costs incidental thereto and costs of financing and refinancing thereof, including certain issuance costs related to the Bonds; and

(iii) for such other uses as are permitted by the Act and the Lease dated as of March 1, 2019 (the “Lease”) between the Commission and the University.

All of the educational facilities constituting the Project are located on the University campus in Cleveland, Ohio. The Project will be leased by the University to the Commission under a Base Lease, dated as of March 1, 2019 (the “Base Lease”). The Project will be leased by the Commission to the University pursuant to the Lease. The

University is required by the Lease to make rental payments (the “Rental Payments”) equal to the principal of and premium, if any, and interest on the Bonds, whether on an Interest Payment Date, at maturity or upon acceleration or mandatory redemption (the “Bond Service Charges”). In the Lease, the University has agreed to purchase and the Commission has agreed to sell the Commission’s interest in the Project after all of the Bond Service Charges have been paid.

**The Bonds are special obligations of the State of Ohio (the “State”), and the Bond Service Charges on the Bonds will be payable solely from the revenues to be derived by the Commission from its lease of the Project, including the Rental Payments, all as provided in the Lease and the Trust Agreement and as hereinafter described under “SECURITY AND SOURCES OF PAYMENT.”**

The Bonds are secured by the Trust Agreement, which grants to the Trustee a security interest in the Revenues as described herein under “SECURITY AND SOURCES OF PAYMENT.” The Bonds are further secured by the Guaranty Agreement, dated as of March 1, 2019, between the University and the Trustee relating to the Bonds (the “Guaranty”) by which the University unconditionally guarantees the payment of the Bond Service Charges on the Bonds as described herein under “THE GUARANTY.”

Brief descriptions of the Commission, the University, the Project, the Bonds, the Lease, the Trust Agreement, the Guaranty and the Tax Agreement are included in this Offering Circular. The descriptions herein of the Bonds, the Lease, the Trust Agreement, the Guaranty and the Tax Agreement do not purport to be complete statements of the provisions of such documents and are qualified in their entirety by reference to each such document. Copies of such documents are available for inspection during the initial offering period at the principal office of J.P. Morgan Securities LLC, 383 Madison Avenue, Third Floor, New York, New York 10179, Attention: Executive Director, Public Finance, and thereafter at the Cleveland, Ohio corporate trust office of the Trustee, and reference is made to such documents for full and complete statements of all matters of fact relating to the Bonds, the security for the payment of the Bonds, and the rights and remedies of Bondholders. The description of the University consists of certain information and data provided by it (as set forth in APPENDIX A and APPENDIX B) and certain of its audited consolidated financial statements (as set forth in APPENDIX B). All descriptions are further qualified in their entirety by reference to laws and principles of equity relating to or affecting generally the enforcement of creditors’ rights. Capitalized terms used herein have the same meanings as given to them in the Lease unless otherwise defined herein or where the context would clearly indicate otherwise. See APPENDIX C – “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT.” **This Offering Circular is intended to provide information regarding the Bonds only when the Bonds bear interest in the initial FRN Mode.**

## THE COMMISSION

The Commission is a body both corporate and politic, constituting an agency and instrumentality of the State. It was created in 1968 by, and exists under, Chapter 3377 of the Ohio Revised Code. The Commission was established for the purpose of enhancing educational opportunities for the people of the State and enhancing the availability, efficiency and economy of educational facilities, for the purpose of “alleviating the pressing demands upon tax supported colleges and universities” and for facilitating or achieving lower costs for the financing or refinancing of such educational facilities.

The Commission is authorized, among other things, to issue revenue bonds of the State to provide funds for acquiring, constructing, equipping and furnishing educational facilities that are leased to private colleges or universities and to refund certain previously issued bonds. Each issue of bonds by the Commission is secured by a pledge and assignment of the payments received by the Commission pursuant to the lease of the applicable educational facilities and may be secured by a mortgage on such facilities. Under the lease, the college or university has the option to purchase the facilities prior to the termination of the lease and the college or university agrees to purchase the facilities at the lease termination, in each case after provision has been made for the retirement or redemption of all the bonds issued for such facilities. The Commission does not make any grants and has access to capital improvement funds only through the issuance of revenue bonds.

The Commission may lease projects to private, nonprofit institutions of higher education that hold effective certificates of authorization issued by the Ohio Chancellor of Higher Education, but not to institutions whose principal

educational activity is preparing students for religious or ecclesiastical fields. The Commission may acquire and lease any facility that is academic, administrative or auxiliary thereto, other than facilities used exclusively as places for devotional activities.

The Commission consists of nine members, including the Ohio Chancellor of Higher Education or a designee of the Chancellor, an *ex officio* member. The other eight members are appointed to overlapping eight-year terms by the Governor with the advice and consent of the Ohio Senate. The Chair is designated by the Governor, and the other officers, including the Vice Chair and the Secretary, are elected by the members from their own number.

The members of the Commission receive no compensation for their services but are entitled to reimbursement for their actual and necessary expenses. The Commission's office is located in Columbus, Ohio. The Commission does not have any employees. The Ohio Department of Higher Education provides staffing assistance to the Commission when necessary.

### **CASE WESTERN RESERVE UNIVERSITY**

The University, an Ohio nonprofit corporation, is the largest independent research university in Ohio, providing undergraduate, graduate and professional programs in eight schools: arts and sciences, engineering, medicine, nursing, dental medicine, law, management and social work. The University's main campus is located in the University Circle area in Cleveland, Ohio, and consists of academic, administrative, residential, athletic and recreational facilities.

See APPENDIX A – "CASE WESTERN RESERVE UNIVERSITY" for a more complete description of the University.

### **PLAN OF REFUNDING AND USE OF PROCEEDS**

The Bonds are being issued to (i) currently refund the Refunded Bonds and (ii) pay costs of issuance of the Bonds.

#### **Refunding of the Refunded Bonds**

A portion of the proceeds of the sale of the Bonds will be used, together with other available funds applied for such purpose, for the purpose of currently refunding the Refunded Bonds on April 1, 2019, and will be deposited in the Escrow Fund established for that purpose. The Escrow Fund and the money therein will be used solely and exclusively for, and are irrevocably committed to, the payment of the outstanding principal of and interest on the Refunded Bonds on their mandatory tender date, as if the University had consummated an optional redemption of the Refunded Bonds. Upon payment of the tender price, the Refunded Bonds shall be canceled and discharged. Any amounts remaining in the Escrow Fund after the payment of the tender price of the Refunded Bonds will be deposited into the Bond Fund applied to the payment of Bond Service Charges on the Bonds. Funds in the Escrow Fund shall be held uninvested or invested in "Eligible Investments" under the Trust Agreement related to the Refunded Bonds provided funds are available to make the aforementioned payment on April 1, 2019.

Sources and Uses of Funds. The proceeds of the Bonds are expected to be applied as follows:

Sources of Funds:

Par Amount	\$68,160,000
Total Sources	\$68,160,000

Uses of Funds:

Deposit to Escrow Fund	\$67,622,516
Cost of Issuance <sup>1</sup>	\$537,484
Total Uses	\$68,160,000

<sup>1</sup> Includes underwriters' discount, accountant fees, legal fees, rating agency fees and other costs of issuance.

## THE BONDS

Reference is made to the Trust Agreement and to the summary of certain provisions of the Trust Agreement included in APPENDIX C – “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT” for a more complete description of the Bonds. Terms not otherwise defined in the following summary have the meanings assigned thereto in APPENDIX C hereto. The discussion herein is qualified by such reference.

**This information under the heading “THE BONDS” summarizes certain terms of the Bonds only if and so long as the Bonds bear interest in the initial FRN Mode. Should the Bonds or portion thereof be subject to a Conversion, such Bonds or portion thereof will be subject to mandatory tender and purchase and, at that time, it is expected that a reoffering circular or a supplement to this Offering Circular or other disclosure document will be prepared for such Bonds.**

### General

The Bonds will mature on the dates and bear interest at the rates per annum set forth on the inside front cover page of this Offering Circular. The Bonds will be dated the date of the original issuance and delivery and will be issued as fully registered bonds in the denomination of \$5,000 or integral multiples thereof.

The Trust Agreement provides that the Bonds may be issued and bear interest from time to time at any of the following interest rates: Daily Rate; Two Day Rate; Weekly Rate; Short Term Rate; Long Term Rate; FRN Rate; VRO Rate; Window Rate; Flexible Rate; Direct Purchase Rate; and Fixed Rate (each as defined in the Trust Agreement). The Bonds will initially bear interest at a FRN Rate.

Interest on the Bonds will be payable on the first Business Day of each month, commencing May 1, 2019 (each, an “Interest Payment Date”). Interest on the Bonds will be calculated on the basis of a 365 or 366 day year, as appropriate, and the actual number of days elapsed. The Bonds initially will be issued in a FRN Interest Rate Period. Thereafter, the Bonds will bear interest at FRN Rates until a Conversion at the University’s election of all or a portion of the Bonds to a new Interest Rate Mode, as provided in the Trust Agreement. The FRN Rate will not exceed the Maximum Interest Rate (as defined in APPENDIX C).

***The Bonds are FRN Rate Hard Put Bonds for the initial FRN Period.***

Payment of the interest on any Bond shall be made to the person appearing on the Register as the Holder thereof as of the close of business of the Trustee on the Record Date for such interest payment.

### Determination of FRN Rates

The FRN Index, FRN Spread, FRN Index Percentage, FRN Rate Mandatory Purchase Date and FRN Rate Adjustment Date for the initial FRN Period for the Bonds were determined by the Underwriters, in consultation with the University, and are set forth on the inside front cover page of this Offering Circular. The initial FRN Interest Rate



Period for the Bonds shall commence on the date of issuance and end on the date immediately preceding the next FRN Rate Adjustment Date.

Each FRN Rate shall be determined by The Bank of New York Mellon Trust Company, N.A., as Calculation Agent (based on the FRN Index, FRN Index Percentage and FRN Spread set forth on the inside cover hereof) by 5:00 p.m., New York City time, on the FRN Rate Determination Date to which it relates. Notice of each FRN Rate shall be given by the Calculation Agent to the Trustee, the University, the Credit Facility Provider, if any, and the Liquidity Facility Provider, if any, with respect to the Bonds to which such interest FRN Rate is applicable, on a monthly basis or upon request. The Trustee shall inform the Holders of the related Bonds of the FRN Rate for such Bonds upon request.

At least one Business Day prior to the FRN Rate Conversion Date for a new FRN Period for the Bonds, the Remarketing Agent, in consultation with the University, shall determine the FRN Index, the FRN Spread, the FRN Index Percentage, the FRN Rate Mandatory Purchase Date, the FRN Rate Adjustment Date for such FRN Period and the dates during which such Bonds may be called for optional redemption if different than as described below under “Redemption – Optional Redemption” and shall give Electronic Notice of such to the Trustee and the University. The FRN Spread shall be the spread which, when added to or subtracted from the product of the FRN Index multiplied by the FRN Index Percentage, will result in the minimum FRN Spread which, in the judgment of the Remarketing Agent under prevailing market conditions, will result in the remarketing of such Bonds in the new FRN Period at a purchase price equal to their principal amount. The University shall, prior to any FRN Rate Conversion Date, elect by Electronic Notice to the Trustee, the Remarketing Agent and the Authority that such Bonds following Conversion be either FRN Rate Hard Put Bonds or FRN Rate Soft Put Bonds.

## **Redemption**

*General.* The Bonds are subject to mandatory, optional and extraordinary optional redemption and purchase in lieu of redemption, as described below, on the inside cover of this Offering Circular, and in the other portions of this Offering Circular referred to below.

*Optional Redemption.* The Bonds are subject to redemption prior to their Maturity Date, at the option of the University, on any date during the period beginning six months prior to the last day of such FRN Period and ending on the last day of such FRN Period, in whole or in part, in such amounts as are designated by the University, at a redemption price equal to the principal amount thereof, plus interest accrued thereon, if any, to the date fixed for redemption, without premium. **The earliest optional redemption date for the Bonds is October 1, 2021.**

*Extraordinary Optional Redemption.* The Bonds are subject to extraordinary optional redemption prior to maturity, upon notice to the Holders as described below under “Notice of Redemption,” on any date by and at the option of the Commission, at the direction of the University, at a redemption price of 100% of the principal amount redeemed, plus interest accrued to the redemption date: (i) in whole upon the occurrence of any of the events described in the Lease and the exercise by the University of its option to terminate the Lease (see APPENDIX C – “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT – THE LEASE – The University’s Options to Terminate Lease and Purchase the Project”) and (ii) in part, in the event of condemnation of the Project or any part thereof from the proceeds of any condemnation award, provided that no part of any such condemnation award may be applied for such redemption unless the University will furnish to the Commission and the Trustee a certificate stating that (1) the property forming a part of the Project that was taken by such condemnation is not essential to the character or significance of the Project as furthering the purposes of the Act, (2) the Project has been restored to a condition substantially equivalent to its condition prior to the taking by such condemnation proceedings or (3) improvements have been acquired that are suitable for the operation of the Project and are not inconsistent with the Act.

*Mandatory Sinking Fund Redemption.* The Bonds maturing on October 1, 2044 are subject to mandatory sinking fund redemption at a redemption price of 100% of the principal amount redeemed plus accrued interest to the redemption date on October 1 in each of the years listed below and in the principal amount shown opposite such year:

<u>Year</u>	<u>Principal Amount</u>
2031	\$ 1,125,000
2037	2,990,000
2038	5,310,000
2039	5,500,000
2040	3,945,000
2041	11,925,000
2042	12,185,000
2043	12,455,000

Unless otherwise redeemed prior to maturity, the remaining principal amount of the Bonds (\$12,725,000) will be payable on October 1, 2044.

*Selection of Bonds for Redemption.* Whenever provision is made for the redemption of less than all of the Bonds, the Trustee shall select the Bonds to be redeemed, from all Bonds subject to redemption or such given portion thereof not previously called for redemption, as directed in writing by the University or in the absence of direction by lot in any manner which the Trustee in its sole discretion shall deem appropriate and fair. So long as the Bonds are held in book entry Form through DTC, the beneficial interests of the Bonds to be selected for redemption in part shall be in accordance with DTC's procedures.

*Notice of Redemption.* The notice shall be given by the Trustee on behalf of the Commission by mailing a copy of the redemption notice at least 30 days but no more than 90 days prior to the date fixed for redemption, to the Holder of each Bond subject to redemption in whole or in part, electronically or by first class mail, in a sealed envelope, postage prepaid at the Holder's address shown on the Register on the 15th day preceding that mailing. Each notice of redemption of the Bonds will identify (i) the complete official name of the issue with series designation, (ii) the Bonds or portions thereof to be redeemed by designation, letters, any CUSIP numbers, numbers or other distinguishing marks, date of issue, interest rate, maturity date and principal amount, (iii) the redemption price to be paid, (iv) the date of mailing and the date fixed for redemption, (v) the place or places, by name and address, where the amounts due upon redemption are payable, (vi) the name and telephone number of the person to whom inquiries regarding the redemption may be directed and (v) any conditions to the redemption specified by the University. The notice shall also state that from and after the redemption date those Bonds or portions thereof called for redemption shall cease to bear interest. If at the time of mailing of notice of an optional redemption there shall not have been deposited with the Trustee moneys sufficient to redeem all Bonds called for redemption, if the University shall so direct such notice may state that it is conditional, that is, subject to the deposit of moneys sufficient for the redemption, with the Trustee not later than the redemption date or the satisfaction of any other specified conditions, and such notice shall be of no effect unless such moneys are so deposited and any other conditions specified by the University have been satisfied. The failure of a Holder to receive notice by mailing or any defect in that notice regarding Bond will not affect the validity of the proceedings for the redemption of the Bonds.

*Purchase of the Bonds in Lieu of Optional Redemption.* The Commission and, by their acceptance of the Bonds, the Bondholders, irrevocably grant to the University and any assignees of the University with respect to this right, the option to purchase, at any time and from time to time, any Bond that is redeemable pursuant to the provisions of the Trust Agreement summarized under the heading "THE BONDS – Redemption – Optional Redemption," herein, at a purchase price equal to the redemption price therefor. To exercise such option, the University shall give the Trustee a written request exercising such option within the time period applicable as though such written request were a written request of the Commission for redemption, and the Trustee shall thereupon give the Holders of the Bonds to be purchased notice of such purchase in the manner specified above as though such purchase were a redemption and the purchase of such Bonds shall be mandatory and enforceable against the holders. On the date fixed for purchase pursuant to any exercise of such option, the University or its assignee shall pay the purchase price of the Bonds then being purchased to the Trustee in immediately available funds and the Trustee shall pay the same to the sellers of such Bonds against delivery thereof. Following such purchase, the Trustee shall cause such Bonds to be registered in the name of the University or its assignees and shall deliver them to the University or its assignee. In the case of the purchase of less

than all of the Bonds, the particular Bonds to be purchased shall be selected in accordance with the redemption provisions of the Trust Agreement as though such purchase were a redemption. No purchase of the Bonds pursuant to the provisions of the Trust Agreement shall operate to extinguish the indebtedness of the Commission evidenced thereby (subject to the terms and limitations contained in the Trust Agreement). Notwithstanding the foregoing, no purchase shall be made pursuant to the provisions of the Trust Agreement unless the University shall have delivered to the Trustee and the Commission concurrently therewith an unqualified opinion of Bond Counsel to the effect that the purchase of the Bonds will not, in and of itself, adversely affect the validity or enforceability of the Bonds or result in the inclusion of interest on the Bonds in gross income for federal income tax purposes, to the extent not already so included with respect to such purchase.

### **Mandatory Tender and Conversions.**

*Mandatory Tenders.* The Bonds are subject to mandatory tender: (i) on the first day following the last day of the FRN Period (either the “FRN Rate Hard Put Mandatory Purchase Date” for FRN Rate Hard Put Bonds or the “FRN Rate Soft Put Mandatory Purchase Date” for FRN Rate Soft Put Bonds) and (ii) on a Conversion Date for such Bonds to a new Interest Rate Mode or for a new FRN Period. The Bonds are subject to mandatory tender for purchase on April 1, 2022.

*Conversions.* Conversion of FRN Bonds may only occur on a FRN Rate Mandatory Purchase Date or any date on which such FRN Bonds are subject to optional redemption. **Accordingly, the earliest available date for a Conversion of the Bonds issued in the initial FRN Mode is October 1, 2021.**

*Notice of Mandatory Tender on Mandatory Purchase Date.* The Trustee shall give Electronic Notice, confirmed by first class mail to the Holders of the Bonds not less than 10 days prior to the Mandatory Purchase Date. Such notice shall state, among other things: (i) the proposed Mandatory Purchase Date and the event which gives rise to the proposed Mandatory Purchase Date; (ii) that such Bonds shall be subject to mandatory tender for purchase on such Mandatory Purchase Date; (iii) that Holders may not elect to retain such Bonds subject to mandatory tender; (iv) that all such Bonds subject to mandatory tender shall be required to be delivered to the Principal Office of the Trustee at or before 10:00 a.m., New York City time, on the Mandatory Purchase Date; (v) that if the Holder of Bond subject to mandatory tender fails to deliver such Bond to the Trustee for purchase on the Mandatory Purchase Date, and if the Trustee is in receipt of funds sufficient to pay the Purchase Price thereof, such Bond (or portion thereof) shall nevertheless be deemed purchased on the Mandatory Purchase Date and ownership of such Bond (or portion thereof) shall be transferred to the purchaser thereof; (vi) that any Holder that fails to deliver any Bond for purchase shall have no further rights thereunder or under the Trust Agreement except the right to receive the Purchase Price thereof upon presentation and surrender of such Bond to the Trustee and that the Trustee will place a stop transfer against the Bonds subject to mandatory tender registered in the name of such Holder(s) on the Register; and (vii) that if moneys sufficient to effect such purchase shall have been provided through (A) the remarketing of such Bonds by a Remarketing Agent, (B) a Credit Facility, if any, or Liquidity Facility, if any, or (C) funds provided by the University (if applicable), all such Bonds shall be purchased. If the Bonds are subject to Conversion on the Mandatory Purchase Date, the provisions described below under “Mandatory Tender Upon Conversion from Interest Rate Period; Notice” also apply.

*Mandatory Tender Upon Conversion from Interest Rate Period; Notice.* At the option of the University, all or a portion of the Bonds may be converted to operate in one or more new Interest Rate Modes or in a new Interest Rate Period within the same Interest Rate Mode on the applicable Mandatory Purchase Date or on any date when such Bonds are subject to optional redemption. Not fewer than 15 days prior to the proposed Conversion Date, the Trustee shall give Electronic Notice, confirmed by first class mail, of the Conversion and mandatory tender of such Bonds to the related Holders of Bonds or portion thereof to be converted. Such notice shall include the information described above under “Notice of Mandatory Tender on Mandatory Purchase Date” for a mandatory purchase date notice and also state that such Conversion and such mandatory tender will not occur in the event any of the conditions to Conversion specified in the Trust Agreement are not satisfied, and that any such failure to effect the Conversion shall not constitute an Event of Default unless such proposed Conversion Date is also a Mandatory Purchase Date pursuant to the Trust Agreement for a reason other than Conversion.

Any Conversion and related mandatory tender will not occur unless the following shall occur: (i) the Authority, the Trustee, the applicable Remarketing Agent, the Credit Facility Provider, if any, and the Liquidity Facility Provider, if any, shall have received a Favorable Opinion of Bond Counsel with respect to such Conversion;

(ii) in the case of any Conversion with respect to which there shall be no Liquidity Facility or Credit Facility in effect to provide funds for the purchase of such Bonds on the Conversion Date, the remarketing proceeds and funds in the University Proceeds Account and available on the Conversion Date shall not be less than the amount required to purchase all of such Bonds to be converted at the applicable Purchase Price; (iii) prior to the Conversion Date (except for a Conversion to a Direct Purchase Period), the University shall have appointed a Remarketing Agent and there shall have been executed and delivered a Remarketing Agreement; (iv) if such Conversion is with respect to less than all of the Bonds, such Bonds to be converted shall be designated as separate Series or sub-Series as provided in the Trust Agreement; (v) a Remarketing Agent determines, when required, the interest rate for the new Interest Rate Mode; (vi) the notice to Holders of the Conversion is given when required; and (vii) sufficient funds are available on the Conversion Date by the time specified in the Trust Agreement to purchase all of the Bonds required to be purchased on such Conversion Date. If the proposed Conversion of Bonds or a portion of Bonds is to be on a Purchase Date that is not otherwise a Mandatory Purchase Date, notwithstanding the University's delivery of notice of the exercise of its option to effect a Conversion, such Conversion to the new Interest Rate Mode shall not take effect if the University, in accordance with the Trust Agreement, withdraws such notice of the exercise of its option to effect Conversion not later than the date on which the interest rate for the new Interest Rate Mode is to be determined.

Purchase Price; Payment of the Purchase Price; Consequences of Failure to Pay Purchase Price. The Purchase Price for the Bonds to be purchased is equal to the principal amount thereof plus accrued interest to, but not including, the applicable Purchase Date; provided, however, that if the Purchase Date for such Bond is an Interest Payment Date, the Purchase Price thereof shall be the principal amount thereof, and interest shall be paid to the Holder as described above. Funds for the payment of the Purchase Price of the Bonds shall be received by the Trustee from the following sources and used in the order of priority indicated: (A) proceeds of the sale of the Bonds remarketed pursuant to the related Remarketing Agreement and furnished to the Trustee by the Remarketing Agent; (B) if a Liquidity Facility is in place, money furnished by the Liquidity Facility Provider to the Trustee from a drawing on the Liquidity Facility, if any (provided that moneys from draws on the Liquidity Facility shall not be used to purchase Bank Bonds or Bonds held by the University); and (C) moneys required to be provided by the University to the Trustee pursuant to the Lease. **The obligation of the University to purchase the Bonds upon mandatory tender is not initially supported by a bank or other third party Liquidity Facility.**

If sufficient funds are not available for the purchase of all tendered Bonds on a Purchase Date, no purchase shall be consummated. **Failure of the University to provide sufficient funds for the purchase of all tendered Bonds on a Purchase Date shall constitute an Event of Default under the Trust Agreement and the Lease if such Purchase Date is a FRN Rate Hard Put Mandatory Purchase Date. If such Bonds are not purchased when required on a FRN Rate Hard Put Mandatory Purchase Date, then such Bonds shall bear interest at the Maximum Interest Rate from such Purchase Date until the actual purchase or payment of such Bonds.**

Delivery of Bonds; Undelivered Bonds. For payment of the Purchase Price on the Purchase Date, a Bond must be delivered at or prior to 10:00 a.m., New York City time, on the Purchase Date. Payment of the Purchase Price of any such Bonds shall be made in immediately available funds by 3:00 p.m., New York City time, on the Purchase Date if such Bond is delivered at or prior to 10:00 a.m. If any Holder of a Bond subject to mandatory tender for purchase shall fail to deliver that Bond to the Trustee at the place and on the Purchase Date and at the time specified, or shall fail to deliver that Bond properly endorsed, that Bond shall constitute an "Undelivered Bond." If funds in the amount of the purchase price of the Undelivered Bond are available for payment to the Holder thereof on the Purchase Date and at the time specified, from and after the Purchase Date and time of that required delivery (1) the Undelivered Bond shall be deemed to be purchased and shall no longer be deemed to be Outstanding under the Trust Agreement; (2) interest shall no longer accrue on the Undelivered Bond; and (3) funds in the amount of the Purchase Price of the Undelivered Bond shall be held by the Trustee for the benefit of the Holder thereof (provided that the Holder shall have no right to any investment earnings thereon), to be paid on delivery of the Undelivered Bond to the Trustee at its Principal Office.

Failed Conversion. If on a Conversion Date, any condition precedent to such proposed Conversion required under the Trust Agreement shall not be satisfied, such Conversion shall not occur, the Bonds, or portion thereof, to be converted shall continue to bear interest in the current Interest Rate Mode and at the current interest rate as in effect immediately prior to such proposed Conversion Date and such Bonds shall not be subject to mandatory tender for purchase on the proposed Conversion Date, unless such Conversion Date is also a Mandatory Purchase Date for the Bonds for a reason other than Conversion.

*No Rescission of Conversion Election.* In connection with any Conversion of the Interest Rate Period for the Bonds on a Mandatory Purchase Date, the University shall not have the right to rescind its election to make such Conversion.

### **The Remarketing Agent**

Concurrently with the issuance of the Bonds, the University will enter into a Remarketing Agreement (the “Remarketing Agreement”) with J.P. Morgan Securities LLC (the “Remarketing Agent”), as the remarketing agent for the Bonds. Under the Remarketing Agreement, the Remarketing Agent will agree, subject to certain conditions, to determine certain information with respect to the interest rate of the Bonds and use its best efforts to remarket such Bonds subject to mandatory tender for purchase as set forth herein. The Remarketing Agent can resign or be removed in accordance with the provisions of the Remarketing Agreement and the Trust Agreement.

The Remarketing Agent’s responsibilities include determining the interest rate from time to time and remarketing the Bonds that are mandatorily tendered by the Holders thereof (subject to the terms of the Remarketing Agreement), in accordance with the Trust Agreement. The Remarketing Agent is appointed and paid by the University for its services. As a result, the interests of the Remarketing Agent may differ from those of existing Holders and potential purchasers of Bonds.

### **Book-Entry System**

The Bonds are originally issued in book-entry form to The Depository Trust Company to be held in a book-entry system. See APPENDIX E – “BOOK-ENTRY SYSTEM.”

## **SECURITY AND SOURCES OF PAYMENT**

The Bond Service Charges and Purchase Price due on the Bonds are payable from the Revenues, including primarily the Rental Payments to be derived by the Commission under the Lease, amounts held in, or for the credit of, the Bond Fund and any other funds or accounts permitted by, established under or identified in the Trust Agreement or the Bond Legislation (collectively, the “Special Funds”), except the Escrow Fund, the Rebate Fund, the Bond Purchase Fund and the Issuance Expenses Fund, all other rentals, revenue, income, charges and money received or to be received by the Commission, or the Trustee for the account of the Commission, from the lease, sale or other disposition of the Project, and all income and profit from the investment of the Rental Payments and the Special Funds and such other money (the “Revenues”). The Bonds are further secured by (a) a security interest in the Commission’s right, title and interest in and to (i) the Revenues created in the Trust Agreement, (ii) the Lease (except for the Unassigned Rights), (iii) the Base Lease (except for the Unassigned Rights) and effective solely upon the occurrence of an Event of Default under the Lease and for so long as such an Event of Default continues to exist, and (iv) the proceeds of the Bonds to the extent included in the Revenues and the Guaranty; (b) the Trust Agreement; and (c) the Guaranty.

The facilities comprising the Project, which are only a portion of the campus of the University, have been specifically constructed, equipped and improved for the benefit of the University for use in its educational programs, and may be subject to practical restrictions that may limit the use thereof by others. Therefore, in the event of a default, the Trustee’s ability to lease the Project or portions thereof to third parties may be limited. The rentals, if any, might thus be adversely affected. There is no assurance that, should an event of default occur, the proceeds from the lease or other disposition of the Project would be sufficient to allow payment in full of the Bonds. Also, as noted in APPENDIX C – “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT – THE LEASE – Events of Default,” the Trustee, as assignee, has the right, upon default under the Lease, to sublease the Project.

The Bonds are secured by a pledge of and security interests in the equipment and other tangible personal property included in the Project. The security interests in such property are intended to be prior to any security interest in, lien on or pledge or assignment of such property except for Permitted Encumbrances.

The University has not granted a mortgage on the Project to secure the Bonds. The Bonds are not secured by a debt service reserve fund.

Under existing law, the remedies specified by the Trust Agreement, the Lease and the Guaranty may not be readily available or may be limited. A court may decide not to order the specific performance of the covenants contained in those documents. The various legal opinions to be delivered concurrently with the delivery of the Bonds will be qualified as to the enforceability of the various legal instruments by limitations imposed by State and federal laws, rulings and decisions affecting remedies and by bankruptcy, reorganization or other laws affecting the enforcement of creditors' rights or the application of general principles of equity.

The enforceability of the Lease and the Trust Agreement may be subject to subordination or prior claims in certain instances in addition to that arising from bankruptcy proceedings. For a discussion of examples of possible limitations on enforceability and of possible subordination or prior claims, see "ENFORCEABILITY OF REMEDIES" herein.

**The Bonds do not represent or constitute a debt or pledge of the faith and credit of the Commission or the State, will not be secured by an obligation or pledge of any money raised by taxation, and do not grant to the Holders any rights to have the State or any political subdivision thereof levy any taxes or appropriate any funds for the payment of Bond Service Charges or Purchase Price on the Bonds. The Commission has no taxing power.**

## INVESTMENT CONSIDERATIONS

### General

The ability of the University to realize revenues in amounts sufficient to meet its obligations relating to the Bonds is affected by and subject to conditions which may change in the future to an extent and with effects that cannot be determined at this time. No representation or assurance is given or can be made that revenues will be realized by the University in amounts sufficient to meet its obligations relating to the Bonds.

The University is subject to changes in the demand for higher education in general and for programs offered by the University in particular. The University is also subject to the same competitive pressures that affect other private colleges and universities. Changing demographics may mean a smaller pool of college-bound persons from which to draw entering classes. Various political and legal developments, including U.S. governmental policy regarding international relations and trade and immigration, may affect the demand among foreign students for education at U.S. universities and colleges, including the University. Greater competition for students together with rising tuition rates may mean that the University will need to increase its financial aid packages to attract and retain students. Attracting and keeping qualified faculty and administrators may mean higher expenditures for salaries and administrative costs.

The University competes for students generally with universities located throughout the United States, many of which receive significant support from state governments and therefore can afford to charge lower tuition than the University. Other educational institutions may in the future expand their programs in competition with the programs offered by the University. Increased competition from other educational institutions (including the availability of online courses and programs) or a decrease in the student population interested in pursuing higher education could have a material adverse economic impact on the University.

Other factors that may also adversely affect the operations of the University, to an extent that cannot be presently determined, include, among others: (1) changes in the legal or political environment that could impact international students attending the University; (2) a decrease in availability of student loan funds or other student financial aid; (3) reductions in funding support from donors or other external sources; (4) reductions in research funding, including research funding from the U.S. government; (5) risks relating to expansions or construction projects undertaken by the University, including risks relating to construction and operation; (6) increases in the costs of operating and maintaining the University's physical plant, including the operation and maintenance of both existing facilities and new or expanded facilities; (7) increases in salaries and other labor costs for the University's employees; (8) increases in the costs of health care benefits, retirement plan or other benefit packages offered by the University to its employees and retirees; (9) a significant decline in the value of or the return on the University's investments based on market or other external factors; (10) cost and availability, including unanticipated outages, of energy; (11) high interest rates, which could strain cash flow or prevent borrowing for needed capital expenditures; (12) an increase

in the cost of outstanding variable rate debt and/or associated liquidity facilities or credit enhancement; (13) increase in the cost of short-term borrowing facilities the University periodically uses to fund operations, or the inability of the University to obtain such facilities in sufficient amount to support operations; (14) risks associated with interest rate hedges, including basis risk, obligations to post collateral, counterparty risk, and termination risk; (15) increased costs and/or decreased availability of public liability insurance; (16) litigation or arbitration; (17) employee strikes and other labor actions that could result in a substantial reduction in revenues without corresponding decreases in costs; and (18) natural disasters, which might damage the University's facilities, interrupt service to its facilities or otherwise impair the operation of the facilities. Neither the Underwriters nor the Commission has made any independent investigation of the extent to which any such factors might have an adverse impact on the revenues of the University.

### **Risks Associated with LIBOR Securities**

In September 2012, the United Kingdom government published the results of its review of the London interbank offered rate ("LIBOR") (commonly referred to as the "Wheatley Review"). The Wheatley Review made a number of recommendations for changes with respect to LIBOR, including the introduction of statutory regulation of LIBOR, the transfer of responsibility for LIBOR from the British Bankers' Association to an independent administrator, changes to the method of compilation of lending rates, and new regulatory oversight and enforcement mechanisms for rate setting. Based on the Wheatley Review, final rules for the regulation and supervision of LIBOR by the Financial Conduct Authority (the "FCA") were published and came into effect on April 2, 2013 (the "FCA Rules").

In particular, the FCA Rules include requirements that (1) an independent LIBOR administrator monitor and survey LIBOR submissions to identify breaches of practice standards and/or potentially manipulative behavior and (2) firms submitting data to LIBOR establish and maintain a clear conflicts of interest policy and appropriate systems and controls. In addition, in response to the Wheatley Review recommendations, ICE Benchmark Administration Limited (the "ICE Administration") was appointed as the independent LIBOR administrator, effective February 1, 2014.

On July 27, 2017, the FCA announced that it will no longer persuade or compel banks to submit rates for the calculation of LIBOR rates after the year 2021 (the "FCA Announcement"). It is not possible to predict the effect of the FCA Rules, the FCA Announcement, any changes in the methods pursuant to which the LIBOR rates are determined and any other reforms to LIBOR that will be enacted in the U.K. and elsewhere, which may adversely affect the trading market for LIBOR based securities or result in phasing out of LIBOR as a reference rate for securities. In addition, any changes announced by the FCA, including the FCA Announcement, the ICE Administration or any other successor governance or oversight body, or future changes adopted by such body, in the method pursuant to which the LIBOR rates are determined may result in a sudden or prolonged increase or decrease in the LIBOR rates. If that were to occur and to the extent that the value of LIBOR securities is affected by reported LIBOR rates, the level of interest payments and the value of securities may be affected. Further, uncertainty as to the extent and manner in which the Wheatley Review recommendations will continue to be adopted and the timing of such changes may adversely affect the current trading market for LIBOR based securities such as the Bonds, and the value of the Bonds while in the initial FRN Mode.

### **THE GUARANTY**

Under the Guaranty, the University unconditionally guarantees to the Trustee for the benefit of the Holders of the Bonds (a) the full and prompt payment of the principal of and redemption premium, if any, on the Bonds when and as the same shall become due, whether at the stated maturity thereof, by acceleration, by call for redemption or otherwise, (b) the full and prompt payment of any interest on the Bonds when and as the same shall become due and (c) the full and prompt payment of all fees and expenses paid or incurred by the Trustee under the Trust Agreement and in enforcing the Guaranty. The Trustee will proceed against the University under the Guaranty if (i) requested to do so by the Holders of at least 25% in aggregate principal amount of the Bonds outstanding and (ii) the Trustee is provided with adequate indemnity.

No setoff, counterclaim, reduction or diminution of an obligation, or any defense of any kind which the University has or may have against the State, the Commission, the Trustee or any Holder will be available to the University against the Trustee under the Guaranty. The University has entered into a similar guaranty agreement in

connection with each series of bonds issued by the Commission for the University (See APPENDIX A – “CASE WESTERN RESERVE UNIVERSITY – Outstanding Indebtedness”).

## **ENFORCEABILITY OF REMEDIES**

Enforcement of the security interest in the Revenues and the remedies specified by the Trust Agreement, the Lease, the Guaranty, and the Assignment of Rights Under Lease dated as of March 1, 2019 from the Commission, as assignor, to the Trustee, as assignee, may be limited by the application of federal bankruptcy laws or other laws relating to creditors’ rights. A court may decide not to order the specific performance of the covenants contained in these documents.

Under the United States Bankruptcy Code, allowable claims in a bankruptcy case for future rents under a lease of real property are limited to rentals during the greater of (i) one year or (ii) 15% (but not exceeding three years) of the lease term remaining after the date of the filing of the bankruptcy proceedings or the removal of the lessee from possession. There is no case that decides whether the Bankruptcy Code’s limitation on claims for rentals may apply to a Trustee’s claim against a bankrupt guarantor under a guaranty of the obligation to make payments on tax-exempt bonds. However, in light of (i) the weight of the case law regarding claims in bankruptcy by Trustees under lease agreements and (ii) the economic realities of this tax-exempt bond financing, a claim by the Trustee under the Guaranty in a bankruptcy proceeding should not be subject to limitations imposed on amounts allowed for claims arising under the leases of real property. The degree to which such a claim is satisfied will be dependent upon amounts that are available for and ordered to be distributed in the bankruptcy proceeding.

The enforceability of the liens of the Lease and the Trust Agreement may be subject to subordination or prior claims in certain instances other than bankruptcy proceedings. Examples of possible limitations on enforceability and of possible subordination or prior claims include (i) statutory liens, (ii) rights arising in favor of the United States of America or any agency thereof, (iii) present or future prohibitions against assignment in any federal statutes or regulations, (iv) constructive trusts, equitable liens or other rights imposed or conferred by any state or federal court in the exercise of its equitable jurisdiction, (v) claims that might arise if appropriate financing or continuation statements are not filed in accordance with the Ohio Uniform Commercial Code from time to time in effect or as a result of that code’s not providing for perfection of a security interest therein, (vi) inability of the Trustee to perfect a security interest in those elements of the Revenues that can be perfected only by taking possession of such collateral, (vii) federal bankruptcy laws affecting, among other matters, payments made within 90 days prior to any institution of bankruptcy proceedings by the University or the Commission, (viii) state or federal fraudulent conveyance laws, and (ix) the rights of holders of prior perfected security interests or of perfected purchase money security interests in equipment or other goods owned by the University and in the proceeds of the sale of such property and the rights of other parties secured by liens permitted under the Bond Documents.

The various legal opinions to be delivered concurrently with the delivery of the Bonds will be qualified as to the enforceability of the various legal instruments by limitations imposed by state and federal laws, rulings and decisions affecting remedies and by bankruptcy, reorganization or other laws affecting the enforcement of creditors’ rights.

## **LITIGATION**

To the knowledge of the appropriate officials of the Commission and the University, there is no litigation or administrative action or proceeding pending or threatened restraining or enjoining, or seeking to restrain or enjoin, the issuance and delivery of the Bonds, the Trust Agreement, the Lease, the Base Lease, the Assignment or the Guaranty or contesting or questioning the validity of the Bonds or the proceedings and authority under which the Bonds have been authorized and are to be issued or delivered, or the pledge or application of any money or security provided for the payment of the Bonds under the Trust Agreement, the Lease or the Guaranty. The Commission will deliver a no-litigation certificate to such effect with respect to the Bonds to the Underwriter at the time of the original delivery of the Bonds.

The University is a party to various legal proceedings seeking damages or injunctive relief which are generally incidental to its operations, and unrelated to the Bonds, the security for the Bonds, or the Project. The



University administration does not believe that the outcome of any pending litigation will materially adversely affect the consolidated financial position, operations or cash flows of the University.

### **ELIGIBILITY UNDER OHIO LAW FOR INVESTMENT AND AS SECURITY FOR THE DEPOSIT OF PUBLIC FUNDS**

Under the authority of Section 3377.11 of the Ohio Revised Code and to the extent investments of the following are subject to Ohio law, the Bonds are lawful investments for banks, societies for savings and loan associations, deposit guaranty corporations, trust companies, trustees, fiduciaries, insurance companies, including domestic for life and domestic not for life, trustees or other officers having charge of sinking and bond retirement or other funds of political subdivisions and taxing districts of the State, the commissioners of the sinking fund of the State, the administrator of workers' compensation, the State retirement systems (teachers, public employees, public school employees) and the police and firemen's disability and pension fund and also are acceptable as security for the deposit of public moneys.

### **TAX MATTERS**

In the opinion of Squire Patton Boggs (US) LLP, Bond Counsel, under existing law: (i) interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), and is not an item of tax preference for purposes of the federal alternative minimum tax; and (ii) interest on, and any profit made on the sale, exchange or other disposition of, the Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. Bond Counsel expresses no opinion as to any other tax consequences regarding the Bonds.

The opinion on federal tax matters will be based on and will assume the accuracy of certain representations and certifications, and continuing compliance with certain covenants, of the Commission and the University contained in the transcript of proceedings and that are intended to evidence and assure the foregoing, including that the Bonds are and will remain obligations the interest on which is excluded from gross income for federal income tax purposes. In addition, Bond Counsel has relied on, among other things, the opinion of Peter M. Poulos, Esq., the University's General Counsel, regarding, among other matters, the current status of the University as an organization described in Section 501(c)(3) of the Code and the use of the facilities financed with the Bonds in activities that are not considered "unrelated trade or business" activities of the University, as defined in Section 513(a) of the Code, which opinion is subject to a number of qualifications and limitations. Failure of the University to maintain its status as an organization described in Section 501(c)(3) of the Code, or to operate the facilities financed by the Bonds in a manner that is substantially related to the University's exempt purpose under Section 513(a) of the Code, may cause interest on the Bonds to be included in gross income retroactively to the date of the issuance of the Bonds. Bond Counsel will not independently verify the accuracy of the Commission's and the University's certifications and representations or the continuing compliance with the Commission's and the University's covenants and will not independently verify the accuracy of the opinion of the University's General Counsel.

The opinion of Bond Counsel is based on current legal authority and covers certain matters not directly addressed by such authority. It represents Bond Counsel's legal judgment as to exclusion of interest on the Bonds from gross income for federal income tax purposes but is not a guaranty of that conclusion. The opinion is not binding on the Internal Revenue Service ("IRS") or any court. Bond Counsel expresses no opinion about (i) the effect of future changes in the Code and the applicable regulations under the Code or (ii) the interpretation and the enforcement of the Code or those regulations by the IRS.

The Code prescribes a number of qualifications and conditions for the interest on state and local government obligations to be and to remain excluded from gross income for federal income tax purposes, some of which require future or continued compliance after issuance of the obligations. Noncompliance with these requirements by the Commission or the University may cause loss of such status and result in the interest on the Bonds being included in gross income for federal income tax purposes retroactively to the date of issuance of the Bonds. The University and, subject to certain limitations, the Commission have each covenanted to take the actions required of it for the interest on the Bonds to be and to remain excluded from gross income for federal income tax purposes, and not to take any actions that would adversely affect that exclusion. After the date of issuance of the Bonds, Bond Counsel will not

undertake to determine (or to so inform any person) whether any actions taken or not taken, or any events occurring or not occurring, or any other matters coming to Bond Counsel's attention, may adversely affect the exclusion from gross income for federal income tax purposes of interest on the Bonds or the market value of the Bonds.

In addition, interest on the Bonds may be subject to a federal branch profits tax imposed on certain foreign corporations doing business in the United States and to a federal tax imposed on excess net passive income of certain S corporations. Under the Code, the exclusion of interest from gross income for federal income tax purposes may have certain adverse federal income tax consequences on items of income, deduction or credit for certain taxpayers, including financial institutions, certain insurance companies, recipients of Social Security and Railroad Retirement benefits, those that are deemed to incur or continue indebtedness to acquire or carry tax-exempt obligations, and individuals otherwise eligible for the earned income tax credit. The applicability and extent of these and other tax consequences will depend upon the particular tax status or other tax items of the owner of the Bonds. Bond Counsel will express no opinion regarding those consequences.

Payments of interest on tax-exempt obligations, including the Bonds, are generally subject to IRS Form 1099-INT information reporting requirements. If a Bond owner is subject to backup withholding under those requirements, then payments of interest will also be subject to backup withholding. Those requirements do not affect the exclusion of such interest from gross income for federal income tax purposes.

Bond Counsel's engagement with respect to the Bonds ends with the issuance of the Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the Commission, the University or the owners of the Bonds regarding the tax status of interest thereon in the event of an audit examination by the IRS. The IRS has a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the Bonds, under current IRS procedures, the IRS will treat the Commission as the taxpayer, and the beneficial owners of the Bonds will have only limited rights, if any, to obtain and participate in judicial review of such audit. Any action of the IRS, including but not limited to selection of the Bonds for audit, or the course or result of such audit, or an audit of other obligations presenting similar tax issues, may affect the market value of the Bonds.

Prospective purchasers of the Bonds upon their original issuance at prices other than the respective prices indicated on the inside cover of this Offering Circular, and prospective purchasers of the Bonds at other than their original issuance, should consult their own tax advisers regarding other tax considerations such as the consequences of market discount, as to all of which Bond Counsel expresses no opinion.

### **Risk of Future Legislative Changes and/or Court Decisions**

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the State legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the Bonds will not have an adverse effect on the tax status of interest or other income on the Bonds or the market value or marketability of the Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

For example, federal tax legislation that was enacted on December 22, 2017 reduced corporate tax rates, modified individual tax rates, eliminated many deductions, repealed the corporate alternative minimum tax and eliminated the tax-exempt advance refunding of tax-exempt bonds, among other things. Additionally, investors in the Bonds should be aware that future legislative actions might increase, reduce or otherwise change (including retroactively) the financial benefits and the treatment of all or a portion of the interest on the Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the Bonds may be affected and the ability of holders to sell their Bonds in the secondary market may be reduced.

Investors should consult their own financial and tax advisers to analyze the importance of these risks.

## **APPROVAL OF LEGAL PROCEEDINGS**

Certain legal matters incident to the issuance of the Bonds and with regard to the tax-exempt status of the interest on the Bonds (see “TAX MATTERS”) are subject to the opinion of Squire Patton Boggs (US) LLP, Bond Counsel to the Commission. The signed legal opinion of Bond Counsel, substantially in the form attached hereto as APPENDIX D, dated and premised on law in effect on the date of issuance of the Bonds, will be delivered on the date of issuance of the Bonds.

The legal opinion to be delivered may vary from that text if necessary to reflect facts and law on the date of delivery. The opinion will speak only as of its date, and subsequent distribution of it by recirculation of the Offering Circular or otherwise shall create no implication that Bond Counsel has reviewed or expresses any opinion concerning any of the matters referred to in the opinion subsequent to its date.

While Bond Counsel has participated in the preparation of portions of this Offering Circular and has provided certain material to be included in the Offering Circular, it has not been engaged to confirm or verify, and expresses and will express no opinion as to, the accuracy, completeness or fairness of any statements in this Offering Circular or any other reports, financial information, offering or disclosure documents or other information pertaining to the University prepared or made available by the University, the Underwriters, or others to the bidders for or holders of the Bonds or others.

In addition to rendering the legal opinion, Bond Counsel will assist in the preparation of and advise the Commission and the University concerning documents for the bond transcript.

Certain legal matters in connection with the Bonds will be passed upon for the University by Peter M. Poulos, Esq., its General Counsel and Deputy Secretary, and by Thompson Hine LLP, its counsel, and for the Underwriters by Forbes, Fields & Associates Co., L.P.A., their counsel.

The legal opinions and other letters of counsel to be delivered concurrently with the delivery of the Bonds express the professional judgment of the attorneys rendering the opinions or advice regarding the legal issues and other matters expressly addressed therein. By rendering a legal opinion or advice, the giver of such opinion or advice does not become an insurer or guarantor of the result indicated by that opinion, or the transaction on which the opinion or advice is rendered, or of the future performance of parties to the transaction. Nor does the rendering of an opinion guarantee the outcome of any legal dispute that may arise out of the transaction.

## **RATINGS**

The Bonds have been assigned a rating of “AA-” with a stable outlook by S&P Global Ratings (“S&P”) and a rating of “A1” with a positive outlook by Moody’s Investors Service, Inc. (“Moody’s”).

The University furnished to such rating agencies the information contained in this Offering Circular and certain other materials and information about the University. Generally, rating agencies base their ratings on such materials and information, as well as separate investigations, studies and assumptions.

A rating reflects only the view of the agency giving such rating and is not a recommendation to buy, sell or hold the Bonds. An explanation of the significance of such rating may be obtained only from the rating agency. Such ratings may be changed at any time, and no assurance can be given that they will not be revised downward or withdrawn entirely by either or both of such rating agencies if, in the judgment of either or both, circumstances so warrant. Any such downward revision or withdrawal of either of such ratings may have an adverse effect on the market price of the Bonds.

Neither the Commission nor the University has undertaken any responsibility (other than the obligations of the University specified in the Continuing Disclosure Agreement) either to bring to the attention of the Holders of the Bonds any proposed change in or withdrawal of such ratings or to oppose any such revision or withdrawal.

## UNDERWRITING

J.P. Morgan Securities LLC and Barclays Capital Inc., as Underwriters, have agreed to purchase the Bonds at an aggregate purchase price of \$68,004,875.42 (equal to the aggregate principal amount of the Bonds, less Underwriters' discount of \$155,124.58). The Underwriters may offer and sell the Bonds to certain dealers (including dealers depositing Bonds into investment trusts) and others at prices lower than the public offering prices stated on the cover page hereof. The public offering price set forth on the cover page hereof may be changed after the initial offering by the Underwriters. The Bond Purchase Agreement provides that the Underwriters will purchase all the Bonds, if any are purchased, and requires the University to indemnify the Underwriters and the Commission against losses, claims, damages and liabilities arising out of any incorrect statements or information including the omission of material facts, contained in this Offering Circular pertaining to the University and other specified matters.

J.P. Morgan Securities LLC ("JPMS"), one of the Underwriters of the Bonds, has entered into negotiated dealer agreements (each, a "Dealer Agreement") with each of Charles Schwab & Co., Inc. ("CS&Co.") and LPL Financial LLC ("LPL") for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, if applicable to this transaction, each of CS&Co. and LPL will purchase Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Bonds that such firm sells.

J.P. Morgan may place the Bonds in J.P. Morgan's or an affiliate's tender option bond program to be held for the account of J.P. Morgan or the affiliate, as the case may be.

Each of the Underwriters and their respective affiliates comprise full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage services. From time to time the Underwriters and their affiliates may have performed, and may in the future perform, various investment banking services for the University or its affiliates for which they received or will receive customary fees and expenses. In the ordinary course of their various business activities, the Underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities and financial instruments which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment activities may involve securities and instruments of the University or its affiliates.

## FINANCIAL ADVISOR

The University has retained Raymond James & Associates Inc. as financial advisor (the "Financial Advisor") in connection with its financing plans and with respect to the authorization and issuance of the Bonds. The Financial Advisor is not obligated to undertake and has not undertaken to make an independent verification or to assume responsibility for the accuracy, completeness, or fairness of the information contained in this Offering Circular. The Financial Advisor did not participate in the underwriting of the Bonds.

## CONTINUING DISCLOSURE

The University has agreed in the Continuing Disclosure Agreement dated as of March 1, 2019 (the "Continuing Disclosure Agreement") between the University and the Trustee, for the benefit of the Holders and Beneficial Owners from time to time of the Bonds, in accordance with SEC Rule 15c2-12 (the Rule), to provide or cause to be provided to the Municipal Securities Rulemaking Board such annual financial information and operating data, audited financial statements and notices of the occurrence of certain events in such manner as may be required for purposes of the Rule. See APPENDIX F for the proposed form of the Continuing Disclosure Agreement.

The Continuing Disclosure Agreement will remain in effect only for such period that the Bonds are outstanding in accordance with their terms and the University remains an obligated person with respect to the Bonds within the meaning of the Rule.

The University has delivered continuing disclosure certificates or agreements for each issue of bonds and notes it has issued since the effective date of the Rule. Within the last five years, the University has not failed to comply, in all material respects, with its prior continuing disclosure agreements.

### **INDEPENDENT ACCOUNTANTS**

The consolidated financial statements of the University as of June 30, 2018, and for the year then ended, included in APPENDIX B of this Offering Circular have been audited by PricewaterhouseCoopers LLP, independent accountants, as stated in their report appearing therein.

### **MISCELLANEOUS**

The University has furnished all information herein relating to the University.

Any statements herein involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact, and no representation is made that any of such statements will be realized. All estimates and assumptions herein have been made on the best information available and are believed to be reliable. No representations whatsoever are made that such estimates or assumptions herein involve anything other than matters of opinion. Information in this Offering Circular has been derived by the University from official and other sources and is believed by the University to be accurate and reliable. The information set forth herein, or in the Appendices, should not be construed as representing all of the conditions affecting the University.

Information other than that obtained from records of the University has not been independently confirmed or verified by the University, and its accuracy is not guaranteed.

All of the summaries of the provisions of the Bonds, the Trust Agreement, the Lease, the Base Lease, the Guaranty and the Tax Agreement set forth herein (exclusive of financial and statistical data), and all other summaries and references to such other materials not purporting to be quoted in full, are only brief outlines of certain provisions thereof and are made subject to all of the detailed provisions thereof, to which reference is hereby made for further information, and do not purport to be complete statements of any or all such provisions of such documents.

Neither this Offering Circular nor any statement that may have been or that may be made orally or in writing is to be construed as or as part of a contract with the original purchasers or subsequent holders of the Bonds, or any beneficial owners thereof.

A complete transcript of proceedings will be delivered by the Commission upon delivery of the Bonds to the original purchaser. At that time, the University will furnish to the original purchaser a certificate relating to the accuracy and completeness of this Offering Circular (including matters set forth in or contemplated by it), and to its being a “final offering circular” in the University’s judgment for purposes of SEC Rule 15c2-12(b)(3).

## **CONSENT TO DISTRIBUTION**

The University has authorized distribution of this Offering Circular; it has been prepared and delivered by the University and signed for and on behalf of the University by its officer identified below.

### **CASE WESTERN RESERVE UNIVERSITY**

By: /s/ John F. Sideras  
Senior Vice President for Finance and Chief Financial  
Officer

## **APPENDIX A**

### **CASE WESTERN RESERVE UNIVERSITY**

*The information contained herein as Appendix A to the Offering Circular relates to and has been supplied by Case Western Reserve University. The delivery of this Offering Circular shall not create any implication that there has been no change in the affairs of Case Western Reserve University since the date hereof, or that the information contained, referred to or incorporated by reference in this Appendix A is correct as of any time subsequent to its date.*

*The Ohio Higher Educational Facility Commission makes no representation or warranty as to the accuracy or completeness of the information contained or incorporated by reference in this Appendix A.*

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# CASE WESTERN RESERVE UNIVERSITY

## General

Case Western Reserve University (“CWRU” or the “University”), an Ohio nonprofit corporation, is the largest independent research university in Ohio, providing undergraduate, graduate and professional programs in eight schools: arts and sciences, engineering, medicine, nursing, dental medicine, law, management and social work. CWRU’s main campus occupies approximately 267 acres in Cleveland, Ohio, and consists of more than 90 buildings for academic, administrative, residential, athletic and recreational use. CWRU also owns a 398-acre property in Hunting Valley, Ohio, that encompasses a variety of deciduous forests, ravines, waterfalls, meadows, ponds and a self-contained natural watershed. Known as the University Farm, the property is used by CWRU both for teaching and research and for recreation. Western Reserve University, founded in 1826, and Case Institute of Technology, founded in 1880, federated in 1967 to form Case Western Reserve University.

CWRU’s main campus is located in University Circle, a concentration of more than 50 educational, medical, cultural, religious, and social service institutions at the eastern edge of Cleveland, Ohio. In addition to CWRU, which is the largest institution in University Circle, the community includes Severance Hall, home of the world-famous Cleveland Orchestra; the Cleveland Museum of Art, housing one of the nation’s finest collections and the Ingalls Library; the Cleveland Institute of Music; the Cleveland Institute of Art; the Cleveland History Center; the Cleveland Museum of Natural History; and several medical facilities, including University Hospitals of Cleveland and the Louis Stokes Cleveland VA Medical Center. The main campus of The Cleveland Clinic Foundation dba Cleveland Clinic Health System (with its affiliates, the “Cleveland Clinic”) is immediately adjacent to University Circle.

The University’s mission is to improve and enrich people’s lives through research that capitalizes on the power of collaboration, and to provide education that dramatically engages its students. The University realizes this goal through scholarship and creative endeavor that draws on all forms of inquiry; learning that is active, creative and continuous; and promotion of an inclusive culture of global citizenship. The University pursues distinctive opportunities to build on its special features, including its relationships with world-class health care, cultural, educational, and scientific institutions in University Circle and across greater Cleveland, Ohio. CWRU admits students without discrimination as to race, color, sex, sexual orientation, religion, age, personal handicap and national or ethnic origin.

CWRU’s opening enrollment for the 2018-19 academic year was 11,072 full-time equivalent students, a 50-year peak. In addition, 91 full-time equivalent students from the Cleveland Institute of Music were enrolled at CWRU through the joint music program. Applications for undergraduate admission to CWRU have increased each year for the past decade (including applications for the past two years, when the University for the first time imposed a \$70 application fee), and the University currently admits less than one-third of its applicants. The mean Scholastic Aptitude Test (SAT) score for the academic year 2018-19 class of first-year students was 1416. Of CWRU’s 2016-17 academic year bachelor’s degree recipients, more than one-third pursued graduate and professional studies at universities and colleges in the United States or

abroad, and more than one-half found full-time employment or had other alternative plans (such as military service, travel, or volunteer positions).

Among research universities, CWRU is one of only 130 classified at the level of “very high research activity” by the Carnegie Classification framework. Research accounts for more than 40% of the CWRU’s operating revenues. CWRU ranked 13th in the country in a Brookings Institution report issued in 2017 on effectiveness in translating research breakthroughs into commercial success. CWRU is also included in Reuters’ list of the 100 most innovative universities in the world.

CWRU operates on a fiscal year (the “Fiscal Year”) that begins on July 1 and ends on the following June 30; any reference to a particular Fiscal Year means the Fiscal Year that ends on June 30 in the indicated year.

### **Governing Structure**

CWRU is governed by a Board of Trustees (the “Board”) presently consisting of 46 members, including the President of CWRU, who is an *ex officio* member of the Board. Pursuant to the University’s Bylaws, the number of Board members may never be less than three, but there is no limit on the size of the Board. The Board may change the number of its members from time to time, except that no such change may have the effect of shortening the term of any incumbent Board member. All of the Board members other than the President are elected by the Board for a term not to exceed four years and are eligible to serve four consecutive (four-year) terms (though the term limit may be waived for a maximum of one additional four-year term where the continued expertise and experience of a Board member would provide a significant benefit to the University).

The full Board holds three regular meetings each Fiscal Year. Special meetings may be called from time to time. A majority of Trustees constitute a quorum at any meeting of the Board. Actions of the Board require the affirmative vote of a majority of the Trustees present at a meeting at which a quorum is present. Any action which may be authorized or taken at a meeting of the Trustees may be authorized without a meeting with unanimous written consent. The Board has nine standing committees (in addition to the Executive Committee): Finance; Investment; Audit; Development and University Relations; Research and Technology Transfer; Campus Planning; Compensation; Academic Affairs and Student Life; and Trustees and Governance.

The Executive Committee of the Board meets in months when there is not a full Board meeting. It is comprised of, as *ex officio* members, the Chair of the Board, the immediate past Chair of the Board (for the first two years after the immediate past Chair’s term as Chair has ended), the Vice Chair(s) of the Board (who may also be Committee Chairs), the Committee Chairs of all standing committees and the President, each of whom has voting rights and is included in a quorum determination. The Executive Committee also includes at least two, but no more than five, other members who are appointed by the Chair of the Board with the approval of the Board. Executive Committee membership is limited to 18 members. In the intervals between meetings of the Trustees, the Executive Committee has full power to take all and every action which the Trustees are authorized to take except: (a) the appointment and renewal of Trustees; (b) the filling of At-Large Executive Committee Member (as defined in the University’s Bylaws) vacancies on the Executive Committee; (c) the election of the Chair of the Board and the appointment of Committee chairs; (d) the election or removal from office of the President and approval of the President’s Total

Compensation Arrange (as defined in the University’s Bylaws); (e) the amendment of the University’s Articles of Incorporation or Bylaws; and (f) the approval of any agreement that requires approval of the other party’s or parties’ full board(s).

The following table sets forth the members of the Board, indicating each member’s principal business or professional affiliation, and the month and year in which each member’s term expires.

### TRUSTEES

<u>Name</u>	<u>Affiliation</u>	<u>Current Term End.</u>
Virginia Barbato	President Nord Family Foundation	June 2020
Linda Burnes Bolton, DrPH, RN	Senior Vice President, Nursing and Health System Chief Nurse Executive, Inaugural Chair Holder James R. Klinenberg, MD and Lynn Klinenberg-Linkin Endowed Chair in Nursing Cedars-Sinai Medical Center	June 2019
Timothy J. Callahan* <i>Vice Chair of the Board</i>	Non-Executive Chairman Embedded Planet	June 2020
Aarti Chandna	Impact Investor & Strategy Consultant	June 2022
Archie G. Co	Chairman and Chief Executive Officer Ginza Bellevue Hotel, Ltd.	June 2020
Scott S. Cowen, Ph.D.*	President Emeritus and Distinguished University Chair Tulane University	June 2019
Fredrick D. DiSanto* <i>Vice Chair of the Board</i>	Chairman and Chief Executive Officer The Ancora Group	June 2020
Thalia Dorwick, Ph.D.* <i>Vice Chair of the Board</i>	Editor-in-Chief (retired) McGraw Hill Higher Education	June 2019
Geoffrey M. Duyk, M.D., Ph.D.*	Managing Director and Partner Circularis Partners	June 2021
Gregory L. Eastwood, M.D.	Professor, Center for Bioethics and Humanities SUNY Upstate Medical University	June 2021
Charles D. Fowler*	Director Covia Corporation	June 2019

<u>Name</u>	<u>Affiliation</u>	<u>Current Term End.</u>
Frederick M. Gans	Founder Ironwood Capital Management	June 2022
Vincent Gaudiani, M.D.	Sr. Cardiac Surgeon Pacific Coast Cardiac & Vascular Surgeons	June 2022
Julie Gerberding, M.D., MPH*	Executive Vice President and Chief Patient Officer, Strategic Communications, Global Public Policy and Population Health Merck & Co., Inc.	June 2022
Susie Gharib	Anchor and Senior Special Correspondent Fortune Magazine	June 2019
Charles E. Hallberg	Chief Executive Officer Renew Advantage	June 2021
Daniel P. Harrington	President HTV Industries, Inc.	June 2020
Samir N. Jadallah	Founder and CEO Tyto Life, LLC	June 2019
Mary Ann Jorgenson*	Retired Senior Partner Squire Patton Boggs (US) LLP	June 2021
Charles J. Koch*	Former Chairman and Chief Executive Officer Charter One Financial	June 2019
Toby D. Lewis	Retired Curator of Corporate Art Progressive Insurance	June 2019
Frank N. Linsalata*	Chairman and Founder Linsalata Capital Partners	June 2019
George L. Majoros Jr.	Co-Managing Partner EagleTree Capital, LP	June 2021
Joseph M. Mandato	Senior Advisor Apercen Partners	June 2019
Thomas A. Mandel	President and Chief Executive Officer Rubber City Radio Group, Inc.	June 2019

<u>Name</u>	<u>Affiliation</u>	<u>Current Term End.</u>
Ellen Stirn Mavec*	President and Chairman The Kelvin and Eleanor Smith Foundation	June 2021
Thomas F. McKee*	Chairman Calfee, Halter & Griswold LLP	June 2022
Sara Moll, Ph.D.	Founder Laura's Home, The City Mission	June 2020
Susan P. Mucciarone	Executive Director of Private Wealth Glenmede	June 2021
Dominic Ozanne	President and Chief Executive Officer Ozanne Construction Company	June 2019
Robert D. Pavey	Partner Emeritus Morgenthaler Ventures	June 2019
James A. Ratner	Partner RMS Investment Group	June 2020
Donald J. Richards* <i>Vice Chair of the Board</i>	Owner Chase Advisors LLC	June 2021
James "Great Neck" Richman	President and CEO Richloom Fabrics Group, Inc.	June 2022
Joseph A. Sabatini*	Former Managing Director JPMorgan Chase & Co. <sup>1</sup>	June 2020
Eric R. Schnur	Chairman, President and Chief Executive Officer Lubrizol Corporation	June 2021
Theodore L. Schroeder	Former Vice President of Engineering Zycada Networks	June 2019
Alan L. Schwartz, Ph.D., M.D.	Alumni Endowed Professor, Department of Pediatrics Washington University School of Medicine	June 2022
Lawrence M. Sears	Lecturer, Electrical Engineering & Computer Science Case Western Reserve University Founder and Former Chief Executive Officer, Hexagram Inc. (now Aclara RF Technologies)	June 2020

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<sup>1</sup> JPMorgan Chase & Co. is the parent entity of J.P. Morgan Securities LLC, an underwriter of the Series 2019A Bonds and initial Remarketing Agent for the Series 2019A Bonds.

<u>Name</u>	<u>Affiliation</u>	<u>Current Term End</u>
Barbara R. Snyder*	President Case Western Reserve University	<i>ex officio</i>
Anand Swaminathan	Senior Partner McKinsey & Company	June 2022
Celia Scott Weatherhead	President Weatherhead Industry Holdings, LLC	June 2021
Mark A. Weinberger	Global Chairman and CEO EY	June 2022
James C. Wyant, Ph.D.* <i>Chair of the Board</i>	Professor Emeritus and Founding Dean, College of Optical Sciences University of Arizona	June 2021
Michael G. Zink	Managing Director (Retired) Citigroup	June 2021

\*member of the Executive Committee

Certain members of the Board may be partners, officers, employees, directors or stockholders of, or may have other financial interests in, or business relationships with, financial institutions, law firms or brokerage firms that are an underwriter of or may act as trustee for the Bonds, or which serve as bond counsel to the Commission, or as counsel to the trustee, an underwriter or the University. It is not the University's practice to disqualify any such institution or firm from acting as an underwriter as counsel or as trustee because of the existence of such a relationship.

### **Administration**

The business affairs of CWRU are administered and managed on a day-to-day basis by senior administrators of CWRU, including a president, a provost and executive vice president, a chief financial officer, and a senior vice president for administration. The senior administrators of the University are:

#### **Barbara R. Snyder, *President***

B.A., The Ohio State University  
J.D., University of Chicago Law School

Barbara R. Snyder became President of the University on July 1, 2007. During her tenure, the University has more than tripled undergraduate admissions applications, become twice as selective, and increased the academic quality of the undergraduate student body. The University has launched major initiatives in internationalization, diversity, and interdisciplinary academic alliances. The University's development campaign, initiated in 2008, surpassed its \$1.5 billion expanded goal and raised \$1.82 billion at its conclusion on December 31, 2018. Ninety-nine

percent of the total funds raised are cash gifts. The University has raised \$163 million for capital projects, such as the Tinkham University Center, the Wyant Athletic and Wellness Center, phase one of the Maltz Performing Arts Center, Sears think[box] in the Richey Mixon Building (a 50,000-square-foot innovation hub), the Nord Family Greenway, renovation of the Jack, Joseph and Morton Mandel School of Applied Social Sciences, and the Linsalata Alumni Center. Snyder is a tenured faculty member at the University's School of Law, and she is an elected member of the American Law Institute. Snyder serves on the boards of KeyCorp and Progressive Corporation and on the following nonprofit boards: American Council on Education, Association of American Universities, Business-Higher Education Forum, Cleveland Rock & Roll, Inc., Greater Cleveland Partnership, Internet2, Ohio Business Roundtable and University Circle, Inc. Before becoming the University's president, Snyder spent 19 years at The Ohio State University, including serving as executive vice president and provost, and she was a professor of law at Ohio State's Moritz College of Law. Previously, she spent five years as a law professor at the University's School of Law, and she began her career at the Chicago law firm of Sidley & Austin. Snyder graduated from the University of Chicago Law School, where she served as executive editor of its law review. She earned her bachelor's degree from The Ohio State University.

**Ben Vinson III, *Provost and Executive Vice President***

B.S., Dartmouth College  
Ph.D., Columbia University

Ben Vinson III became the University's Provost and Executive Vice President on July 2, 2018. A historian of colonial Mexico, Vinson served on the faculties of Barnard College and Penn State before joining Johns Hopkins in 2006 as a professor of history and founding director of its Center for Africana Studies. He went on to serve as a vice dean for centers, interdisciplinary studies and graduate education before becoming dean of George Washington University's Columbian College of Arts and Sciences, a position he has held since 2013. Vinson's scholarship focuses on colonial Mexico, especially the African presence in Mexico. His latest book, *Before Mestizaje: The Frontiers of Race and Caste in Colonial Mexico*, examines the extreme caste groups of colonial Mexico. He has been awarded fellowships from the Fulbright Commission, National Humanities Center, Social Science Research Council, the University of North Carolina at Chapel Hill and the Ford, Rockefeller and Mellon foundations. Vinson earned a bachelor's degree from Dartmouth College and a doctorate from Columbia University.

**John F. Sideras, *Senior Vice President for Finance and Chief Financial Officer***

B.S., John Carroll University  
M.B.A., University of Colorado

John F. Sideras was named the Interim Senior Vice President for Finance and Chief Financial Officer of the University on May 1, 2008 and became Senior Vice President for Finance and Chief Financial Officer of the University in February 2009. Prior to joining the University, Sideras was President/Chief Executive Officer (2004-2008) and Senior Vice President/Chief Financial Officer (1998-2003) of The MetroHealth System (Cleveland, Ohio). He previously held a variety of executive and finance-related positions with The Cleveland Clinic Foundation, University Hospitals of Cleveland, St. John West Shore Hospital, and St. Luke's Medical Center. Sideras maintains an active certified public accountant license in the State of Ohio.

**Elizabeth J. Keefer, *Senior Vice President for Administration, and Secretary***

B.A., Barnard College

J.D., George Washington University

Elizabeth J. Keefer became General Counsel on October 3, 2011 and added the duties of Senior Vice President for Administration effective January 20, 2015. Immediately prior to coming to the University, she was Senior Vice President at TMG Strategies (now McGinn and Company). Previously, she was General Counsel at Columbia University for over a decade. Earlier in her career, Keefer was General Counsel at Teledyne Inc., a technology company, and a partner in the international law firm of Hughes, Hubbard & Reed. Keefer is a member of the bars of the State of Ohio, the State of New York and the District of Columbia. Effective February 1, 2019, Peter M. Poulos, formerly Deputy General Counsel, was appointed as Keefer's successor as General Counsel.

**Academic Programs**

The academic programs of the University are administered through the College of Arts and Sciences (the "College"), the School of Graduate Studies, the Case School of Engineering and six professional schools, with administrative coordination provided by the President and Provost. The major academic divisions of the University are described below, along with a listing of their principal offerings. Several of these units cooperate to offer programs leading to joint degrees.

The University's academic year is divided into two semesters and a summer session. The number of semester credit hours required for the baccalaureate varies with the major field of study, ranging from 120 credit hours for most of the arts and sciences programs to 127-133 credit hours for most of the engineering programs.

Course offerings are extensive. Students at the University may choose from among approximately 130 fields of concentration, many of which are interdisciplinary and offer advanced study leading to masters and doctoral degrees.

The College offers curricula leading to B.A. and B.S. degrees in more than 40 disciplines in the arts, humanities, social sciences, mathematics and natural sciences. Faculty in the College also conduct research and offer instruction leading to M.A., M.F.A., M.S., D.M.A. (Doctor of Musical Arts), and Ph.D. degrees in these fields.

The School of Engineering offers courses leading to the B.S., M.S., M.Engr. and Ph.D. degrees in more than a dozen fields of engineering. Five master's programs can also be completed entirely online. The Institute for Management and Engineering, a joint venture of the School of Engineering and the Weatherhead School of Management, offers the Master of Engineering and Management (M.E.M.) degree, designed to prepare undergraduate engineering majors for work in a business environment, particularly in technology-based organizations. Faculty in the School of Engineering are also engaged in extensive research and scholarship, much of which is externally sponsored.

The School of Graduate Studies confers M.A., M.S., M.F.A., M.P.H., D.M.A., and Ph.D. degrees upon students who have completed advanced study in the arts, humanities and social sciences, mathematics and natural sciences, engineering and various professional fields. The



School is an administrative unit; graduate instruction is provided by faculty who hold appointments in the College, the School of Engineering and various professional schools.

The Jack, Joseph, and Morton Mandel School of Applied Social Sciences (“MSASS”) offers curricula leading to the M.S.S.A. (Master of Science in Social Administration) degree in social work, Master of Nonprofit Organizations (M.N.O.), and the Ph.D. degree in social welfare. In 2012 the school introduced a fully online version of the M.S.S.A. MSASS also operates continuing education programs for social workers, nurses, and psychologists in the region.

The School of Dental Medicine (the “Dental School”) offers a curriculum leading to the D.M.D. degree, and postdoctoral training in several dental specialties leading to the M.S.D. degree and/or professional certification. In conjunction with its curriculum, the Dental School also operates a dental clinic where students provide dental service to area residents under close faculty supervision.

The School of Law offers curricula leading to the J.D., LL.M., M.A. in Patent Practice, Executive M.A. in Financial Integrity, and S.J.D. degrees. As part of its curricula, the School also operates a legal clinic in which law students under close faculty supervision provide services to clients from the community.

The Weatherhead School of Management offers curricula leading to the B.S., M.S., M.Acc., M.B.A., D.M. (Doctor of Management) and Ph.D. degrees in management, accounting, organizational behavior, operations research and other areas of business administration. Members of the Weatherhead School’s faculty also provide instruction in economics for undergraduate students enrolled in the College. As noted above, the Weatherhead School offers a joint program with the School of Engineering leading to the M.E.M. degree.

The School of Medicine (the “SOM”) offers three tracks leading to the M.D. degree: the University Track, a four-year M.D. curriculum; the College Track, based at the Cleveland Clinic Lerner College of Medicine (“CCLCM”), which is a five-year research-focused curriculum that prepares students for careers as physician-investigators; and the Medical Scientist Training Program (M.D./Ph.D.), which develops physician-scientists who bridge the gap between basic science and clinical research. The SOM’s pre-clinical departments offer instruction leading to the M.A., M.S., M.P.H., and Ph.D. degrees in the biomedical sciences. In Fall 2016, the SOM enrolled the inaugural class in its M.S. in Physician Assistant Studies program. The faculty in the SOM are extensively involved in biomedical research. Full-time faculty in the SOM’s clinical disciplines also have a major commitment to patient care and to close supervision of medical students’ involvement in patient services in a network of affiliated hospitals and clinics.

The Frances Payne Bolton School of Nursing (the “Nursing School”) offers curricula leading to undergraduate and post-baccalaureate degrees in nursing: the Bachelor of Science in Nursing (B.S.N.) degree, the M.S.N. degree in several nursing specialties, the Doctor of Nursing Practice (D.N.P.) degree, and the Ph.D. in nursing. Students with a non-nursing baccalaureate may earn the Master of Nursing (M.N.) degree through the graduate entry program, which is also a gateway to the D.N.P. or Ph.D. degrees. The Nursing School’s faculty maintain an active research program.

## Special Programs for Undergraduate Students

Slightly fewer than half of the full-time student body are undergraduates. CWRU offers numerous programs of study for undergraduates, including:

*Seminar Approach to General Education and Scholarship (SAGES):* SAGES is an innovative undergraduate curriculum, beginning freshman year, designed to establish the foundations for academic inquiry by emphasizing critical reading, analytical thinking, and effective written and oral communication. The program features small seminars, intensive faculty advising, a writing portfolio, and a senior capstone experience.

*Study Abroad Programs:* Qualified students may participate in international exchange or study abroad programs at approved foreign universities or study abroad programs offered by approved American universities. A list of approximately 80 approved study abroad institutions and programs in more than 40 countries is maintained by the University and ensures accreditation and academic rigor meet CWRU's standards, among other specifics. CWRU has bilateral exchange agreements with universities in Australia, China, France, Germany, Ireland, Italy, Japan, Singapore, South Korea, Spain, Sweden, Thailand, Turkey, and the United Kingdom. CWRU also participates in the Global Engineering Education Exchange, an international exchange program administered by the Institute for International Education that offers semester- or year-long study abroad in multiple different countries. For students seeking an international experience but unable to commit to a semester- or year-long program, the University offers summer study abroad opportunities at partner universities and short-term experiences led by CWRU faculty. The latter are generally between one and six weeks in duration and take place during winter break, spring break, or over the summer.

*Pre-Professional Scholars Programs and the Seven-Year Dental Program:* These programs grant to a few outstanding freshman applicants conditional commitments of admission to the professional schools of dental medicine and medicine at CWRU.

*Senior Year in Professional Studies at CWRU:* Students of superior ability and attainment who are candidates for a B.A. degree and are admitted during their junior year to professional studies in dental medicine, nursing or social work at CWRU are offered an opportunity to shorten their entire course of study by one year by substituting work in the first year of professional school for their final undergraduate year.

*Integrated Bachelor's/Master's Programs:* Candidates for the B.A. degree or the B.S. in nutrition may be admitted to graduate study for their senior year and pursue simultaneous completion of requirements for both the bachelor's and master's degrees. Candidates for the B.S. degree in engineering, computer science, mathematics, natural sciences, or statistics may begin study toward the master's degree while still an undergraduate, counting up to nine hours of graduate credit toward both degrees. In Management, students who are candidates for the B.S. in accountancy may begin graduate coursework leading to the Master of Accountancy degree while still enrolled as undergraduates. The integrated BA/BS and Master of Science in Management – Finance program allows students to work toward the completion of the M.S.M. during their undergraduate studies.

*Washington Center Program:* Qualified students may receive 15 hours of credit for participating in the Washington Center Program in fall or spring semesters, and nine hours of credit for participating during the summer. Students work in a full-time internship, participate in a seminar, and attend a weekly lecture/discussion group.

*Co-Operative Education and Practicum Programs:* Cooperative education offers students pursuing degrees in engineering and computer science the opportunity to alternate classroom studies with full-time employment consistent with their major fields of study. Students majoring in fields in the College of Arts and Sciences or Weatherhead School of Management can participate in the Practicum Program, a structured experiential learning opportunity.

*Teacher Licensure:* CWRU offers preparation for teacher licensure in art education and music education for grades pre-K through 12 at the undergraduate and graduate levels. CWRU also offers preparation for Adolescence/Young Adult Teacher Licensure (grades 7-12) in life sciences, physical sciences, integrated language arts, integrated social studies and integrated mathematics. Multi-age licensure (pre-K through grade 12) preparation is available in French, Spanish, and Latin.

## **Accreditation and Recognition**

CWRU is a member of the Association of American Universities, and is fully accredited by the Higher Learning Commission. In 2015, CWRU was reaccredited by the Commission for ten years, which was the maximum period possible.

In addition, several of its programs are fully accredited by nationally recognized professional accrediting associations, including:

AACSB International – The Association to Advance Collegiate Schools of Business  
(*business, accounting*)

Accreditation Board for Engineering and Technology  
(*engineering, computer science*)

Accreditation Commission for Midwifery Education  
(*nurse midwifery*)

Accreditation Council for Cooperative Education  
(*cooperative education programs*)

Accreditation Council for Genetic Counseling  
(*genetic counseling*)

Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)  
(*physician assistant studies; provisional accreditation of new program*)

American Bar Association  
(*law*)

American Chemical Society  
(*chemistry*)

American Council of Nurse-Midwives  
(*nurse midwifery*)

American Dental Association  
(*dental medicine*)

American Medical Association and Association of American Medical Colleges, Liaison Committee on Medical Education  
*(medicine)*

American Psychological Association  
*(clinical psychology)*

American Speech-Language-Hearing Association  
*(speech pathology)*

Association of American Law Schools  
*(law)*

Commission on Accreditation for Dietetics Education, American Dietetic Association  
*(didactic program in dietetics, dietetic internship)*

Commission on Accreditation of Allied Health Education Programs  
*(anesthesiology assistant)*

Commission on Collegiate Nursing Education  
*(nursing)*

Council for the Accreditation of Educator Preparation  
*(teacher licensure)*

Council on Accreditation of Nurse Anesthesia Educational Programs  
*(nurse anesthesia)*

Council on Education for Public Health  
*(public health)*

Council on Social Work Education  
*(applied social sciences)*

National Association of Schools of Music  
*(music)*

Ohio Department of Education, Division of Teacher Education and Licensure  
*(art education, music education, life sciences, physical sciences, integrated language arts, integrated social studies, integrated mathematics, French, Spanish, Latin.)*

Teacher Education Accreditation Council  
*(art education and music education)*

CWRU is chartered as an educational institution under the laws of the State of Ohio and holds a Certificate of Authorization from the Ohio Department of Higher Education.

## **Enrollment**

The Fall 2018 total of full-time and part-time students is 11,891 (of which approximately 56% are graduate and professional students and approximately 44% are undergraduate students), with an additional 247 students from the Cleveland Institute of Music enrolled at CWRU through the joint music program. The current total enrollment is the highest at the University since the 1960s.

CWRU's students come primarily from the United States, although CWRU has students from 90 other countries, with the greatest number of students coming from China. CWRU has students from all 50 states and the District of Columbia. Approximately one-quarter of CWRU's undergraduate students are from Ohio.

The Fall full-time equivalent (“FTE”) student enrollments by major program are shown below for the indicated academic years.

	<u>2018-19</u>	<u>2017-18</u>	<u>2016-17</u>	<u>2015-16</u>	<u>2014-15</u>
Undergraduate	5,151	5,035	5,044	5,053	4,814
Graduate	2,319	2,312	2,309	2,237	2,100
Professional:					
Dental Medicine	386	397	387	385	389
Law	616	573	547	496	511
Management	805	763	771	810	805
Medicine	986	946	892	858	838
Nursing	293	283	290	286	323
Applied Social Sciences	<u>516</u>	<u>607</u>	<u>580</u>	<u>462</u>	<u>350</u>
Total	<u>11,072</u>	<u>10,916</u>	<u>10,820</u>	<u>10,587</u>	<u>10,130</u>

For its 2018-19 academic year, CWRU received more than 26,000 applications, and admitted less than one-third of applicants. The following information pertains to the classes entering in Summer and Fall 2018.

<u>School</u>	<u>Applications Received</u>	<u>Admittance Granted</u>	<u>Admitted/ Applied</u>	<u>Enrolled</u>	<u>Enrolled/ Admitted</u>	<u>Test Scores</u>
Undergraduate	26,642	7,794	29%	1,393	18%	note 1
Graduate	4,540	1,996	44	788	39	note 2
Professional:						
Management	2,698	1,458	54	505	35	note 3
Applied Social Sciences	866	586	68	218	37	note 4
Law	1,807	1,028	57	296	29	note 5
Dental Medicine	3,128	326	10	102	31	note 6
Nursing	280	216	77	111	51	note 7
Medicine	6,869	550	8	250	45	note 8

**notes:**

1. Undergraduates: The ranges for SAT scores for the middle 50% of the Fall 2018 enrolled class were 650-730 Evidence-based Reading and Writing and 700-790 Math.
2. Graduate Studies: Reporting one average for all graduate programs would not be meaningful since scores vary widely among disciplines. In addition, not all departments require the GRE.
3. Management: The median GMAT score for students entering the full-time M.B.A. program in Fall 2018 was 620.
4. Applied Social Sciences: Applicants to the M.S.S.A. program are not required to submit test scores unless their cumulative undergraduate grade point average is below 2.7.
5. Law: The median LSAT score for the class entering the J.D. program in Fall 2018 was 159.
6. Dental Medicine: There are two parts to the Dental Admission Test (DAT): for the class entering the D.M.D. program in Fall 2018, the Academic average was 20.9, and the Perceptual Ability Test (PAT) average was 20.6.

7. Nursing (D.N.P., M.S.N.): Average scores are not calculated.
8. Medicine: Among students who took the new MCAT, the median score was 518 (96<sup>th</sup> percentile). Applications and admittances represent unduplicated counts of applicants and admittees. In some prior years, an applicant to multiple tracks within the M.D. program was counted as a separate applicant in each track. As of 2017, admission numbers also include the Physician Assistant program.

The number of undergraduate applicants has increased significantly in recent years. A history of undergraduate applicants, admissions, and enrollments is reported below, along with a measure of their academic strength.

<u>Academic Year</u>	<u>Applications Received</u>	<u>Admittance Granted</u>	<u>Admitted/ Applied</u>	<u>Freshmen Enrolled</u>	<u>Enrolled/ Admitted</u>	<b>Combined SAT Scores of the Middle 50% of Enrolled Freshmen</b>
2018-19	26,642	7,794	29%	1,393	18%	1350-1490*
2017-18	25,380	8,405	33	1,309	16	1350-1500*
2016-17	23,116	8,192	35	1,265	15	1310-1470
2015-16	22,877	8,271	36	1,259	15	1320-1450
2014-15	21,733	8,326	38	1,282	15	1300-1440

\*As of 2017-18, scores are from the new SAT.

The University expects to enroll freshman classes of approximately 1,350 in future years, increasing the undergraduate student body to approximately 5,400 students. The 2018-19 academic year first-to-second-year retention rate of 94.4% is above prior years and indicates a strong level of student satisfaction. High retention rates also allow the University to plan for programming and enrollment levels with more precision.

CWRU annually awards degrees at the baccalaureate, master and doctoral level, as shown below for the last five academic years.

<u>Academic Year</u>	<u>Baccalaureate</u>	<u>Master</u>	<u>M.D./D.M.D./ D.N.P./J.D./D.M./S.J.D.</u>	<u>Ph.D./D.M.A.</u>
2017-18	1,181	1,620	455	203
2016-17	1,249	1,451	459	198
2015-16	1,137	1,406	426	215
2014-15	902	1,211	469	186
2013-14	908	1,185	461	194

Competition among colleges and universities for the top students is expected to remain intense. Although CWRU believes that stable demand for its educational programs will continue, no assurance can be given that it will. A material decrease in CWRU's enrollment could adversely affect CWRU's consolidated financial position.

**Tuition and Fees**

For each of the five most recent academic years (including the 2018-19 academic year) the University charged entering students the following tuition (including health fees):

	<u>2018-19</u>	<u>2017-18</u>	<u>2016-17</u>	<u>2015-16</u>	<u>2014-15</u>
Medical	\$63,262	\$61,420	\$59,346	\$57,475	\$55,370
Dental	69,770	67,180	64,660	62,235	59,840
Management <sup>1</sup>	40,560	39,390	38,250	37,500	44,940
Law	51,900	50,500	49,500	48,600	47,600
Applied Social Sciences	44,500	43,500	42,570	41,550	39,950
Graduate Studies	45,168	43,854	42,576	41,137	39,842
Nursing	49,704	48,254	46,860	45,384	43,643
Undergraduate	48,604	47,074	45,592	44,156	42,766

<sup>1</sup> The Weatherhead School of Management no longer has a flat tuition rate for full-time students in the M.B.A., M.S.M., or D.M. (Doctor of Management) programs. New students in the full-time M.B.A. program pay \$1,352 per credit hour; part-time M.B.A. students pay \$1,379 per credit hour. The recommended program of full-time study in the first year is 15 hours in fall and 15 in spring, for an academic year total of \$40,560.

CWRU’s gross total tuition revenue, including admission fees and laboratory fees, for each of the five most recent Fiscal Years is set forth below:

<u>Fiscal Year</u>	<u>Total Tuition Revenue (amounts rounded)</u>
2018	\$470,870,000
2017	451,874,000
2016	426,432,000
2015	394,365,000
2014	368,739,000

For each of the five most recent academic years (including the 2018-19 academic year), the University charged entering undergraduate students the following room and board and activity fees:

	<u>2018-19</u>	<u>2017-18</u>	<u>2016-17</u>	<u>2015-16</u>	<u>2014-15</u>
Room & Board	\$15,190	\$14,784	\$14,298	\$13,850	\$13,376
Activity Fee	388	376	364	354	342

Student housing, food service and health service operations are self-sustaining auxiliary enterprises; rates charged for these services are each set at a level sufficient to recover the University’s costs of providing these services.

CWRU has a two-year residency requirement for undergraduates. First- and second-year students who do not live with their parents must live in a CWRU residence hall or a CWRU-recognized fraternity or sorority. Accommodations include single and double rooms as

well as apartment-style housing. The rates included in the table above are for double rooms. In Fall 2018, 4,096 of 4,326 available beds in residence halls, University-owned apartment buildings and Greek houses were occupied by undergraduate students for an occupancy rate of 95%. Average occupancy of all available beds has been in the 90-96% range for the last five years, and exceeded 96% occupancy of residence halls beds for the same time period.

CWRU does not offer on-campus housing for graduate and professional students, but does own a number of properties in the area close to campus which are rented in part or in whole to graduate and professional students. CWRU has converted the 281 units in the Triangle complex to University housing.

All undergraduate students living in CWRU residence halls (excluding apartment-style housing) are required to participate in one of the meal plans offered by CWRU. Graduate and professional students may participate in CWRU meal plans if they desire. The room and board rates in the table above include a 19-meal per week plan plus 75 “Case Cash” dollars per semester.

All students registered for at least one credit hour are required to participate in a plan that entitles the student to use the University Health Service and to receive coverage under the Student Medical Plan. A student is charged a medical plan fee in addition to tuition and other fees unless the student shows proof of coverage by a comparable insurance plan.

The student activity fee is used to support undergraduate student organizations and activities of a social and recreational nature.

CWRU may make changes in the various charges at the beginning of any semester. Although CWRU believes that it would be able to raise tuition and fees without adversely affecting its future enrollment, there can be no assurance that it will be able to do so. Future economic and other conditions may affect CWRU’s ability to increase its tuition and fees.

## **Financial Aid**

During Fiscal Year 2018, CWRU provided \$182 million in student aid to CWRU students to help support educational costs. Approximately 19% of this support was from restricted sources, including the State, the federal government, gifts and scholarship endowment income. CWRU committed unrestricted operating funds to make up the balance. In the 2017-18 academic year, 86% of first-year students and 85% of all undergraduates received grant or scholarship aid from the federal government, state/local government, or the University.

In addition to grant assistance provided for Fiscal Year 2018, CWRU provided, arranged for or assisted students in obtaining loans of \$150 million, of which \$142 million came from federal or state sources. Undergraduate, graduate and professional students also were provided work opportunities throughout CWRU and earned \$32 million.

State and federal support for student financial aid comes to CWRU in three forms -- grants to students based upon need, research and training support and access to loan funds. Federal and state grant funds are limited for the most part to undergraduates. There is no assurance that the current level of this support will be maintained in future years.



Historically, the University had followed a need-blind approach to admission decisions for U.S. applicants admitted through the early and regular decision rounds, while international students and students selected from the waiting list, in some cases, were considered on a need-aware basis. However, those policies resulted in an increasing number of enrolled students having a significant gap in their financial aid packages. Beginning with the class enrolled in Fall 2017, the University now meets 100% of demonstrated need for all admitted students and considers some students, including U.S. applicants, on a need-aware basis. While in its first year of use the new aid policy produced slightly increased costs to the University, the University expects that in subsequent years this policy modification will not be likely to result in a material change in the annual cost to the University of providing financial aid.

### **Affiliations**

CWRU maintains education and research affiliations with four principal hospitals in Cleveland: University Hospitals Health System, Inc. (“UH”), Cleveland Clinic, the MetroHealth System and the Louis Stokes Cleveland VA Medical Center. Each affiliation arrangement has slightly different characteristics, but they all feature clinical and didactic teaching of SOM students, faculty appointments at the SOM, and research collaboration.

On September 1, 2016, CWRU restructured its affiliation with UH, replacing the prior affiliation agreement with a five-year agreement. Under the restructured Affiliation Agreement, CWRU’s medical students continue to have clinical rotations at UH, and UH’s physicians continue to have faculty appointments at the SOM. Most federal research at UH’s main campus will continue to be administered by CWRU. UH is no longer designated as the SOM’s “primary” affiliate, but instead has an affiliate standing like other affiliates of CWRU. In addition, UH’s main campus is no longer branded as “University Hospitals Case Medical Center,” but instead uses the name “University Hospitals Cleveland Medical Center.” CWRU and UH will continue their collaborations in education and research, while having the flexibility to pursue collaborations with other institutions.

CWRU’s affiliation with Cleveland Clinic includes the Cleveland Clinic Lerner College of Medicine, a separate five-year medical education track within the SOM. This affiliation also includes other collaborations in education and research, including the placement of CWRU medical students in clinical slots at Cleveland Clinic hospitals. Further, there are collaborations between Cleveland Clinic and other schools at CWRU, such as the Weatherhead School of Management.

CWRU and Cleveland Clinic are collaborating on the development of a Health Education Campus. See “Health Education Campus” below.

### **Health Education Campus**

CWRU and Cleveland Clinic have entered into an agreement with a perpetual term to provide for the development and operation of a new state-of-the-art Health Education Campus (the “HEC”). The HEC will provide a unified educational space for programs of the SOM (the CCLCM College Track, the University Track and the Medical Scientist Training Program), the Dental School, and the Nursing School. The HEC will also provide additional space to accommodate planned or possible future expansions and/or increases in enrollment at the SOM, the Dental School and the Nursing School, and a new expanded dental clinic.

The HEC includes two buildings, a four-story, approximately 485,000-square-foot academic building located on an 11-acre site adjacent to Cleveland Clinic's main campus in Cleveland and a separate dental clinic building of approximately 133,000 square feet located on a site adjacent to the academic building site. Both buildings are being constructed on property to be owned jointly by CWRU and Cleveland Clinic, with both CWRU and Cleveland Clinic (in connection with the Cleveland Clinic involvement with the CCLCM College Track of the SOM) having perpetual rights of use of the HEC. The currently projected total cost of the HEC (including construction hard and soft costs, and interior fit-out and furnishing (including equipment) of the buildings) is \$515 million. The actual cost of the HEC may vary as the construction of the two buildings proceeds to completion.

Groundbreaking for the academic building occurred in October 2015, and construction is now approximately 95% complete and slightly ahead of schedule. Groundbreaking for the dental clinic occurred in October 2017 and construction is now approximately 85% complete. Phased occupancy of both buildings is scheduled to occur in April and May 2019. The University will have moved all pedagogical activities of the SOM, the Dental School and the Nursing School to the HEC for the semester beginning in June 2019. In connection with the move of the SOM, the Dental School and the Nursing School to the HEC, certain facilities currently occupied by the SOM, the Dental School and the Nursing School will be decommissioned or converted to other uses. The HEC will provide, net of such decommissioning and conversion, additional classroom and additional administrative space for the three schools.

CWRU is contributing philanthropic funds it had raised for new CWRU health education facilities prior to its agreement with Cleveland Clinic to establish the HEC. Cleveland Clinic has also made certain financial and in-kind contributions to the HEC and is providing interim funding of construction costs as needed.

CWRU and Cleveland Clinic are collaborating on fundraising to cover the remaining capital costs of the HEC. To date their efforts have raised approximately \$270 million (which amount includes approximately \$16.5 million from reserves CWRU had previously accumulated for a new Dental School building).

In the event that the amounts raised (by the combined CWRU and Cleveland Clinic fundraising) by September 1, 2020 do not cover the total costs of the HEC, CWRU has agreed to provide up to \$50 million over a five-year period beginning in 2021 with payments on January 1 of 2021 – 2025 to be applied towards total costs of the HEC. CWRU has established a reserve that is intended to be available to make any such payments and believes that any such payments will not have a material effect on the University's financial operations.

The costs of operating the HEC after opening will be shared by CWRU and Cleveland Clinic, with CWRU expected to pay a significantly larger share because of its greater proportionate use of the HEC. CWRU will also incur costs of approximately \$500,000 in Fiscal Year 2019 incident to moving the three schools from their present locations into the HEC. The University expects that the total operating costs of the SOM, the Dental School and the Nursing School after the move to the HEC will be higher than those schools' current operating costs. Those higher operating costs will begin in Fiscal Year 2020.

## Research at CWRU

CWRU's Carnegie Basic Classification is Doctoral University: Very High Research Activity. This classification is based on a formula that includes both aggregate and per-capita measures of research activity, including research and development expenditures, the number of research staff, and the number of doctorates awarded.

For Fiscal Year 2017, the most recent period for which complete information is available, CWRU ranked 39th among all institutions in the country (17th among private institutions) in federally financed expenditures for research and development in both science and non-science disciplines.

CWRU's total research and training revenues (including indirect cost recovery) over the last five Fiscal Years are shown below. These revenues include research and training revenues of CCLCM, which are included in the revenues and expenses of the University in accordance with applicable Generally Accepted Accounting Principles ("GAAP").

<u>Fiscal Year</u>	<u>Revenue (amounts rounded)</u>
2018	\$437,819,000
2017	424,728,000
2016	407,480,000
2015	385,927,000
2014	404,723,000

In Fiscal Year 2018, research accounted for approximately 43% of CWRU's operating revenues. Major sources of this support were the National Institutes of Health for support of biological and biomedical research, and the National Science Foundation for research in the physical sciences, social sciences and engineering. The University cannot predict future levels of research funding from these or other sources.

While all of CWRU's schools carry out contract research supported by federal agencies, foundations and business firms, the School of Medicine and the School of Engineering are the two major centers of supported scientific research.

CWRU participates in a number of partnerships, with both government agencies and private firms, to promote economic development based on technology originating on the campus, including several technology centers affiliated with the State of Ohio's Thomas Edison Program and Third Frontier initiative. CWRU has made significant investments in its technology transfer infrastructure over the past decade, with creation of a central office to analyze new invention disclosures, estimate market size for inventions with commercial potential, identify potential licensees, and negotiate licenses. In addition, CWRU has started a pre-seed stage venture capital fund, Case Technology Ventures, to be used to advance promising commercial ideas.

## **Faculty**

Excluding the School of Medicine and Department of Physical Education, CWRU had a full-time faculty of 688 for the 2018-19 academic year, of whom 389 (57%) have tenure. Of the full-time faculty members, approximately 92% hold the Ph.D. degree or the highest degree appropriate to their teaching assignment. The full-time faculty is augmented by more than 200 visiting faculty, lecturers, and adjunct faculty.

The School of Medicine has more than 2,800 full-time faculty members, and a comparable number of clinical (voluntary) faculty. Of this full-time faculty, approximately 9% have tenure, and almost all have Ph.D. or M.D. degrees, or both.

## **Employees**

As of June 30, 2018, CWRU had 4,247 full-time and part-time benefits-eligible employees, including faculty. CWRU believes that its employee relations are good. CWRU has one collective bargaining unit that represents six employees. There has never been a work stoppage by the University's employees.

## **Pension Plans**

CWRU's faculty and employees are covered by one of two pension plans.

Faculty and senior administrative staff, representing about 46% of the total pension participants, are covered by a defined contribution plan. There are two funding vehicles for this plan: individually owned annuity contracts purchased from Teachers Insurance and Annuity Association and College Retirement Equities Funds; and a "Section 403(b)(7)" plan through the Vanguard Fund. Contributions to these plans are made on a current basis according to a defined formula. Each employee is vested immediately.

Of the remaining staff employees, those hired prior to July 1, 2015, are covered under a defined benefit plan administered by Milliman, Inc. with TIAA-CREF serving as plan trustee. Employees become vested in plan benefits after three years of service. For Fiscal Year 2018, the University contributed \$14,223,152 to the plan. For Fiscal Year 2017, the University contributed \$10,532,077 to the plan. The University pays Pension Benefit Guaranty Corporation premiums from plan assets.

Staff employees not considered senior staff and hired on or after July 1, 2015 are covered by a defined contribution plan; *i.e.*, the defined benefit plan has been closed to new participants. Employees become vested in plan benefits after three years of service. The same investment vehicles available for the faculty plan are also available for this plan. Additionally, staff participants in the defined benefit plan and defined contribution plan are eligible to participate in a voluntary supplemental retirement plan, a 403(b) cash contribution plan, where CWRU provides a 50% match on tax deferred employee contributions, up to 4% of pay. The same investment vehicles available for the faculty plan are also available for this plan. The participation rate of eligible employees in the voluntary, supplemental plan is 70%. Each participating employee is vested immediately in the matching contributions.

CWRU's pension costs for both pension plans and the supplemental plan for Fiscal Years 2018 and 2017 totaled \$37.2 million and \$36.9 million, respectively.

### **Insurance**

The University maintains comprehensive insurance coverage on its assets. Buildings, other real property and equipment are insured on a replacement-value basis with a \$ 200,000 deductible. For the November 1, 2018 to November 1, 2019 policy period, the University is insured for an aggregate amount of \$ 2.7 billion, which includes business interruption insurance that protects the University against loss of income from closure caused by insured events. The University also maintains insurance coverage for personal injury and property damage under a comprehensive general liability policy with a \$ 100,000 self-insured retention and loss limits of \$ 1 million per occurrence and \$ 3 million general aggregate. It also carries other insurance policies for specific types of losses, and umbrella policies that increase this coverage substantially. The University considers these policies to be comparable to those carried by similar universities and businesses.

### **Membership in Athletic Associations**

CWRU is a member of the National Collegiate Athletic Association (NCAA Division III) and is a founding member of the University Athletic Association (the "UAA"), a group of independent, research-oriented universities that do not offer athletic scholarships. Other members of the UAA are Brandeis University, Carnegie Mellon University, University of Chicago, Emory University, New York University, University of Rochester and Washington University in St. Louis. No funds are generated from athletic competitions to the member institutions from broadcasting, advertising or promotion.

CWRU offers 17 varsity sports teams for both men and women.

### **Budgeting and Financial Management**

Academic programming and planning, budgeting and financial management are conducted within a decentralized structure of nine management centers: the College, the School of Engineering, CWRU's six professional schools and the central administration, "University General."

Financial planning begins in the fall each year with a review of institutional and school priorities. During this period, program priorities of the schools and the University are evaluated in context with financial assumptions about tuition rates, inflation, endowment yields and related issues.

The annual budgeting process for each Fiscal Year begins in the winter of the previous Fiscal Year. The Budget Office, working with senior administrative officers and management center Deans, makes estimates of enrollment and major income and expense categories. Recommended tuition and room and board rates are developed, reviewed with the University Budget Committee, and then recommended to the Board's Finance Committee for approval by the Board in February. Other CWRU guidelines are developed centrally, including salary increases, fringe benefit rates and spendable endowment income. These guidelines are transmitted to the Deans and administrative officers who prepare detailed budgets for their areas of responsibility.

These are collected, reviewed and consolidated into a University budget by the Budget Office, reviewed by the senior administrative officers and the Faculty Senate Finance Committee, revised where necessary, and submitted for approval to the Board's Finance Committee and the Board at its June meeting.

General fiscal control is exercised on a daily basis through the Controller. At the end of each quarter, each Dean and each responsible administrative officer prepares a budget forecast. These forecasts are reviewed by the Budget Office and reviewed with administrative officers. Corrective action is taken with each Dean or responsible administrator as may be appropriate to ensure that CWRU operates within budget limits and/or available income. CWRU administrators report quarterly to the Board on the status of performance against budget.

### **Unrestricted, Temporarily Restricted and Permanently Restricted Net Assets**

At June 30, 2018, unrestricted, temporarily restricted and permanently restricted net assets totaled, in accordance with the net asset reporting requirements of GAAP, \$229 million, \$1,067 million and \$1,101 million, respectively.

### **Gifts, Grants and Bequests**

The University began a major fundraising campaign in 2008, with a goal of \$1 billion. After an initial "quiet phase", the campaign was publicly announced in late 2011. After surpassing the initial \$1 billion goal, the University announced a new goal of \$1.5 billion in 2014. The new \$1.5 billion goal was surpassed in 2017, and the University completed the campaign in December 2018 having raised a total of \$1.82 billion.

During Fiscal Year 2018, CWRU received a record \$208 million in new gifts and pledge commitments, including numerous scholarships, fellowships, professorships and private support for research in all of the University's schools and the College. This amount includes will commitments, gifts related to grant agreements and other gifts and pledges not recognized in gift and pledge income in Fiscal Year 2018. Fundraising for current capital priorities included gifts to the Maltz Performing Arts Center, Sears Think[box], Mather Quad Renovations, the Lucia Smith Nash Walkway and the HEC (described above under **Health Education Campus**).

In addition, during Fiscal Year 2018, CWRU was awarded \$334 million in research, training and career grants from various funding sources, principally the National Institutes of Health (\$192 million). Awards from industry totaled \$14 million, and non-profit organizations contributed \$64 million, of which \$28 million is from government contracts to other nonprofit organizations, primarily universities. Other federal agencies made grants of \$53 million, and state and other non-federal government sources totaled \$10 million. Grant amounts referred to in this paragraph exclude awards to CCLCM.

### **Investment Assets**

CWRU's long-term investment assets ("Combined Investments"), including the University's endowment assets and certain other specified assets, had a total market value as of June 30, 2018 of \$2,050.1 million. Combined Investments are held in various places: Pooled Investments, which are actively managed by CWRU's Investment Office, of \$1,447.2 million;

funds held in trust and managed by others of \$347.5 million; and other investments of \$255.4 million. Of the total Combined Investments, \$1,539.3 million were endowment and other donor-restricted funds.

The following table shows the market value at Fiscal Year-end of CWRU's Combined Investments for the most recent five Fiscal Years:

<b><u>Fiscal Year</u></b>	<b><u>Market Value of Combined Investments (amounts rounded)</u></b>
2018	\$2,050,100,000
2017	1,920,900,000
2016	1,771,300,000
2015	1,902,100,000
2014	1,853,900,000

The following table shows the market value at Fiscal Year-end of CWRU's Pooled Investments for the most recent five Fiscal Years and the total return on Pooled Investments, including dividends, interest and realized and unrealized gains and net of all expenses, for each of those Fiscal Years.

<b><u>Fiscal Year</u></b>	<b><u>Market Value of Pooled Investments (amounts rounded)</u></b>	<b><u>Total Annual Return on Pooled Investments</u></b>
2018	\$1,447,200,000	9.15%
2017	1,356,700,000	12.43
2016	1,331,300,000	(3.45)
2015	1,422,100,000	4.77
2014	1,374,800,000	15.96

#### **Distribution Policy Relating to Endowment and Other Assets**

Distributions from the University's Combined Investments are governed by various policies. Different categories of Combined Investments are governed by different policies. These categories generally are endowment funds, funds held in trust by others, other endowment assets and certain other funds of the University. The Pooled Investments represent approximately 71% of the Combined Investments and are managed by the University. The Board's Investment Committee each year sets the rate for distributions from endowment funds held in the Pooled Investments, taking into account market fluctuations and inflation adjustments. For Fiscal Years 2017, 2018 and 2019, the approved distribution rates are 4.91%, 4.75% and 4.60%, respectively, of the market value of Pooled Investments.

Distributions from funds held in trust by others (which represent approximately 17% of the Combined Investments) are in most cases capped at 5% of annual market value, and the amounts distributed are not determined by the University but by the trustees of those funds. Other endowment investments (which represent approximately 8% of the Combined Investments) are

unpooled endowments governed by a variety of market-value-based spending policies established primarily by the donors. The remainder of Combined Investments consists of funds designated by the University, and distributions are governed by policies established from time to time by the University.

Due to various donor restrictions on how endowments may be used, all endowment distributions are not necessarily spent in the year that they are distributed. Such unused distributions are carried in designated operating funds, which may be invested in Pooled Investments, until such time as the restrictions are met.

The table below presents authorized distributions and expenditures from the Combined Investments, and the percentage of the beginning market value (“BMV”) of Combined Investments for each, for each of the Fiscal Years indicated.

<u>Fiscal Year</u>	<u>Authorized Distributions</u>		<u>Amounts Expended</u>	
	<u>(millions)</u>	<u>% of BMV</u>	<u>(millions)</u>	<u>% of BMV</u>
2018	\$77.9	4.05%	\$84.0	4.37%
2017	81.1	4.58	79.1	4.47
2016	84.1	4.42	82.6	4.34
2015	79.0	4.26	83.2	4.49
2014	81.6	4.84	80.7	4.79

The portion of the authorized distributions and expenditures from the Combined Investments which is attributable solely to the Pooled Investments, and the percentage of the BMV of Pooled Investments for each, is presented below for each of the Fiscal Years indicated.

<u>Fiscal Year</u>	<u>Authorized Distributions</u>		<u>Amounts Expended</u>	
	<u>(millions)</u>	<u>% of BMV</u>	<u>(millions)</u>	<u>% of BMV</u>
2018	\$59.6	4.39%	\$67.0	4.94%
2017	62.4	4.69	61.1	4.59
2016	66.0	4.64	65.2	4.54
2015	61.6	4.48	66.1	4.81
2014	64.8	4.94	64.0	4.88

The Board annually has authorized an additional distribution from the Pooled Investments to support the current development activities. For Fiscal Year 2019, the Board authorized a distribution of \$6.0 million for this purpose. The amounts withdrawn pursuant to such Board authorizations for prior years are:

<u>Fiscal Year</u>	<u>Distribution</u>
2018	\$6,000,000
2017	6,000,000
2016	6,000,000
2015	5,900,000
2014	6,500,000



## Outstanding Indebtedness

The University has previously incurred debt, including bonds issued by the Ohio Higher Educational Facility Commission (the “Commission”), for the purposes of financing various facilities and for refunding bonds or other evidences of indebtedness issued for those purposes. The University has never failed to pay punctually in full all amounts due for principal and interest on its indebtedness.

The outstanding principal amount of bonds issued by the Commission for the University totals \$446,105,000 as of February 28, 2019 and consists of the following:

	<b><u>Calendar Year Issued</u></b>	<b><u>Original Amount Issued</u></b>	<b><u>Principal Amount Outstanding</u></b>	<b><u>Final Maturity Fiscal Year</u></b>
Series 1990 Bonds	1990	\$ 21,530,000	\$ 4,365,000	2021
Series 2006 Bonds	2006	82,490,000	40,340,000	2027
Series 2012A Bonds	2012	28,345,000	15,670,000	2024
Series 2013A Bonds	2013	42,120,000	20,435,000	2024
Series 2014A Bonds	2014	67,500,000	67,500,000	2045
Series 2015A Bonds	2015	51,630,000	45,375,000	2035
Series 2016 Bonds	2016	166,450,000	163,640,000	2041
Series 2018 Bonds	2018	88,780,000	88,780,000	2031

The University also has Other Notes Payable outstanding at February 28, 2019 in the principal amount of \$112,500.

The University has two separate lines of credit with commercial banks in the aggregate amount of \$100,000,000. No amount is currently outstanding under the lines of credit. The University draws on its operating lines to support operations, smoothing out the cyclical flow of revenue.

## Interest Rate Hedges

The University is a party to several interest rate swap transactions, all with the same counterparty, with a total notional amount of \$72,510,000. The aggregate termination value of those swap transactions as of March 5, 2019 is (\$11,315,364). In accordance with the requirements of the swap contracts, the University posts collateral to the swap counterparty when the aggregate negative valuation of the swap transactions exceeds \$20,000,000. The University has not posted collateral on its swaps since November 20, 2016.

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**APPENDIX B**

**CASE WESTERN RESERVE UNIVERSITY FINANCIAL REPORT OF 2018,  
INCLUDING CONSOLIDATED FINANCIAL STATEMENTS FOR THE  
FISCAL YEAR ENDED JUNE 30, 2018  
(WITH REPORT OF INDEPENDENT AUDITORS THEREON)**

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# 2018

## FINANCIAL REPORT



CASE WESTERN RESERVE  
UNIVERSITY EST. 1826

think beyond the possible™

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*Cover: The Nord Family Greenway is a 2,200-foot-long expanse that connects Case Western Reserve University's main and west campuses. The 15-acre commons, made possible by broad and generous philanthropic collaboration offers open-air spaces suited to performances, picnics and even quiet contemplation. Most of all, it is a permanent, living invitation to those beyond University Circle to explore not only the greenway itself, but the dozens of arts and cultural institutions that fill the roughly square-mile district. It is named in honor of the project's lead donors, the Eric and Jane Nord Family..*

This document may also be found at: <https://case.edu/finance>

# DISCUSSION OF FINANCIAL RESULTS

Case Western Reserve University (the “University”) continued to produce positive financial results during Fiscal Year 2018 (FY18), reflecting over a decade of solid financial performances.

The University’s FY18 financial plan continued to focus on maintaining momentum in core operating results, strengthening the balance sheet, and generating new funding for strategic capital projects by philanthropy. The results were a \$34 million or 3.4% operating margin on a Generally Accepted Accounting Principles (GAAP) basis; an increase in total net assets of \$111 million; and another record setting year in attainment with \$208 million in new gifts and pledges.

Following are additional comments related to the university’s operations and financial results, with *Selected Financial Data* shown on page 7.

## FY18 FINANCIAL HIGHLIGHTS

### Solid Core Operating Results

The University’s management of resources produced a net operating activity of \$34 million or a 3.4% operating margin reflected on the *Statement of Activities* (GAAP Basis). Likewise, the *Statement of Operations* (unaudited, management view) reports a positive operating indicator, an operating surplus, of \$9.0 million, which is also positive compared against the FY18 operating budget. Both net operating activity and operating surplus have been positive for over a decade. See *Selected Financial Data* on page 7 for more information.

### Strengthened Financial Position - Balance Sheet

The University’s *Statement of Financial Position*, the balance sheet, reflects a year of positive growth as indicated by an increase in total assets of \$95 million combined with a reduction of total liabilities of \$16 million yielding an increase in total net assets of \$111 million. Working capital initiatives, stronger investment returns, continued flow of new capital pledges, refinanced long term debt, expiration of interest rate swaps and the reduction of accrued pension liability all contributed to a stronger balance sheet.

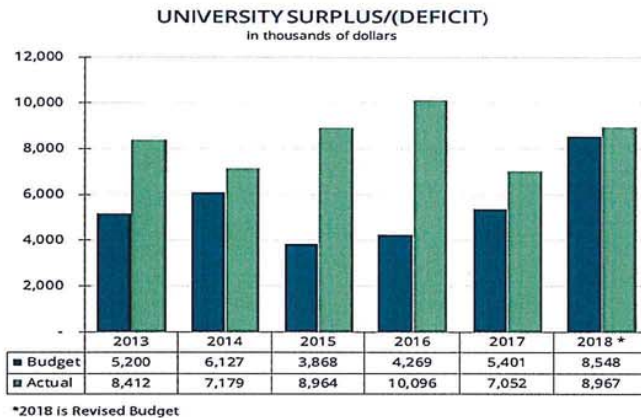
### Record-breaking Attainment Level

The generosity of university donors once again produced a record year in attainment of \$208 million in FY18. The total represents a 15% increase over the prior year. Attainment has increased in each of the last ten years. In FY18, the University received gifts from 18,000 donors, totaling \$113 million as reported on a cash basis. Realized gifts and pledges of \$69 million are reported in the *Statement of Activities* (GAAP basis).

# STATEMENT OF OPERATIONS *unaudited*

The University manages its daily operations using a *Statement of Operations* (management view) that is prepared on a modified-cash basis and presented by natural account class; it is unaudited. The *Statement of Operations* measures and reports the organization's management center-based activities. It excludes non-operating transactions, depreciation expense, differs in its treatment of capital, and excludes most restricted funds transactions (e.g. restricted gift revenue).

The University produced a total surplus of \$9.0 million in FY18, compared to a revised budgeted surplus of \$8.5 million and a \$7.1 million surplus in FY17. FY18 marked the eleventh consecutive year of positive operating results.



The FY18 operating results reflect increasing research and training revenue along with increased tuition revenues.

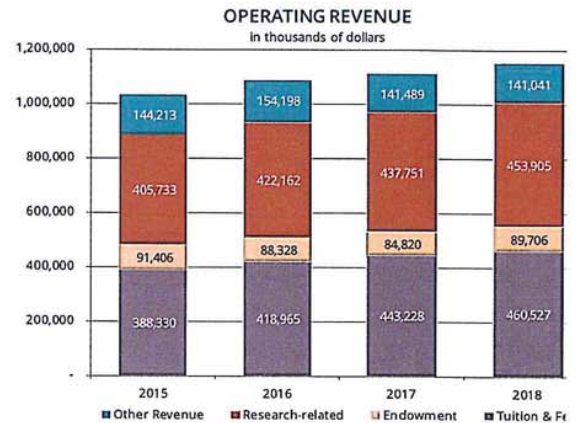
## MANAGEMENT CENTER OPERATING REVENUES

Operating revenues are classified in four categories: Tuition and Fees, Endowment, Research-related, and Other Revenue. The University reported \$1.145 billion in total revenue, a \$38 million or 3% increase over FY17.

Gross tuition and fees revenue was \$460 million, a \$17 million or 4% increase over FY17. Gross undergraduate tuition was \$220 million, an \$8 million or 4% increase over FY17. The increase is a net of a 3.25% rate increase offset by a 1% increase in the discount rate. The University changed its undergraduate financial aid policy to a meet full need basis in FY18. Professional and graduate program gross tuition, along with summer programs and fees, was \$241 million, a \$10 million or 4% increase over FY17.

Endowment revenue used by operations was \$90 million, a \$5 million or 6% increase over FY17.

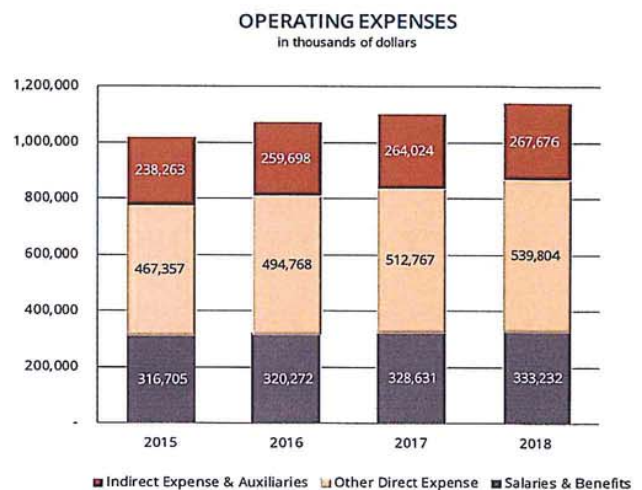
Research-related revenues (Research & Training, Overhead Recovery, and Restricted Gifts) were \$454 million, a \$16 million or 4% increase over FY17.



Other revenue was \$141 million, which is unchanged from FY17.

## MANAGEMENT CENTER OPERATING EXPENSES

Operating expenses were \$1.141 billion, a \$36 million or 3% increase over FY17. Expenses are categorized as Salaries and Benefits, Other Direct, and Indirect Expense and Auxiliaries.



Salaries and benefits were \$333 million, a \$5 million or 2% increase over FY17. Other direct expense was \$540 million, a \$27 million or 5% increase over FY17. Indirect expense and auxiliaries were \$268 million, a \$4 million or 2% increase over FY17.

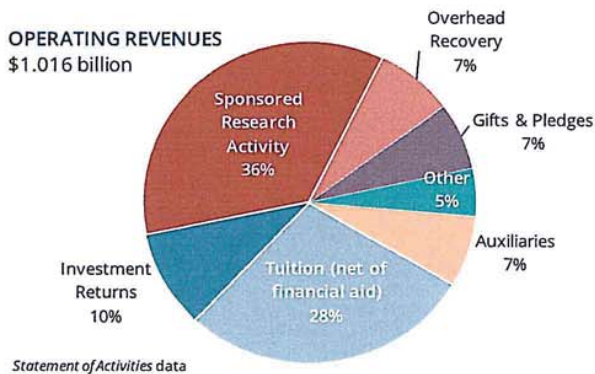


# CONSOLIDATED STATEMENT OF ACTIVITIES

The *Statement of Activities* (GAAP basis) includes consolidated results from the University's operating and non-operating activities which produced a positive change in net assets. In FY18, operating activity contributed \$34 million to net assets.

## OPERATING REVENUES

Total operating revenues were \$1.016 billion, a decrease of \$6 million or less than 1% from FY17. The components of the University's revenues are shown below and additional detail of operating revenue follows.



### Tuition income

Gross tuition income of \$471 million increased \$19 million or 4% over FY17, and includes fees and undergraduate, graduate, summer, and professional tuition. Gross tuition income is offset in part by financial aid awarded; the financial aid offset for FY18 was \$182 million, resulting in net tuition of \$289 million, or 28% of operating revenues.

The net tuition and fees income of \$289 million represents a \$11 million or 4% increase over FY17, with increased revenues generated by an increase in tuition rates and from higher student enrollment.

### Investment returns

Investment returns included \$67 million in returns distributed from the long-term investment pool, \$16 million in returns on operating investments, and \$16 million in distributions from funds held by others (FHBO) for endowment spending. Investment returns, which represent 10% of operating revenues, totaled \$99 million, an increase of \$2 million or 2% over FY17.

### Grants and contracts

Grants and contracts revenue includes awards to Case Western Reserve University and also its affiliates, most notably the Cleveland Clinic Lerner College of Medicine ("CCLCM").

Grants and contracts received for research and training purposes totaled \$361 million, including \$100 million in CCLCM awards. This amount reflects an increase of \$11 million or 3% over FY17. The total represents 36% of overall University operating revenues. This increase corresponds with an increase in research operating expenses.

### Overhead cost recovery

Facilities and administrative cost recovery applicable to federally sponsored projects and all other sponsored activity was \$77 million in FY18, a \$2 million or 3% increase over FY17. Overhead recovery represents 7% of operating revenues.

### Gifts and pledges

Gifts and pledges income was \$69 million, a decrease of \$27 million or 28% from FY17. Gifts and pledges, which represent 7% of operating revenues, are recorded in the appropriate asset category when received.

### Other revenue

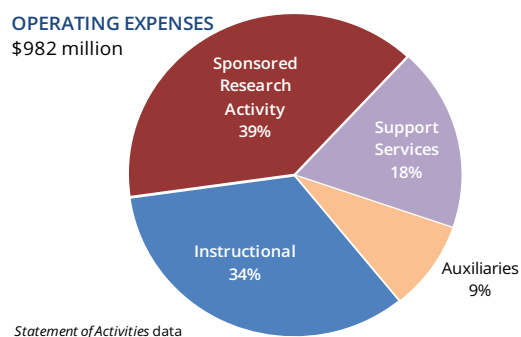
Other revenue of \$49 million decreased \$5 million or 10% from FY17. Other revenue represents 5% of operating revenues and includes the State of Ohio appropriation, Organized Activities, and Other Sources.

### Auxiliaries

Auxiliaries revenue of \$73 million increased \$264 thousand or less than 1% over FY17. Auxiliaries revenue is categorized as either "Student," which is largely Housing, Food, and Health Services, totaling \$63 million, or "Other," including Rental Properties and Parking, totaling \$10 million for FY18. Auxiliaries revenue represents 7% of operating revenues.

## OPERATING EXPENSES

Total expenses of \$982 million increased \$23 million or 2% over FY17. The components of the University's expenses are shown below and additional detail of operating expenses follows.



**Instructional costs** of \$332 million, represents 34% of operating expenses, increased by \$10 million or 3% over FY17. Included in direct instructional costs are faculty and staff salaries and benefits.

**Sponsored research activity** of \$386 million, represents 39% of operating expenses, increased \$11 million or 3% over FY17. Sponsored research activity includes sponsored research and training, other sponsored projects, and CCLCM research and training expenses.

**Support services** costs of \$181 million, represents 18% of operating expenses, including libraries, student services, and university services, increased \$4 million or 2% over FY17. The increase is primarily in university services due to an increase in benefit expenses.

**Auxiliaries** expenses of \$83 million, represents 9% of operating expenses, decreased \$2 million or 2% over FY17. The decrease came from auxiliaries-other.

## NON-OPERATING ACTIVITIES

Non-operating activities increased net assets by \$77 million, a \$67 million decrease from FY17. Most of the decrease is due to financial market fluctuations. Long-term investment activities (investment income and net appreciation) resulted in a \$137 million increase in net assets. Other non-operating activities (investment returns distributed for operations, changes in liabilities due under life-income agreements, pension plan changes other than periodic benefit costs, and loss on disposal of plant assets) resulted in a \$60 million decrease in net assets.

## THE UNIVERSITY'S ENDOWMENT

Case Western Reserve University's investment pool consist of a group of funds, including the endowment funds, funds functioning as endowments (also referred to as *quasi-endowment*), Board-designated funds, and operating funds, that are invested in a broadly diversified portfolio. The total investment return for the investment pool, net of external manager fees, approximated 9.15% (2018) and 12.43% (2017). Additional detail on the investment pool is shown in *Footnote 5*.

The University's combined endowment, the purpose of which is to generate revenue in perpetuity, is comprised of funds invested and managed by the University, that includes endowment funds and quasi-endowments (referred to as the *endowment pool*) and funds invested and managed outside the University (referred to as *funds held in trust*). The University's combined endowment at June 30, 2018 and 2017 is shown in the table below:

(in thousands)	2018	2017
Endowment Pool:		
Donor-restricted	\$ 1,173,633	\$ 1,118,540
Donor-purpose restricted	296,604	288,060
Quasi-endowment	69,065	54,637
Funds held in trust (FHBO)	347,459	337,553
<b>Total combined endowment</b>	<b>\$ 1,886,761</b>	<b>\$ 1,798,790</b>
<b>Change in market value</b>	<b>4.89%</b>	<b>8.18%</b>

Activities and total investment return for the combined endowment for the years ending June 30, 2018 and 2017 are shown in the table below:

(in thousands)	2018	2017
Beginning combined endowment	\$ 1,798,790	\$ 1,662,739
Additions	27,459	28,984
Spending distribution	(83,115)	(77,861)
Campaign support	(6,000)	(6,000)
Operating support	(3,239)	(3,550)
Other	(222)	(324)
Appreciation (depreciation) and investment income	153,088	194,802
<b>Ending combined endowment</b>	<b>\$ 1,886,761</b>	<b>\$ 1,798,790</b>
<b>Combined endowment investment return</b>	<b>9.24%</b>	<b>12.69%</b>

## CHANGE IN NET ASSETS

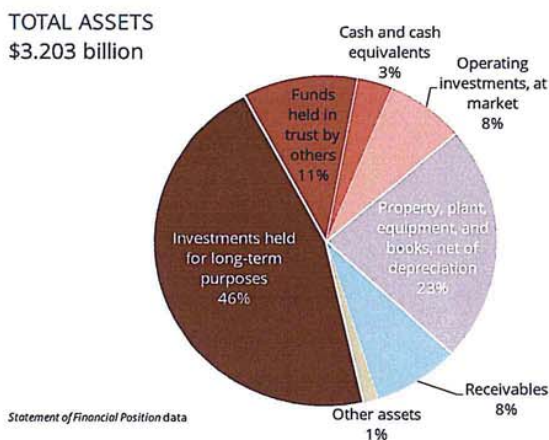
The combined net operating activity of \$34 million and net non-operating activity of \$77 million resulted in an increase in net assets of \$111 million or 5% over FY17.

# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

The University's *Statement of Financial Position* reflect total assets of \$3.203 billion with a primarily sizable cash and investment balance of \$2.155 billion.

## ASSETS

Total cash and investments of \$2.155 billion, including cash and cash equivalents, operating investments, long-term investments, and funds held by others, combined total 67% of University assets. Property, plant, equipment and books represent an additional \$742 million or 23% of assets. Total assets increased \$95 million or 3% over FY17.



### Cash and cash equivalents

The University actively manages its cash and cash equivalents to maintain targeted levels of working capital in highly liquid assets to meet daily operating requirements. Working capital and board designated funds in excess of the liquidity target are retained in operating investments to produce a higher investment return.

The University's cash position on June 30 was \$105 million, a decrease of \$38 million or 27% from FY17. Cash equivalents include all highly liquid investments with original purchase maturity of 90 or fewer days, and appropriated endowment income which may be spent on demand.

### Operating investments, at market

The University's operations were supported by \$239 million of operational investments in addition to cash and cash equivalents. These investments generally have a maturity of greater than 90 days but may be liquidated on demand. Operating investments increased \$51 million or 27% over FY17.

### Receivables

Receivables include net accounts and loans receivable as well as net pledges receivable. In total, the University had \$264 million in receivables, which represent 8% of assets. Receivables increased \$11 million or 5% over FY17.

### Investments held for long-term purposes

Long-term investments of \$1.464 billion increased \$68 million or 5% over FY17. Because a majority of the University's long-term investments are endowments or similar funds, the Board of Trustees' annually-approved endowment spending allocation and support for certain development-related activities had an impact of approximately \$65 million on long-term investments in FY18.

### Funds held by others

Funds held in trust by others of \$347 million increased \$10 million or 3% over FY17.

### Property, plant, equipment, and library books

Property, plant, equipment, and library books, net of depreciation, constitute 23% of the University's assets, totaling \$742 million for FY18. Net plant assets decreased \$15 million or 2% from FY17.

## LIABILITIES

Total liabilities of \$806 million decreased \$17 million or 2% from FY17.

### Retirement plans

The University provides defined benefit and defined contribution pension plans for its faculty and staff. The pension plan discount rate for the defined benefit plan of 4.35% in FY18 increased over FY17. The University's accrued pension liability decreased \$12 million from FY17, to a total accrued pension liability of \$90 million in FY18.

## Debt

Total liability on notes and bonds payable, including the line of credit and unamortized bond premium and issuance costs, remained flat year over year at \$531 million. The line of credit balance was \$22 million higher, offset by scheduled principal payments of \$18 million and scheduled bond premium amortization of \$4 million.

The University restructured a portion of its debt portfolio in FY18 to refund the 2015B bonds (\$73 million) and to close the commercial paper program (\$30 million). The restructuring lowered the proportion of the portfolio's variable rate debt from 35% to 15% and smoothed out the debt service in later years. The University's remaining variable rate debt of \$68 million is synthetically fixed with four floating-to-fixed rate swaps totaling \$73 million. The 2018 refinancing included bond premium of \$14.5 million. The restructuring, along with scheduled principal payments and premium amortization, reduced the University's total long-term indebtedness to \$461 million in FY18 from \$493 million in FY17.

## NET ASSETS

In FY18, the University's total net assets increased \$111 million or 5% over FY17 to \$2.397 billion.

CHANGE IN NET ASSETS		
(in thousands)	2018	2017
Beginning net assets	\$ 2,286,160	\$ 2,077,928
Increase in net assets	111,142	208,232
Ending net assets	\$ 2,397,302	\$ 2,286,160

## Unrestricted net assets

Unrestricted net assets increased \$23 million or 11% over FY17 to \$229 million. Net operating activity added \$33 million and net non-operating activity decreased net assets by \$10 million.

## Temporarily restricted net assets

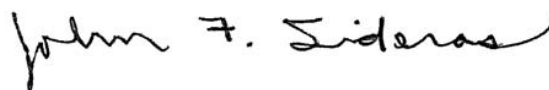
Temporarily restricted net assets increased \$54 million or 5% over FY17 to \$1.067 billion. The University received \$23 million of new temporarily restricted gifts and pledges and \$47 million in net assets released from restrictions in net operating activity. Non-operating activity increased temporarily restricted net assets by \$107 million from long-term investment activities and decreased temporarily restricted net assets by \$30 million in assets released from restrictions.

## Permanently restricted net assets

Permanently restricted net assets increased \$34 million or 3% over FY17 to \$1.101 billion. The University received \$25 million of new permanently restricted gifts and pledges and \$1 million in net assets released from restrictions in net operating activity. Non-operating activity increased permanently restricted net assets by \$9 million, primarily from long-term investment activities.

## PROSPECTIVE DISCUSSION

The University expects to maintain a positive operating position as reflected in its FY19 operating budget surplus of \$5 million. The Class of 2022 is the largest and most academically qualified in the university's history. Lastly, senior leadership is continuously engaged in improving operating performance using a disciplined approach.



John F. Sideras, CPA  
Senior Vice President and Chief Financial Officer

# SELECTED FINANCIAL DATA *unaudited*

Fiscal Years Ended June 30

*in thousands of dollars*

	2018	2017	2016	2015
<b>STATEMENT OF OPERATIONS HIGHLIGHTS - Management View</b>				
Total revenue	\$ 1,145,179	\$ 1,107,288	\$ 1,083,653	\$ 1,029,682
Total expense	1,140,712	1,105,422	1,074,738	1,022,325
Operating margin	4,467	1,866	8,915	7,357
Retained surplus use	4,500	5,186	1,181	1,607
Surplus	\$ 8,967	\$ 7,052	\$ 10,096	\$ 8,964

## STATEMENT OF ACTIVITIES HIGHLIGHTS - GAAP Basis

Tuition and fees (net of student aid)	\$ 289,278	\$ 278,258	\$ 255,613	\$ 233,564
Investment, FHBO, and operational returns	99,354	97,537	88,011	95,288
Grants and contracts	361,177	350,171	335,208	315,316
Facilities and administrative cost recovery	76,642	74,557	72,272	70,611
Gifts and pledges	68,678	95,779	131,513	87,542
Other revenue	48,523	53,933	68,608	63,034
Auxiliary services	72,645	72,381	70,031	65,287
Total operating revenue	1,016,297	1,022,616	1,021,256	930,642
Instructional expenses	331,878	322,242	311,880	305,429
Sponsored research activity	386,071	374,671	363,077	348,381
Support services	180,568	176,230	162,105	146,278
Auxiliary services	83,370	85,311	78,582	74,216
Total operating expense	981,887	958,454	915,644	874,304
Net operating activity	\$ 34,410	\$ 64,162	\$ 105,612	\$ 56,338
Long-term investment activities	137,252	190,376	(91,469)	50,567
Other non-operating activities	(60,520)	(46,306)	(108,805)	(84,999)
Net non-operating activities	\$ 76,732	\$ 144,070	\$ (200,274)	\$ (34,432)
Change in net assets	\$ 111,142	\$ 208,232	\$ (94,662)	\$ 21,906

## FINANCIAL POSITION HIGHLIGHTS

Cash and cash equivalents	\$ 105,409	\$ 143,589	\$ 139,344	\$ 143,096
Operating investments, at market	238,988	187,904	160,195	148,105
Receivables	263,526	252,142	229,157	203,933
Investments (held for long-term purposes)	1,463,671	1,395,449	1,298,508	1,417,187
Funds held in trust by others	347,459	337,553	312,635	336,825
Property, plant, equipment, and books, net of depreciation	742,416	757,082	776,317	766,094
Prepaid expenses and other assets	41,899	35,013	32,700	6,634
Total assets	\$ 3,203,368	\$ 3,108,732	\$ 2,948,856	\$ 3,021,874
Total liabilities	\$ 806,066	\$ 822,572	\$ 870,928	\$ 849,284
Total net assets	\$ 2,397,302	\$ 2,286,160	\$ 2,077,928	\$ 2,172,590

## OTHER FINANCIAL INFORMATION

Net investments (including FHBO), at fair value	\$ 2,050,118	\$ 1,920,906	\$ 1,771,338	\$ 1,902,117
Investments payout in support of operations	\$ 83,115	\$ 77,861	\$ 81,675	\$ 83,434
Total gifts and pledges (attainment)	\$ 207,973	\$ 181,187	\$ 174,136	\$ 166,914
Total gifts - cash basis	\$ 113,178	\$ 113,983	\$ 158,454	\$ 133,423

## STUDENTS

Enrollment *				
Undergraduate	5,035	5,044	5,053	4,814
Post-Baccalaureate	5,882	5,776	5,534	5,316

\*Enrollment for fall semester of fiscal year in FTEs



## Report of Independent Auditors

To the Board of Trustees  
Case Western Reserve University:

We have audited the accompanying consolidated financial statements of Case Western Reserve University, which comprise the consolidated statement of financial position as of June 30, 2018 and 2017, and the related consolidated statement of activities for the year ended June 30, 2018 and of cash flows for the years ended June 30, 2018 and 2017.

### ***Management's Responsibility for the Consolidated Financial Statements***

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the University's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Case Western Reserve University as of June 30, 2018 and 2017, and the changes in their net assets for the year ended June 30, 2018 and their cash flows for the years ended June 30, 2018 and 2017 in accordance with accounting principles generally accepted in the United States of America.



***Other Matter***

We previously audited the consolidated statement of financial position as of June 30, 2017, and the related consolidated statement of activities (not presented herein) and of cash flows for the year then ended, and in our report dated October 14, 2017, we expressed an unmodified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying summarized financial information as of June 30, 2017 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

*PricewaterhouseCoopers LLP*

Cleveland, OH  
October 20, 2018

# CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

<i>In thousands of dollars</i>	June 30	
	2018	2017
<b>ASSETS</b>		
Cash and cash equivalents	\$ 105,409	\$ 143,589
Operating investments	238,988	187,904
Accounts and loans receivable, net	116,725	106,965
Pledges receivable, net	146,801	145,177
Prepaid expenses and other assets	41,899	35,013
Investments, held for long-term purposes	1,463,671	1,395,449
Funds held in trust by others	347,459	337,553
Property, plant, equipment and books, net	742,416	757,082
<b>TOTAL ASSETS</b>	<b>\$ 3,203,368</b>	<b>\$ 3,108,732</b>
<b>LIABILITIES AND NET ASSETS</b>		
<b>LIABILITIES</b>		
Accounts payable and accrued expenses	\$ 63,221	\$ 61,267
Deferred income and other liabilities	52,311	59,713
Annuities payable	35,141	34,241
Refundable advances	7,528	6,127
Accrued pension liability	89,893	101,817
Notes and bonds payable	531,244	531,184
Refundable federal student loans	26,728	28,223
<b>TOTAL LIABILITIES</b>	<b>\$ 806,066</b>	<b>\$ 822,572</b>
<b>NET ASSETS</b>		
Unrestricted	\$ 228,685	\$ 205,826
Temporarily restricted	1,067,412	1,012,836
Permanently restricted	1,101,205	1,067,498
<b>TOTAL NET ASSETS</b>	<b>\$ 2,397,302</b>	<b>\$ 2,286,160</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$ 3,203,368</b>	<b>\$ 3,108,732</b>

The accompanying notes are an integral part of the consolidated financial statements.



# CONSOLIDATED STATEMENT OF ACTIVITIES

with summarized financial information for the year ended June 30, 2017

<i>In thousands of dollars</i>	Unrestricted	Temporarily Restricted	Permanently Restricted	For the year ended June 30	
				2018	2017
<b>OPERATING REVENUES</b>					
Student tuition and fees	\$ 470,870			\$ 470,870	\$ 451,874
Less: Student aid	(181,592)			(181,592)	(173,616)
	289,278			289,278	278,258
Investment returns distributed for operations	67,157			67,157	62,044
FHBO returns distributed	14,692	\$ 1,266		15,958	15,817
Investment returns on operating investments	16,239			16,239	19,676
Grants and contracts	261,210			261,210	253,861
CCLCM grants and contracts	99,967			99,967	96,310
Gifts and pledges	20,692	22,864	\$ 25,122	68,678	95,779
State of Ohio appropriation	2,575			2,575	2,734
Facilities and administrative cost recovery	76,642			76,642	74,557
Organized activities	12,659			12,659	11,960
Other sources	33,125		164	33,289	39,239
Auxiliary services - students	62,795			62,795	62,681
Auxiliary services - other	9,850			9,850	9,700
Net assets released from restrictions	47,482	(46,579)	(903)	-	
<b>TOTAL OPERATING REVENUES</b>	<b>\$ 1,014,363</b>	<b>\$ (22,449)</b>	<b>\$ 24,383</b>	<b>\$ 1,016,297</b>	<b>\$ 1,022,616</b>
<b>OPERATING EXPENSES</b>					
Instructional	331,878			331,878	322,242
Sponsored research and training	261,605			261,605	252,592
Other sponsored projects	24,499			24,499	25,769
CCLCM research and training	99,967			99,967	96,310
Libraries	22,815			22,815	22,500
Student services	33,120			33,120	30,802
University services	124,633			124,633	122,928
Auxiliary services - students	70,412			70,412	69,506
Auxiliary services - other	12,958			12,958	15,805
<b>TOTAL OPERATING EXPENSES</b>	<b>\$ 981,887</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 981,887</b>	<b>\$ 958,454</b>
<b>NET OPERATING ACTIVITY</b>	<b>\$ 32,476</b>	<b>\$ (22,449)</b>	<b>\$ 24,383</b>	<b>\$ 34,410</b>	<b>\$ 64,162</b>
<b>NON-OPERATING ACTIVITIES</b>					
Long-term investment activities					
Investment income	\$ 7,041	\$ 59,250	\$ 3,523	\$ 69,814	\$ 19,943
Net appreciation	9,902	48,196	9,340	67,438	170,433
Total long-term investment activities	16,943	107,446	12,863	137,252	190,376
Investment returns distributed for operations	(67,157)			(67,157)	(62,044)
Change in liabilities due under life-income agreements	(19)		(3,539)	(3,558)	2,020
Loss on disposal of plant assets	(1,827)			(1,827)	(2,382)
Pension plan changes other than periodic benefit costs	12,022			12,022	16,100
Net assets released from restrictions	30,421	(30,421)		-	
<b>NET NON-OPERATING ACTIVITY</b>	<b>\$ (9,617)</b>	<b>\$ 77,025</b>	<b>\$ 9,324</b>	<b>\$ 76,732</b>	<b>\$ 144,070</b>
<b>CHANGE IN NET ASSETS</b>	<b>\$ 22,859</b>	<b>\$ 54,576</b>	<b>\$ 33,707</b>	<b>\$ 111,142</b>	<b>\$ 208,232</b>
Beginning Net Assets	205,826	1,012,836	1,067,498	2,286,160	2,077,928
<b>ENDING NET ASSETS</b>	<b>\$ 228,685</b>	<b>\$ 1,067,412</b>	<b>\$ 1,101,205</b>	<b>\$ 2,397,302</b>	<b>\$ 2,286,160</b>

The accompanying notes are an integral part of the consolidated financial statements.

# CONSOLIDATED STATEMENTS OF CASH FLOWS

<i>In thousands of dollars</i>	For the year ended	
	June 30	
	2018	2017
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Change in net assets	\$ 111,142	\$ 208,232
<i>Adjustments to reconcile change in net assets to net cash (used for) provided by operating activities:</i>		
Depreciation	67,880	68,344
Amortization of bond issuance costs	235	208
Amortization of bond premiums	(4,132)	(3,184)
Loss on debt refunding and defeasance		601
Realized and unrealized net gains on investments	(138,577)	(178,438)
Increase (decrease) to annuities payable resulting from actuarial adjustments	3,558	(2,020)
Gifts of property and equipment	(123)	(49)
Loss on disposal of plant assets	1,827	2,382
Contributions restricted for long-term investment	(18,163)	(19,931)
(Increase) decrease in accounts and loans receivable, net	(11,323)	5,692
Increase in pledges receivable, net	(1,624)	(30,623)
Increase in prepaid expenses and other assets	(6,886)	(2,313)
Increase in funds held in trust by others	(9,906)	(24,918)
Increase in accounts payable and accrued expenses	4,294	3,108
(Decrease) increase in deferred income and other liabilities	(7,402)	3,671
Increase in refundable advances	1,400	1,372
Decrease in accrued pension liability	(11,924)	(11,699)
<b>NET CASH (USED FOR) PROVIDED BY OPERATING ACTIVITIES</b>	<b>\$ (19,724)</b>	<b>\$ 20,435</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Student loans		
Collected	\$ 7,683	\$ 7,834
Issued	(6,120)	(5,887)
Decrease (increase) in donor-restricted cash for long-term investment	22,978	(3,019)
Proceeds from the sale of investments	1,477,316	2,924,537
Purchase of investments	(1,458,045)	(2,870,749)
Proceeds from the sale of plant assets	560	415
Purchases of property, plant, equipment and books	(57,817)	(49,162)
<b>NET CASH (USED FOR) PROVIDED BY INVESTING ACTIVITIES</b>	<b>\$ (13,445)</b>	<b>\$ 3,969</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Decrease in federal advances for student loans	\$ (1,496)	\$ (588)
Contributions restricted for long-term investment	10,077	15,690
Distributions restricted for long-term investment	(22,978)	
Proceeds from the sale of investments received as gifts	8,086	7,260
Proceeds from short-term debt	213,000	157,600
Repayment of short-term debt	(191,000)	(176,600)
Repayment of commercial paper	(30,000)	(38,110)
Proceeds from notes and bonds payable	102,682	182,919
Repayment of notes and bonds payable	(90,725)	(165,268)
Increase to annuities payable resulting from new gifts	114	270
Decrease to annuities payable resulting from payments	(2,771)	(3,332)
<b>NET CASH USED FOR FINANCING ACTIVITIES</b>	<b>\$ (5,011)</b>	<b>\$ (20,159)</b>
<b>NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS</b>	<b>\$ (38,180)</b>	<b>\$ 4,245</b>
Cash and cash equivalents, beginning of year	143,589	139,344
<b>CASH AND CASH EQUIVALENTS, END OF YEAR</b>	<b>\$ 105,409</b>	<b>\$ 143,589</b>
<b>SUPPLEMENTAL DATA:</b>		
Interest paid in cash	\$ 17,126	\$ 17,728
Construction-in-progress payments included in accounts payable	4,499	6,838

The accompanying notes are an integral part of the consolidated financial statements.

## 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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### Basis of Presentation

Case Western Reserve University (“the University”) is an Ohio not-for-profit corporation that operates a private research university in Cleveland, Ohio. The consolidated financial statements of the University as of June 30, 2018, and for the year then ended, as well as summarized information for the year ended June 30, 2017, have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). Accordingly, the accompanying consolidated financial statements have been prepared on the accrual basis of accounting and include the accounts of the University and all wholly-owned subsidiaries.

### Net Asset Categories

Standards for external financial reporting by not-for-profit organizations require that resources be classified for reporting purposes into three net asset categories according to donor-imposed restrictions:

**UNRESTRICTED** net assets are available for any purpose consistent with the University’s mission. Unrestricted net assets and related activity include the following:

- All revenues traditionally classified as unrestricted resources of the University, including tuition and fees, unrestricted gifts, investment returns on unrestricted funds designated to function as endowment, recovery of facility and administrative costs from grants and contracts, and auxiliary services revenues
- Revenues related to sponsored research and other sponsored program agreements which are considered exchange transactions
- Unrestricted funds functioning similar to endowment
- Gifts with donor-imposed restrictions, if the restriction is anticipated to be met within the current fiscal year of the University
- Investments in plant assets
- All expenses of the University

**TEMPORARILY RESTRICTED** net assets include investment returns from endowments and gifts for which donor-imposed restrictions have not been met. This restriction on temporarily restricted endowment returns (income and realized and unrealized gains and losses) is released when appropriations are distributed for use and the funds have been spent for intended purposes. The

category also includes pledges receivable and life-income gifts for which the ultimate purpose of the proceeds is not permanently restricted.

**PERMANENTLY RESTRICTED** net assets include gifts, trusts and pledges on which donors have imposed the restriction that the corpus is maintained in perpetuity and only the investment returns be made available for program operations. In the case of trusts, gains and losses are added to the gift amount. Gifts restricted by donors to provide loans to students are also included in permanently restricted net assets.

Expirations of temporary restrictions on net assets are reported as reclassifications between the applicable classes of net assets. Donor required matching from University funds and donor release or clarification of restrictions are also included in this category.

Accounting Standards Codification (“ASC”) 958, “Not for Profit Entities,” provides guidance on the net asset classification of donor-restricted endowment funds for a not-for-profit organization that is subject to an enacted version of the Uniform Prudent Management of Institutional Funds Act (“UPMIFA”), and expanded disclosures about an organization’s endowment (both donor-restricted and board-designated funds). The University’s Board of Trustees (“the Board”) has interpreted UPMIFA as requiring the preservation of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulation to the contrary. As a result of this interpretation, the University classifies as permanently restricted net assets, (a) the original value of initial gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified as permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated and expended by the University in a manner consistent with the standard of prudence prescribed by UPMIFA.

### Contributions

Contributions, including unconditional pledges to give and irrevocable trusts held by others with the University

as the beneficiary, are recognized as revenues in the period received or promised. They are classified as unrestricted, temporarily restricted, or permanently restricted net assets depending upon the donor's intent.

Contributions restricted for the acquisition of land, buildings and equipment are reported as temporarily restricted revenues. These contributions are reclassified to unrestricted net assets when the assets are placed in service. Promises to give that are subject to donor-imposed stipulations that the corpus be maintained in perpetuity are recognized as increases in permanently restricted net assets.

Conditional promises to give are not recognized until the conditions on which they depend are substantially met. Gifts whose restrictions are met in the same fiscal year in which they are received are reported with unrestricted contribution revenues. Contributions of assets other than cash are reported at their estimated fair value at the date of gift. Contributions scheduled to be received after one year are discounted using a market rate (Note 3).

#### **Grants and Contracts** (Government and Private)

Revenues from government and private grants and contracts are recognized as earned in accordance with the terms of the grant or contract. Any government payment received before it has been expended is recorded as a refundable advance. Projects funded by government grants that incur expenses prior to payment receipt are recorded as revenue with a corresponding receivable.

#### **Investment Returns on Operating Investments**

The University has invested excess operating funds and certain Board-designated funds with the University's investment pool. The operating funds are invested alongside other funds and receive a pro-rata portion of income, expenses, gains, and losses of the pool.

#### **Cash and Cash Equivalents**

The University considers all highly liquid investments with an original maturity of 90 days or fewer when purchased as cash and cash equivalents, except those amounts managed by investment managers as part of the investment pool that do not belong to operations, or unspent bond proceeds, which are classified as investments. The University maintains operating cash and reserves for replacement balances in financial

institutions which, from time to time, may exceed federally insured limits. The University periodically assesses the financial condition of these institutions and believes that the risk of loss is minimal.

#### **Operating Investments**

Operating investments are stated at fair value and include all other current investments with original maturities greater than 90 days that are used to support operations. These investments may include obligations of triple A-rated banks, various United States Government agencies, other investments, and internal operating funds invested in the University's investment pool. Although the pool primarily invests in mid- to long-term investments, the pool maintains a sufficient investment mix that allows operating assets to be liquidated upon demand.

#### **Prepaid Expenses and Other Assets**

Within other assets, the University has cash of \$5,188 and \$28,167 as of June 30, 2018 and 2017, respectively, restricted by donors for investment in property and equipment. Also included as of June 30, 2018 is an earnest deposit of \$29,953 to the Cleveland Clinic Foundation ("CCF") on the University's investment in the Health Education Campus ("HEC") (Note 10).

#### **Investments**

Investments are made within guidelines authorized by the Board. Investments are initially recorded at cost at date of acquisition or fair value at date of donation in the case of gifts.

Ownership of marketable securities is recognized as of the trade date. Endowment returns are calculated net of internal and external investment management expenses.

Investments are stated at fair value as defined by ASC 820, "Fair Value Measurements and Disclosures." Fair value is defined under ASC 820 as the exchange price that would be received for an asset or paid to transfer a liability, i.e., an exit price, in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

The fair value of all debt and equity securities with readily determinable fair values are based on quotations obtained from national securities exchanges. The alternative investments, which are not readily

marketable, are carried at estimated fair values as provided by the investment managers. The University reviews and evaluates the values provided by the investment managers and agrees with the valuation methods and assumptions used in determining the fair value of the alternative investments. Those estimated fair values may differ significantly from the values that would have been used had a ready market for these securities existed.

Realized gains and losses on investments are included in *Investment income*. Average cost is generally used to determine gains or losses on securities sold. Unrealized changes in the fair value of investments are shown as net unrealized appreciation or depreciation.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by the University for financial instruments measured at fair value on a recurring basis (Note 6). The three levels of inputs are as follows:

*Level 1* — Quoted unadjusted prices in active markets for identical assets or liabilities. An active market is one in which transactions occur with sufficient frequency and volume to produce pricing information on an ongoing basis. Market price data are generally obtained from exchange or dealer markets.

*Level 2* — Pricing inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the same term of the assets or liabilities. Inputs are obtained from various sources including market participants, dealers and brokers.

*Level 3* — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

## **Collections**

The University's collections of historically significant artifacts, scientific specimens, and art objects are held for education, research, scientific inquiry, and public exhibition. They are neither disposed of for financial gain nor encumbered in any manner. Accordingly, their value is not reflected in the University's consolidated financial statements.

## **Funds Held in Trust by Others**

Funds held in trust by others are assets held and administered by outside trustees from which the University derives income or residual interest. Funds held in trust by others are reported at their fair value as of June 30, 2018 and 2017.

Income received from funds held in trust by others is classified as temporarily restricted net assets until those amounts are appropriated and expended by the University. Income appropriated within the same year earned/received is classified as unrestricted. Unrealized changes in the fair value of investments are shown as net unrealized appreciation or depreciation in permanently restricted net assets.

## **Fixed Assets**

When capital assets are sold or disposed, the carrying value of such assets and any accumulated depreciation are removed from the asset accounts. Any resulting gain or loss on disposal is recognized in the non-operating portion of the consolidated statement of activities.

Expenditures for construction-in-progress are capitalized as incurred and depreciated over the estimated life of the asset when placed into service. All identifiable direct costs including other costs incurred to ready the asset for its intended use are included in the cost of the project. The University capitalizes interest on borrowings to finance facilities, net of any investment income earned through the temporary investment of project borrowings, during construction until the project has been substantially completed.

## **Split-Interest Agreements**

The University has split-interest agreements consisting primarily of pooled income funds, charitable gift annuities and charitable remainder unitrusts and annuities. Contributions are recognized at the date the trusts and annuities are established, net of a liability for the present value of the estimated future cash outflows to beneficiaries, using a discount rate of 2.9% and 2.6% for June 30, 2018 and 2017, respectively. These assets are invested and payments are made to donors and beneficiaries in accordance with the respective agreements.

### **Allocation of Certain Expenses**

The consolidated statement of activities presents expenses by function. Some expenses — such as depreciation, amortization, and expenses related to the operation of the physical plant — are allocated by square footage. Interest expense is allocated to the functions that derive the greatest benefit from the facilities financed.

### **Retirement Plans**

The University accounts for its defined benefit postretirement plan in accordance with ASC 715, “Compensation - Retirement Benefits.” The University recognizes the overfunded or underfunded status of a defined benefit postretirement plan as an asset or liability in its consolidated statements of financial position in the year in which the change occurs, with an offsetting impact to unrestricted net assets.

### **Use of Estimates**

Financial statements using U.S. GAAP rely on estimates. At June 30, management makes certain estimates and assumptions, which affect assets and liabilities, disclosures of contingent assets and liabilities, and reported revenues and expenses during the period. Actual results may differ from these estimates.

### **Comparative Information**

The consolidated statement of activities includes prior year summarized comparative information in total, but not by net asset category. Such information does not include enough detail to constitute a presentation in conformity with U.S. GAAP. Accordingly, such information should be read in conjunction with the University’s consolidated financial statements for the year ended June 30, 2017, from which it was derived.

### **Income Taxes**

The University is exempt from federal income tax to the extent provided under section 501(c) (3) of the Internal Revenue Code (“IRC”). The University is classified as an organization that is not a private foundation under section 509(a) of the IRC, and as such, gifts to the University qualify for deduction as charitable contributions. The University is exempt from federal income tax; however, it is required to pay federal income tax on unrelated business income. The University did

not have any material income tax liabilities for the years ended June 30, 2018 and 2017. ASC 740, “Income Taxes,” prescribes a recognition threshold and measurement requirements for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. In addition, ASC 740 provides guidance on recognition, classification and disclosure requirements for uncertain tax provisions. The University has no financial reporting requirements associated with ASC 740 for the years ended June 30, 2018 and 2017.

### **New Pronouncements**

In May 2014, the FASB issued Accounting Standard Update (“ASU”) 2014-09: “Revenue from Contracts with Customers (Topic 606)” at the conclusion of a joint effort with the International Accounting Standards Board to create common revenue recognition guidance for U.S. GAAP and international accounting standards. This framework ensures that entities appropriately reflect the consideration to which they expect to be entitled in exchange for goods and services by allocating transaction price to identified performance obligations and recognizing revenue as performance obligations are satisfied. Qualitative and quantitative disclosures are required to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The standard is effective for fiscal years beginning after December 15, 2017. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2019, the first year in which the standard is effective.

In February 2016, the FASB issued ASU 2016-02: “Leases (Topic 842),” which increases transparency and comparability among organizations by recognizing lease assets and lease liabilities on the consolidated statements of financial position and disclosing key information about leasing arrangements. This standard requires the recognition of lease assets and lease liabilities by lessees for those leases previously classified as operating leases. The standard is effective for fiscal years beginning after December 15, 2018. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2020, the first year in which the standard is effective.

In August 2016, the FASB issued ASU 2016-14: “Presentation of Financial Statements of Not-for-Profit Entities,” which simplifies and improves how a not-for-profit entity classifies net assets and presents and

discloses information related to liquidity, financial performance, and cash flows in financial statements. The standard is effective for fiscal years beginning after December 15, 2017. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2019, the first year in which the standard is effective.

In August 2016, the FASB issued ASU 2016-15: "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments," which attempts to eliminate the diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. This includes debt prepayment or debt extinguishment costs, certain contingent consideration payments and proceeds from the settlement of insurance claims, among others. The standard is effective for fiscal years beginning after December 15, 2018. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2020, the first year in which the standard is effective.

In November 2016, the FASB issued ASU 2016-18: "Statement of Cash Flows (Topic 230): Restricted Cash," which requires amounts generally described as restricted cash and restricted cash equivalents to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The standard is effective for fiscal years beginning after December 15, 2018. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2020, the first year in which the standard is effective.

In March 2017, the FASB issued ASU 2017-07: "Compensation – Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost," which requires an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered

by the pertinent employees during the period, among other improvements to benefit cost presentation. The standard is effective for fiscal years beginning after December 15, 2018. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2020, the first year in which the standard is effective.

In March 2017, the FASB issued ASU 2017-08: "Receivables – Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities," which shortens the amortization period of premiums on certain purchased callable debt securities to the earliest call date. The standard is effective for fiscal years beginning after December 15, 2019. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2021, the first year in which the standard is effective.

In August 2017, the FASB issued ASU 2017-12: "Targeted Improvements to Accounting for Hedging Activities," which improves the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements. The standard is effective for fiscal years beginning after December 15, 2019. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2021, the first year in which the standard is effective.

In June 2018, the FASB issued ASU 2018-08: "Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made," which will assist entities in evaluating whether transactions should be accounted for as contributions or as exchange transactions as well as determining whether a contribution is conditional. The standard is effective for fiscal years beginning after June 15, 2018. The University is evaluating the impact this will have on the consolidated financial statements for fiscal year ending June 30, 2019, the first year in which the standard is effective.

## 2. ACCOUNTS AND LOANS RECEIVABLE

Accounts and loans receivable of the University at June 30, 2018 and 2017 were as follows:

	2018	2017
ACCOUNTS RECEIVABLE, NET		
Grants, contracts and others	\$ 64,110	\$ 52,362
Students	2,096	2,890
STUDENT LOANS, NET	50,519	51,713
<b>ACCOUNTS AND LOANS RECEIVABLE, NET</b>	<b>\$ 116,725</b>	<b>\$ 106,965</b>

Allowance for doubtful accounts:

Accounts receivable	\$ 4,945	\$ 3,857
Loans receivable	\$ 2,067	\$ 2,419

Management regularly assesses the adequacy of the allowance for doubtful accounts by performing ongoing evaluations of the various components of the accounts receivable and student loan portfolios, including such factors as the differing economic risks associated with each category, the financial condition of specific

borrowers, the economic environment in which the borrowers operate, the level of delinquent loans, and the past history of the various borrowers and the University.

Factors also considered by management when performing its assessment, in addition to general economic conditions and the other factors described above, included, but were not limited to, a detailed review of the aging of the various receivables and loans, and a review of the default rate by loan category in comparison to prior years. The level of the allowance is adjusted based on the results of management's analysis.

Management considers the allowance for doubtful accounts to be prudent and reasonable. Furthermore, the University's allowance is general in nature and is available to absorb losses from any loan category. Management believes that the allowance for doubtful accounts at June 30, 2018 is adequate to absorb credit losses inherent in the portfolio as of that date.

## 3. PLEDGES RECEIVABLE

Unconditional promises to give are included in the consolidated financial statements as pledges receivable and revenue of the appropriate net asset category. Multi-year pledges are recorded after discounting based on the market rate to the present value of expected future cash flows. The discount rate utilized for fiscal 2018 and 2017 was 5%.

Unconditional promises to give at June 30, 2018 and 2017 are expected to be realized in the following periods:

	2018	2017
Less than one year	\$ 49,046	\$ 46,979
Between one year and five years	103,958	101,849
More than five years	17,696	17,500
	170,700	166,328
Less: Discount	(10,994)	(11,819)
Less: Allowance	(12,905)	(9,332)
<b>TOTAL PLEDGES RECEIVABLE, NET</b>	<b>\$ 146,801</b>	<b>\$ 145,177</b>

Management follows a similar approach as described in Note 2 for accounts and loans receivable in evaluating the adequacy of the allowance for doubtful accounts

for pledges receivable. Management considers the allowance for doubtful accounts to be prudent and reasonable. Management believes that the allowance for doubtful accounts at June 30, 2018 is adequate to absorb any uncollectible pledges as of that date.

Pledges receivable at June 30, 2018 and 2017 had the following restrictions:

	2018	2017
Department programs and activities	\$ 44,748	\$ 35,418
Endowments for scholarships and department programs and activities	39,946	29,948
Building construction	62,107	79,811
<b>TOTAL PLEDGES RECEIVABLE, NET</b>	<b>\$ 146,801</b>	<b>\$ 145,177</b>

Uncollectible pledges totaling \$6,141 (2018) and \$6,113 (2017) were written off against the allowance for uncollectible pledges. The University had conditional pledge commitments totaling \$19,321 (2018) and \$10,568 (2017).



#### 4. LONG-TERM INVESTMENTS

The University holds long-term investments for permanently restricted endowment funds, donor-restricted funds, annuity assets, Board-designated funds and excess operating assets that are able to be invested in longer term investments.

The University invests through traditional investments as well as operating an investment pool that works similar to a mutual fund (Note 5). The University's long-term investments at June 30, 2018 and 2017 were as follows:

	2018	2017
Cash and cash equivalents	\$	50,423
Domestic stocks	\$ 83,685	66,094
International securities	104,657	92,480
Global securities	320,568	252,175
Bonds		
Government and municipal	29,860	19,088
Corporate	91,226	19,509
Mutual funds	166,525	272,173
Derivatives	94,816	27,280
Limited partnerships and Other		
Venture capital	115,416	116,624
Private equity	255,038	231,050
Real estate	69,090	77,815
Absolute return	335,300	322,125
Other	36,397	36,436
Equity real estate	81	81
<b>TOTAL INVESTMENTS</b>	<b>\$ 1,702,659</b>	<b>\$ 1,583,353</b>

	2018	2017
Operating investments	\$ 238,988	\$ 187,904
Investments, held for long-term purposes	1,463,671	1,395,449
<b>TOTAL INVESTMENTS</b>	<b>\$ 1,702,659</b>	<b>\$ 1,583,353</b>

Investment returns shown on the consolidated statement of activities are netted against investment management fees of \$11,245 (2018) and \$9,548 (2017). The investments were held for the following purposes:

	2018	2017
Endowment	\$ 1,173,633	\$ 1,118,540
Donor-restricted funds	304,850	298,486
University investments	171,296	111,748
Annuities	41,985	44,294
Funds held for the benefit of others	10,895	10,285
<b>TOTAL INVESTMENTS</b>	<b>\$ 1,702,659</b>	<b>\$ 1,583,353</b>

University investments include unspent bond proceeds of \$0 (2018) and \$24 (2017) (Note 8).

## 5. ENDOWMENT AND SIMILAR FUNDS

### Endowment Funds

The purpose of endowment funds is to generate in perpetuity revenue to support specific activities or for general institutional use. Endowments represent only those net assets that are under the control of the University. Gift annuities, interests in funds held in trust by others, and pledges designated for the endowment but not yet received are not considered components of the endowment.

The state of Ohio has enacted legislation that incorporates the provisions outlined in the Uniform Prudent Management of Institutional Funds Act ("UPMIFA"). UPMIFA stipulates that unless directed otherwise in the gift instrument, donor-restricted assets in an endowment fund are restricted assets until appropriated for expenditure by the institution. Accordingly, the following items are recorded as permanently restricted net assets:

- The original value of initial gifts donated to the permanent endowment
- The original value of subsequent gifts to the permanent endowment
- For those endowment funds with donor-specified reinvestment provisions, accumulations to the

permanent endowment made in accordance with the gift instrument at the time the accumulation is added to the fund

The remaining portion of donor-restricted endowment funds that are not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated and spent in accordance with the endowment purpose by the University.

### Similar Funds

The University has designated certain funds to function as endowments and has co-invested as such. Donor purpose-restricted funds were not given to the University with the understanding that the gift amount would be maintained in perpetuity; these funds are classified in temporarily restricted net assets. All other Board-designated funds are classified in unrestricted net assets. Even though the Board has elected to treat these funds in the same fashion as an endowment fund, at its option, the Board may elect to change that treatment and spend these funds in accordance with the intentions of the donor, if any, without the constraints of the University endowment spending formula.

The breakdown of these classifications are:

<b>June 30, 2018</b>	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	\$ (8,392)	\$ 538,176	\$ 643,849	\$ 1,173,633
Donor purpose-restricted funds		296,604		296,604
Board-designated funds	69,065			69,065
<b>TOTAL ENDOWMENT AND SIMILAR FUNDS</b>	<b>\$ 60,673</b>	<b>\$ 834,780</b>	<b>\$ 643,849</b>	<b>\$ 1,539,302</b>

<b>June 30, 2017</b>	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	\$ (11,234)	\$ 501,891	\$ 627,883	\$ 1,118,540
Donor purpose-restricted funds		288,060		288,060
Board-designated funds	54,637			54,637
<b>TOTAL ENDOWMENT AND SIMILAR FUNDS</b>	<b>\$ 43,403</b>	<b>\$ 789,951</b>	<b>\$ 627,883</b>	<b>\$ 1,461,237</b>

### Investment Pool

The Board's interpretation of its fiduciary responsibilities for endowment and similar funds is to preserve intergenerational equity to the extent possible. This principle holds that future beneficiaries should receive at least the same level of economic support that the current generation enjoys. To that end, investment goals are formulated to earn returns over the long term that equal

or exceed the Board-approved distribution rates plus the impacts of inflation. The University's endowment and similar funds are invested in a broadly diversified portfolio designed to produce long-term rates of return that sustain or increase the real spending contribution from endowed and similar assets and to mitigate downturns in a single sector.

Unless otherwise directed in the gift instrument, both endowment and similar funds are pooled for efficient investment purposes.

The pool is accounted for on a dollarized method of accounting similar to a money market fund and accounted for on an account basis. The total investment return for the pooled investments, net of external manager fees, approximated 9.15% (2018) and 12.43% (2017).

### Spending Policy

The Board has approved an endowment spending policy for pooled investments based on a hybrid formula. The objective of this two-pronged approach is to provide support for operations, preserve intergenerational equity, and insulate programming supported by endowment and similar funds from short-term fluctuations in the investment markets. The two components are:

- A constant growth component which seeks to provide growth in annual spending equal to the rate of academic inflation as measured by the Higher Education Price Index
- A market value component based on 4.5% of the average of the three previous calendar year-end market values

Specific appropriation for expenditure of funds under the policy occurs each spring when the Board approves the operating budget for the following year. The fiscal year 2018 and 2017 pooled endowment and similar funds spending allocation approved by the Investment Committee of the Board were \$58,900 and \$61,300, respectively. The approved spending rate for fiscal year

2018 and 2017 were 4.75% and 4.91% of beginning market value, respectively. The total amount allocated was \$59,422 and \$63,439, respectively.

While the policy provides guidance for the level of spending permitted (allocation), the actual spending will vary from the spending allocation based on the timing of actual expenditures. Funds are transferred from the investment pool to the University's operating account after they have been spent in accordance with the endowment and similar funds requirements. The actual movement of cash and investments between the investment pool and operating accounts occurs on a periodic basis as determined by the University and its processes to maintain the proper balance between liquidity and the remaining invested.

For years where actual investment return exceeds actual approved spending, the difference remains in temporarily restricted net assets; years in which the actual endowment and similar funds return is less than distributions under the policy, the shortfall is covered by realized returns from prior years. Both fiscal years 2018 and 2017 pooled endowment and similar funds distribution were funded from a combination of current year investment income and prior year accumulated realized gains.

In addition to the general distribution described above, the Board has authorized a supplemental distribution of previously reinvested income and realized appreciation to support certain development-related activities. This distribution totaled \$6,000 in 2018 and \$6,000 in 2017.

Changes in endowment and similar funds net assets for fiscal year 2018 and 2017 are as follows:

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
<b>ENDOWMENT AND SIMILAR FUNDS NET ASSETS, JUNE 30, 2016</b>	<b>\$ 22,689</b>	<b>\$ 721,151</b>	<b>\$ 606,264</b>	<b>\$ 1,350,104</b>
Investment income	1,878	41,439		43,317
Realized and unrealized gains	4,398	96,656		101,054
<b>TOTAL INVESTMENT RETURN</b>	<b>6,276</b>	<b>138,095</b>		<b>144,371</b>
Contributions	6,012	1,175	21,797	28,984
Current year withdrawals			(178)	(178)
Current year expenditures	(2,460)	(59,584)		(62,044)
Reclassification of deficits in donor-designated funds	10,886	(10,886)		-
<b>ENDOWMENT AND SIMILAR FUNDS NET ASSETS, JUNE 30, 2017</b>	<b>\$ 43,403</b>	<b>\$ 789,951</b>	<b>\$ 627,883</b>	<b>\$ 1,461,237</b>
Investment income	3,171	59,341		62,512
Realized and unrealized gains	3,272	52,178		55,450
<b>TOTAL INVESTMENT RETURN</b>	<b>6,443</b>	<b>111,519</b>		<b>117,962</b>
Contributions	10,465	829	16,165	27,459
Current year withdrawals			(199)	(199)
Current year expenditures	(2,480)	(64,677)		(67,157)
Reclassification of deficits in donor-designated funds	2,842	(2,842)		-
<b>ENDOWMENT AND SIMILAR FUNDS NET ASSETS, JUNE 30, 2018</b>	<b>\$ 60,673</b>	<b>\$ 834,780</b>	<b>\$ 643,849</b>	<b>\$ 1,539,302</b>

Occasionally, the fair market value of assets associated with individual donor-restricted endowment funds falls below the value of the original gift amounts. When deficits exist in these funds, they are classified as a reduction of unrestricted net assets. Deficits of this nature reported in unrestricted net assets were \$8,392 (2018) and \$11,234 (2017). These deficits resulted from unfavorable market fluctuations that occurred after

the investment of recently established endowments and additions, and authorized appropriation that was deemed prudent.

Of the amount classified as temporarily restricted endowment net assets, \$538,176 (2018) and \$501,891 (2017) represented the investment returns on perpetual endowment funds subject to time and purpose restrictions under Ohio's enacted version of UPMIFA.

## 6. FAIR VALUE MEASUREMENTS

Financial instruments carried at fair market value as of June 30, 2018 and 2017 by the ASC 820 valuation hierarchy are as follows:

	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value	Total
<b>June 30, 2018</b>					
<b>INVESTMENTS</b>					
Domestic stocks	\$ 43,323	\$ 980		\$ 39,382	\$ 83,685
International securities		44,119		60,538	104,657
Global securities				320,568	320,568
Bonds					
Government and municipal		29,860			29,860
Corporate		91,226			91,226
Mutual funds	159,933	6,592			166,525
Derivatives		94,816			94,816
Limited partnerships and Other					
Venture capital			\$ 16,745	98,671	115,416
Private equity			4,332	250,706	255,038
Real estate				69,090	69,090
Absolute return		6,286		329,014	335,300
Other		42	36,355		36,397
Equity real estate			81		81
<b>TOTAL INVESTMENTS</b>	<b>\$ 203,256</b>	<b>\$ 273,921</b>	<b>\$ 57,513</b>	<b>\$ 1,167,969</b>	<b>\$ 1,702,659</b>
<b>FUNDS HELD IN TRUST BY OTHERS</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 347,459</b>	<b>\$ -</b>	<b>\$ 347,459</b>
<b>PENSION PLAN ASSETS</b>					
Cash and cash equivalents	\$ 4,394				\$ 4,394
Mutual funds	94,476	\$ 8,947			103,423
Limited partnerships and Other					
Absolute return				\$ 42,854	42,854
Other				8,540	8,540
Equity real estate				9,031	9,031
<b>TOTAL PENSION PLAN ASSETS (Note 9)</b>	<b>\$ 98,870</b>	<b>\$ 8,947</b>	<b>\$ -</b>	<b>\$ 60,425</b>	<b>\$ 168,242</b>
<b>ASSETS AT FAIR VALUE</b>	<b>\$ 302,126</b>	<b>\$ 282,868</b>	<b>\$ 404,972</b>	<b>\$ 1,228,394</b>	<b>\$ 2,218,360</b>
Interest rate swaps payable (Note 12)	\$ -	\$ 10,671	\$ -	\$ -	\$ 10,671
<b>LIABILITIES AT FAIR VALUE</b>	<b>\$ -</b>	<b>\$ 10,671</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 10,671</b>

<b>June 30, 2017</b>	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value	Total
<b>INVESTMENTS</b>					
Cash and cash equivalents	\$ 36,092	\$ 14,331			\$ 50,423
Domestic stocks	29,586	980		\$ 35,528	66,094
International securities		33,615		58,865	92,480
Global securities				252,175	252,175
Bonds					
Government and municipal		19,088			19,088
Corporate		19,509			19,509
Mutual funds	266,151	6,022			272,173
Derivatives		27,280			27,280
Limited partnerships and Other					
Venture capital			\$ 15,952	100,672	116,624
Private equity			4,127	226,923	231,050
Real estate				77,815	77,815
Absolute return		6,175		315,950	322,125
Other		42	36,394		36,436
Equity real estate			81		81
<b>TOTAL INVESTMENTS</b>	<b>\$ 331,829</b>	<b>\$ 127,042</b>	<b>\$ 56,554</b>	<b>\$ 1,067,928</b>	<b>\$ 1,583,353</b>
<b>FUNDS HELD IN TRUST BY OTHERS</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 337,553</b>	<b>\$ -</b>	<b>\$ 337,553</b>
<b>PENSION PLAN ASSETS</b>					
Cash and cash equivalents	\$ 5,455				\$ 5,455
Mutual funds	82,056	\$ 9,273			91,329
Limited partnerships and Other					
Absolute Return				\$ 44,954	44,954
Other				4,073	4,073
Equity real estate				8,597	8,597
<b>TOTAL PENSION PLAN ASSETS (Note 9)</b>	<b>\$ 87,511</b>	<b>\$ 9,273</b>	<b>\$ -</b>	<b>\$ 57,624</b>	<b>\$ 154,408</b>
<b>ASSETS AT FAIR VALUE</b>	<b>\$ 419,340</b>	<b>\$ 136,315</b>	<b>\$ 394,107</b>	<b>\$ 1,125,552</b>	<b>\$ 2,075,314</b>
Interest rate swaps payable (Note 12)	\$ -	\$ 14,690	\$ -	\$ -	\$ 14,690
<b>LIABILITIES AT FAIR VALUE</b>	<b>\$ -</b>	<b>\$ 14,690</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 14,690</b>

### Level 3 Investment Information

Investments included in Level 3 consist primarily of the University's ownership in alternative investments (principally limited partnership interests in venture capital, private equity, equity real estate, real assets and other similar funds), beneficial interests in funds held in trust by others, and portions of investments in the pension assets. Level 3 investments are more difficult to value due to the following:

- The fair values of the securities held by limited partnerships that do not have readily determinable fair values are determined by the general partner based on appraisals or other estimates that require varying degrees of judgment.
- If no public market consideration exists, the fair value is determined by the general partner taking

into consideration, among other things, the cost of the securities, prices of recent significant placements of securities of the same issuer, subsequent developments concerning the companies to which the securities relate, or other estimates requiring varying degrees of judgment. The University regularly reviews, evaluates and performs significant due diligence around these investments to ensure that the values provided by the investment managers are appropriate measures of fair value. The University agrees with the valuations and assumptions used in determining the fair value of these investments.

A roll forward of the consolidated statements of financial position amounts for financial instruments classified by the University within Level 3 of the fair value hierarchy is as follows:

	Venture Capital	Private Equity	Equity Real Estate	Other & Funds Held by Others	Total
<b>June 30, 2016</b>	\$ 14,852	\$ 3,820	\$ 143	\$ 361,390	\$ 380,205
Investment income	15	4		9,169	9,188
Unrealized gains	1,785	462		17,684	19,931
Purchases	169	44			213
Settlements	(869)	(203)	(62)	(14,296)	(15,430)
<b>June 30, 2017</b>	<b>\$ 15,952</b>	<b>\$ 4,127</b>	<b>\$ 81</b>	<b>\$ 373,947</b>	<b>\$ 394,107</b>
Investment loss	(3)	(1)		(12)	(16)
Unrealized gains	1,524	395		10,232	12,151
Purchases	82	21			103
Settlements	(810)	(210)		(353)	(1,373)
<b>June 30, 2018</b>	<b>\$ 16,745</b>	<b>\$ 4,332</b>	<b>\$ 81</b>	<b>\$ 383,814</b>	<b>\$ 404,972</b>

The net realized and unrealized gains and losses in the table above are included in the University's consolidated statement of activities in one of two financial statement lines: *Investment income* or *Net appreciation*. In the case of pension assets, net realized and unrealized gains and losses are recognized in the financial statement line *Pension plan changes other than periodic benefit costs*.

The pricing inputs and methods described above could produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the University believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

The University is permitted under U.S. GAAP to estimate the fair value of an investment at the measurement date using the reported net asset value ("NAV") without further adjustment unless the entity expects to sell the investment at a value other than NAV or if the NAV is not calculated in accordance with U.S. GAAP. The University's investments in domestic stocks, international securities, global securities, venture capital, private equity, real estate, and certain hedge funds in the absolute return portfolio are fair valued based on the most current NAV.

The University performs additional procedures including due diligence reviews on its investments in investment companies and other procedures with respect to the capital account or NAV provided to ensure conformity with U.S. GAAP. The University has assessed factors including, but not limited to, managers' compliance with

the Fair Value Measurement standard, price transparency at NAV at the measurement date, and existence of certain redemption restrictions at the measurement date.

The guidance also requires additional disclosures to enable users of the financial statements to understand

the nature and risk of the University's investments.

The table below illustrates the fair value of the University's investments measured at NAV and the commitments that have been made for future purchases:

Category	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments
Domestic stocks (a)	monthly, quarterly, annually	30 - 90 days	\$ 39,382	
International securities (b)	monthly, quarterly	30 - 90 days	60,538	
Global securities (c)	monthly, quarterly	30 - 90 days	320,567	
Limited partnerships and Other				
Venture capital (d)			98,671	\$ 30,819
Private equity (e)			250,706	148,178
Real estate (f)			69,090	48,283
Absolute return (g)	monthly, quarterly, annually	30 - 90 days	371,868	64,746
Other (h)			8,540	
Equity real estate (i)			9,031	
<b>TOTAL</b>			<b>\$ 1,228,393</b>	<b>\$ 292,026</b>

(a) **Domestic stocks** include funds invested in equity securities domiciled in the United States. Fund liquidity is daily, monthly, quarterly, semi-annual, annual, and up to a maximum period of three years. Approximately 100% of the net asset value is accessible within one year.

(b) **International securities** include funds invested in equity securities domiciled in countries outside of the United States including developed and emerging markets. Approximately 100% of the net asset value is accessible within one year or less.

(c) **Global securities** include funds invested in equity securities domiciled in both Domestic stocks and International securities. Investments in this asset class have a mandate for global securities worldwide. Approximately 100% of the net asset value is accessible within one year or less.

(d) **Venture capital** includes several private equity funds that invest primarily in technology, health care or clean technology industries. While the portfolio is U.S. centric, there are small allocations to companies in foreign markets. The funds typically provide money and resources to entrepreneurs to finance a start-up company or product, with the hope that the company experiences exceptional growth and therefore would produce a successful investment. The funds invest at different stages of a company's growth, some very early and others at a later stage where the company may already produce revenues. The valuations for these investments have been estimated using the managers'

fair market values, which have been vetted to make sure they meet the ASC 820 guidelines. These investments can never be redeemed with the funds. As these investments age in duration, distributions will be received from these funds as the underlying portfolio companies are sold in the market. It is estimated that the underlying investments within the funds would be fully liquidated over the next 7-12 years.

(e) **Private equity** includes several private equity funds that invest across all industries. While the portfolio is U.S. centric, there has been an increasingly larger allocation to companies in foreign markets. The funds typically invest capital into more mature companies for a minority or majority of ownership and through operational and financial expertise, generate a return of capital greater than the original amount invested. The valuations for these investments have been estimated using the managers' fair market values, which have been vetted to make sure they meet the ASC 820 guidelines. These investments can never be redeemed with the funds. As these investments age in duration, distributions will be received from these funds as the underlying portfolio companies are sold in the market. It is estimated that the underlying investments within the funds would be fully liquidated over the next 7-12 years.

(f) **Real estate** includes private real estate funds that invest primarily in the United States. Some of these private partnerships also make investments internationally, primarily in Europe, India and Brazil. The private funds make investments in various real

estate types, such as office, industrial, retail and multi-family properties. The valuations for these investments have been estimated using the managers' fair market values, which have been vetted to make sure they meet the ASC 820 guidelines. These investments can never be redeemed with the funds. As these investments age in duration, distributions will be received from these funds as the underlying properties are sold at the market. It is estimated that the underlying investments within the funds would be fully liquidated over the next 5-7 years.

(g) **Absolute return** includes hedge fund investments across a multitude of strategies including long/short equity, long/short commodity, global macro, multi-strategy, event-driven, credit, fund of hedge funds, and emerging markets. The vast majority of these investments are U.S. based, but some may invest internationally. Investment managers may make investment decisions based on top down macro-economic analysis or bottom up company or theme specific analysis; managers may shift portfolios from net long to net short positioning but on balance tend to carry a net long exposure within their portfolios. The estimated fair values of the investments are received on a monthly basis from the fund administrators. Final valuations are typically received around mid-month for most funds, but in some instances funds will report final valuations on a quarterly basis in accordance with the reporting period specified in the fund legal documents. Fund liquidity varies across the absolute return category from monthly, quarterly, annually, and up to a maximum of three years for traditional hedge fund vehicles and 5-10 years for private credit vehicles. Approximately 92% of the net asset value in this asset class is accessible within one year or less and 94% within three years. Over the course of the last twelve months less liquid, private credit funds with 5-10 year hold periods have been added to the portfolio for diversification purposes. This has marginally reduced liquidity in the absolute return asset class but as the private credit funds begin to call more capital portfolio liquidity will be further reduced but still maintained at manageable levels.

(h) **Other** includes various investments that do not fall within the other categories listed. Examples would include liquid multi-asset strategy investments.

(i) **Equity real estate** includes liquid real estate securities and indices domiciled in both the United States and countries outside of the United States including developed and emerging markets.

## Derivative Information

The use of financial derivative instruments is governed by the University's Investment Policy Statement, which is approved and overseen by the Investment Committee of the Board. The University assumes many risks as a result of its investment decisions and investment holdings. Many risks are discussed in the Investment Policy Statement:

*Manager risk* – the risk that a manager underperforms similar managers, benchmarks, or appropriate indices.

*Benchmark risk* – the risk of harm caused by constructing, selecting, or managing to an inappropriate benchmark.

*Peer risk* – the risk that one's peers generate better investment performance, thereby boosting the relative size of their endowments and enhancing their competitive advantage.

*Market risk* – the risk that the value of an investment will decrease due to market moves.

*Interest rate risk* – the risk that an investment's value will change due to a change in the absolute level of interest rates, the spread between two rates, the shape of the yield curve, or any other interest rate relationships.

*Concentration risk* – the risk of being too concentrated in one particular security, manager, strategy, sector or asset class, thus being vulnerable to poor performance stemming from lack of diversification.

*Absolute return risk* – the ability to generate positive absolute returns, not just in favorable markets, but also in uncertain and negative phases measured over a business cycle.

*Currency risk* – the risk that currency fluctuations or trends reduce the value of investments in non-U.S. markets.

*Commodity risk* – refers to the uncertainties of future market values and the size of future income caused by fluctuation in the prices of commodities (energy, agricultural, precious and industrial metals) due to demand/supply imbalances.

*Leverage risk* – the risk that significant volatility or losses will be generated by the use of debt designed to magnify returns.

*Counterparty risk* – the risk that one party to a transaction does not make complete or timely payment of margin,



swap cash flow, bond proceeds, or other similar payments.

*Credit risk* – the possibility that a bond issuer will default by failing to pay interest or repay principal in a timely manner.

*Tail risk* – a form of portfolio risk that arises when the possibility that an investment will move more than three standard deviations from the mean is greater than what is shown by a normal distribution.

*Liquidity risk* – the inability to sell or trade securities at fair market value within a short period of time; also, the risk that sufficient cash is not maintained, or cannot be accessed, to meet short-term obligations.

*Inflation risk* – the risk that rising prices significantly erode the effective purchasing power of the portfolio, as measured by the University's cost inflation.

*Shortfall risk* – the risk that investment returns will be lower than expected, causing a failure to accomplish investment or financial objectives.

The University seeks to mitigate these risks by using derivative transactions. At the macro level of the investment portfolio, derivative transactions also create cost-effective beta exposure that may replace a fund or investment manager, add alpha, support liquidity management, and reduce the impact of extreme negative market conditions. The derivative instruments used include futures, total return swaps, and over-the-counter options.

**Futures:** An Equity Index Future is a standardized obligation to buy or sell a market index, at a certain date in the future (settlement date), at a specified price (futures price). Equity Index Futures are typically cash-settled. Trading Medium: Exchange A single clearing house (e.g., Options Clearing Corporation, for the Chicago Board Options Exchange) is the counterparty to both parties involved in the contract. Futures trade a premium or discount to the cash index level based on the following theoretical formula:  $\text{Futures Fair Value} = \text{Cash Index Value} + \text{Expected Interest Income prior to contract expiry} - \text{Expected Dividend Income prior to contract expiry} - \text{Expected Lending Income prior to contract expiration}$ . The value of a futures contract converges to that of the underlying index at expiration. The investor posts an initial margin and a maintenance margin which represents a small portion of the overall notional value (usually 12%-18% of the notional value). Collateral

between the counterparties is exchanged daily based on the mark to market performance of the futures contract. Used primarily as a manager replacement strategy to gain beta exposure to an index on the long side and to hedge out beta exposure on the short side.

**Total Return Swaps ("TRS"):** A TRS is a non-standardized agreement whereby one party makes periodic cash payments based on a set rate (e.g., London Interbank Offered Rate ("LIBOR")) while another party makes periodic cash payments based on the total return of an underlying index. The total return payer agrees to pay the total return of the underlying index to the total return receiver. The total return receiver agrees to receive future total return, and pay periodic payments to the total return payer. Trading Medium: Over-The-Counter ("OTC"). TRS offer synthetic exposure to beta returns while avoiding the transaction and administrative costs of owning the actual underlying equity shares. TRS are subject to counterparty credit risk; if collateral is posted between parties, counterparty credit risk can be mitigated. Transacted via agreement between counterparties. There is no initial or maintenance margin posting. Collateral between the counterparties is exchanged daily based on the mark to market performance of the swap. Used to gain beta exposure to an index on the long side and to hedge out beta exposure on the short side. The swap resets on a periodic basis (monthly, quarterly, or annually), at which point the LIBOR rate is reset and the gains/losses cash settled. A new notional value reflecting the settled gains/losses is established at this point. The next measurement begins with the new notional value. There may be a breakup fee if the swap is terminated earlier than its expiration date. Used primarily as a manager replacement strategy.

**Options:** Options or Option Structures are non-standardized agreements whereby one party makes or receives one payment at the time of initial transaction to/from a counterparty and may make or receive a second payment to/from the counterparty at the expiration date of the agreement based on an individual option or a combination of individual options. Trading Medium: OTC. Transacted via ISDA/CSA agreement between counterparties. Options are subject to counterparty credit risk; if collateral is posted between parties, counterparty credit risk can be mitigated. Options/Option Structures allow investors to customize the risk/return profile of existing portfolios. For example: Investors who are underweight equities and have a moderately positive outlook can obtain enhanced equity exposure by capping returns with or without a leveraged

payoff. More bearish investors can opt for downside protection to reduce risk. Collateral between the counterparties is exchanged daily based on the mark to market performance of the Option or Option Structure. At maturity the Option or Option Structure is cash settled. Prior to maturity, Options/Option Structures may trade above or below their intrinsic value due to various factors such as time, volatility, interest rates, skew, delta, gamma, etc. The value eventually converges to intrinsic value at maturity. Used for beta replacement strategies, alpha strategies or hedging strategies.

**Swaptions:** Swaptions are a specific type of Option which gives the buyer the right, but not the obligation, to enter into a specified swap agreement with the counterparty on a specified future day.

**Forward contracts:** A forward contract is an agreement to buy or sell an asset at a certain future time for a certain price. A forward contract is traded in the OTC market – usually between two financial institutions or a

financial institution and a client. One party assumes a long position and agrees to buy the underlying asset on a certain date for a certain price. The other party assumes a short position and agrees to sell the underlying asset on a certain date for a certain price. The price in a forward contract is known as the delivery price. Forward contracts are commonly used to hedge foreign currency risk. Payoff for a long position on a forward contract is  $S_t - K$  where  $K$  is the delivery price and  $S_t$  is the spot price at maturity of the contract. Similarly the payoff on a short position in a forward contract is  $K - S_t$ . Settlement of forward contracts can be made with delivery of the underlying or cash settlement. Since the contract is OTC, margin and collateral are determined by individual agreements and sometimes fall under the agreement.

The following table provides detailed information on the derivatives included in the investment portfolio as of June 30 and where they are located in the consolidated statements of financial position:

Location	Derivative Type	Notional Amount	2018		
			Level 1 Fair Value	Level 2 Fair Value	Level 3 Fair Value
Investments, held for long-term purposes	Total return swaps	\$ 100,721		\$ 94,736	
	Options (over-the-counter)			80	
<b>TOTAL DERIVATIVES, 2018</b>			<b>\$ -</b>	<b>\$ 94,816</b>	<b>\$ -</b>

Location	Derivative Type	Notional Amount	2017		
			Level 1 Fair Value	Level 2 Fair Value	Level 3 Fair Value
Investments, held for long-term purposes	Total return swaps	\$ 207,681		\$ 27,799	
	Options (over-the-counter)			(519)	
<b>TOTAL DERIVATIVES, 2017</b>			<b>\$ -</b>	<b>\$ 27,280</b>	<b>\$ -</b>

The following table provides detailed information on the effect the derivatives had on the overall performance

of the investment portfolio which is reflected in the consolidated statement of activities:

Location	Derivative Type	2018	2017
Net effect on investment income (loss)			
	Total return swaps	\$ 39,072	\$ 6,031
	Options (over-the-counter)		601
	Futures contracts		330
	Interest rate hedges		(2,121)
	Yield curve hedges		(1,306)
		<b>\$ 39,072</b>	<b>\$ 3,535</b>
Net appreciation			
	Total return swaps	2,596	21,299
		<b>\$ 2,596</b>	<b>\$ 21,299</b>
<b>NET EFFECT OF DERIVATIVES</b>		<b>\$ 41,668</b>	<b>\$ 24,834</b>

## 7. PROPERTY, PLANT, EQUIPMENT AND BOOKS

Property, plant, equipment and books are stated at cost, less accumulated depreciation. Depreciation is computed on the straight-line method over the estimated useful life of 10 to 30 years for land improvements, 10

to 50 years for building and building improvements, 5 to 15 years for equipment, and 10 years for books. Components of property, plant, equipment and books are as follows:

	2018	2017
Land and land improvements	\$ 72,483	\$ 61,035
Building and building improvements	1,355,525	1,337,187
Equipment and software	304,173	290,629
Library books	46,645	44,920
Construction-in-progress	42,453	41,380
	1,821,279	1,775,151
Less: Accumulated depreciation	(1,078,863)	(1,018,069)
<b>TOTAL PROPERTY, PLANT, EQUIPMENT AND BOOKS, NET</b>	<b>\$ 742,416</b>	<b>\$ 757,082</b>

The above assets include \$571,015 leased from the Ohio Higher Educational Facility Commission ("OHEFC"). The University may purchase each of the leased assets for a nominal amount at the end of the lease period. Therefore, these assets have been capitalized and are included in the above listing. The corresponding liability is included in *Notes and bonds payable* on the consolidated statements of financial position.

Capitalized interest added to construction-in-progress was \$0 (2018) and \$152 (2017). The expected cost to complete construction-in-progress is approximately \$38,306.

Depreciation expense included in the consolidated statement of activities is \$67,880 (2018) and \$68,344 (2017).

## 8. NOTES AND BONDS PAYABLE

Notes and bonds payable are as follows:

		Interest Rate(s)	Maturity	2018	2017
OHEFC revenue notes and bonds:	Series 1990	6.50%	2018-2021	\$ 6,300	\$ 8,045
	Series 1994	6.25%	2019	4,745	9,085
	Series 2006	4.00 - 5.25%	2018-2027	40,525	42,260
	Series 2008C	5.00%	2018		1,595
	Series 2012A	4.00 - 5.00%	2018-2024	18,880	22,415
	Series 2013A	4.00 - 5.00%	2018-2024	20,435	22,510
	Series 2014A	1.42%	2030-2045	67,500	67,500
	Series 2015A	4.00 - 5.38%	2018-2035	47,095	48,765
	Series 2015B	1.51%	2018		73,730
	Series 2016	3.00 - 5.00%	2018-2041	166,450	166,450
	Series 2018	3.00 - 5.00%	2018-2031	88,780	
OHEFC commercial paper		1.24%	2018		30,000
Compass Group USA, Inc.		-n/a-	2018-2019	263	563
<b>TOTAL LIABILITY</b>				<b>\$ 460,973</b>	<b>\$ 492,918</b>
Line of credit				36,000	14,000
Unamortized bond premium				37,705	27,264
Unamortized bond issuance cost				(3,434)	(2,998)
<b>TOTAL NOTES AND BONDS PAYABLE</b>				<b>\$ 531,244</b>	<b>\$ 531,184</b>

In November 2016, the OHEFC Series 2016 bonds were issued to refinance the balance of the OHEFC Series 2008A bonds in the amount of \$60,000, a portion of the OHEFC Series 2006 bonds in the amount of \$32,805, and OHEFC tax-exempt Commercial Paper in the amount of \$33,000. The OHEFC Series 2016 bonds were also issued to defease a portion of the OHEFC Series 2008C in the amount of \$43,662, and a portion of the OHEFC Series 2013A in the amount of \$13,416 and included a University cash contribution of \$2,197. Deferred financing fees of \$1,370 were paid and the unamortized balance is a reduction to *Notes and bonds payable*. The total amount of the bond proceeds were \$186,450.

In May 2018, the OHEFC Series 2018 bonds were issued to refinance the balance of the OHEFC Series 2015B bonds in the amount of \$72,630 and OHEFC tax-exempt Commercial Paper in the amount \$30,000. Deferred financing fees of \$724 were paid and the unamortized balance is a reduction to *Notes and bonds payable*. The total amount of the bond issue was \$103,354.

The amount outstanding under the OHEFC tax-exempt commercial paper program to provide construction funds for several approved capital projects was \$0 (2018) and \$30,000 (2017). Principal was paid down in the amount of \$30,000 (2018) and \$38,110 (2017). The commercial

paper program was terminated in May 2018. The annualized interest cost and credit facility expense for this program was 1.61% (2018) and 1.20% (2017).

The University has revolving lines of credit with two financial institutions in the amount of \$100,000 to finance working capital. Each \$50,000 line is subject to annual review, one in September 2018 and the other in February 2019. The amount outstanding was \$36,000 (2018) and \$14,000 (2017).

Principal payment requirements for bonds, notes, and capital lease obligations for the next five fiscal years and thereafter are as follows:

Year	Total Scheduled Principal Payments
2019	\$ 14,868
2020	15,595
2021	15,375
2022	18,335
2023	45,925
Thereafter	350,875
<b>TOTAL</b>	<b>\$ 460,973</b>

Interest expense, including those amounts for interest rate swap agreements (Note 12), was \$19,283 (2018) and

\$19,721 (2017).

## 9. RETIREMENT PLANS

The University has both defined benefit and defined contribution pension plans for its employees. In accordance with provisions of the Employee Retirement Income Security Act of 1974, the University has established a trust to hold plan assets for its defined benefit plan. The funded status of the University's defined benefit plan is as follows:

	2018	2017
Funded status at June 30 of prior fiscal year	\$ (101,817)	\$ (113,516)
Service cost	(10,424)	(10,287)
Interest cost	(10,682)	(10,098)
Expected return on assets	12,868	12,236
Actuarial gain	5,939	9,316
Employer contributions	14,223	10,532
<b>FUNDED STATUS AT JUNE 30</b>	<b>\$ (89,893)</b>	<b>\$ (101,817)</b>

Accumulated benefit obligation	\$ 256,998	\$ 254,593
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Benefit plan costs for the defined benefit plan are as follows:

	2018	2017
Net periodic benefit cost	\$ 14,321	\$ 14,933
Employer contributions	14,223	10,532
Benefits paid	6,998	6,138

Estimated benefits expected to be paid under the defined benefit plan for the next five fiscal years are as follows:

2019	\$ 6,634
2020	7,224
2021	7,658
2022	8,490
2023	9,176

Amounts expected to be paid between 2024 and 2028 total \$59,179. The University's estimated employer contribution for the defined benefit plan in fiscal 2019 will depend on the results of the July 1, 2018 actuarial valuation and is estimated to be \$16,972.

Weighted-average assumptions used to determine the benefit obligation and benefit plan costs are as follows:

	2018	2017
<b>BENEFIT OBLIGATION</b>		
Discount rate	4.35%	4.10%
Rate of compensation increase	2.25%	2.25%
Measurement date	6/30/18	6/30/17
Census date	7/1/17	7/1/16

	2018	2017
<b>NET PERIODIC BENEFIT COST</b>		
Discount rate	4.10%	3.90%
Expected return on plan assets	7.50%	7.50%
Rate of compensation increase	2.25%	2.25%

The expected long-term rate of return for the defined benefit plan was estimated using market benchmarks for equities and bonds applied to the plan's target asset allocation. Management estimated the rate by which the plan assets would outperform the market in the future based on historical experience adjusted for changes in asset allocation and expectations compared to past periods.

The investment objective for the defined benefit plan is to maximize total return with tolerance for slightly above average risk, in order to meet the obligations that the University has to its plan beneficiaries. To accomplish this objective, the University has established a broadly-diversified asset allocation strategy that includes absolute return strategies (combination of fixed income and equity securities) (50%), equity investments (30%), bonds and cash (16%), and real estate (4%). The weightings of the investments relative to each other in the total portfolio fluctuate as market conditions vary; they are adjusted regularly to remain within acceptable ranges.

The weighted-average asset allocation for the defined benefit plan is as follows:

	2018	2017
Equity securities	42%	39%
Fixed income securities	22%	23%
Real estate	5%	6%
Other	31%	32%
<b>TOTAL ASSET ALLOCATION</b>	<b>100%</b>	<b>100%</b>

The amounts recognized in the University's consolidated statements of financial position and in unrestricted net assets related to the defined benefit plan are as follows:

	2018	2017
Benefit obligation at June 30	\$ 258,135	\$ 256,225
Fair value of plan assets at June 30	168,242	154,408
<b>NET LIABILITY</b>	<b>\$ (89,893)</b>	<b>\$ (101,817)</b>
<b>UNRESTRICTED NET ASSETS</b>		
Actuarial losses	92,676	104,698
<b>AMOUNT RECOGNIZED AS REDUCTION OF UNRESTRICTED NET ASSETS</b>	<b>\$ 92,676</b>	<b>\$ 104,698</b>

The estimated amortization of net loss expected in fiscal 2019 totals \$5,211. Components of the net periodic benefit cost and other changes in plan assets that are recognized in the consolidated statement of activities are as follows:

	2018	2017
Change in actuarial gains	\$ (12,022)	\$ (16,100)
<b>TOTAL GAIN RECOGNIZED, UNRESTRICTED NET ASSETS</b>	<b>(12,022)</b>	<b>(16,100)</b>
Service cost	10,424	10,287
Interest cost	10,682	10,098
Expected return on assets	(12,868)	(12,236)
Net loss amortization	6,083	6,784
<b>Net periodic benefit cost</b>	<b>14,321</b>	<b>14,933</b>
<b>TOTAL LOSS (GAIN) RECOGNIZED, STATEMENT OF ACTIVITIES</b>	<b>\$ 2,299</b>	<b>\$ (1,167)</b>

Benefit plan costs for the defined contribution plan are \$22,884 (2018) and \$21,940 (2017).

## 10. COMMITMENTS AND CONTINGENCIES

In its normal operations, the University is subject to various claims and lawsuits. In management's opinion, the resolution of these contingencies will not have a significant adverse effect on the University's financial position, operations, or cash flows.

In May 2002, the University entered into an agreement with CCF to form a new medical education and research program, the Cleveland Clinic Lerner College of Medicine ("CCLCM"). Beginning in 2004, research grants from the National Institutes of Health to support work by CCF-based investigators were awarded to and administered through the University by CCLCM, which operates as an academic unit of the School of Medicine. Expenditures for research conducted under this joint agreement totaled \$99,967 (2018) and \$96,310 (2017).

In April 2006, the Boards of University Hospitals Health System and the University approved an affiliation agreement between the School of Medicine and University Hospitals of Cleveland ("UHC"). This agreement created the Case Medical Center, a virtual entity that encompasses certain teaching, research, and clinical activities of the School of Medicine and UHC. In September 2016, the affiliation agreement was renewed with the exception of the Case Medical Center designation. Even though the virtual entity will

be dissolved, there will be continued collaboration in education and research.

The University and CCF have entered into an agreement with a perpetual term to provide for the development, operation and joint use of a new state-of-the-art Health Education Campus ("HEC"), which includes an academic building and a separate dental clinic. The HEC will provide a unified educational space for programs of the School of Medicine, including CCLCM, the School of Dental Medicine and the Frances Payne Bolton School of Nursing. Occupancy is scheduled to be in spring of 2019. CCF is providing interim funding of construction costs as needed, while the University and CCF are collaborating on fundraising to cover the capital costs of HEC. In the event that amounts raised by 2020 do not cover the total costs of the HEC, the University has agreed to provide up to \$50,000 over a five-year period beginning in 2021.

The University is self-insured for workers compensation and employee and student medical coverage. Property is commercially insured with an aggregate deductible of \$700. The University also carries general liability insurance with a deductible of \$100 per occurrence. The University believes its reserves for self-insured risks and the deductible portion of insured risks are sufficient.

## 11. RELATED PARTY TRANSACTIONS

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In 1998, the University entered into a thirty-year agreement with the Medical Center Company (a cooperative utility company formed by and serving institutions in the University Circle area) to purchase steam, chilled water, and other utilities for several University buildings. The amounts purchased were \$22,624 (2018) and \$22,423 (2017). No obligation associated with this agreement is recorded in the accompanying consolidated financial statements.

In July 2012, the University received an energy efficiency grant from the Medical Center Company in the amount of \$998. The grant required a capital contribution of \$267 from the University and payback of a portion of projected energy cost savings. Payback terms are 36 months beginning January 2014. The obligation recorded in *Deferred income and other liabilities* is \$0 (2018) and \$23 (2017).

In August 2015, the Medical Center Company approved an additional energy efficiency grant in the amount of \$829. The project costs incurred totaled \$0 (2018) and \$169 (2017). The payback terms related to this project are 36 months beginning March 2016. The obligation related to this project recorded in *Deferred income and other liabilities* is \$155 (2018) and \$217 (2017).

In October 2017, the Medical Center Company approved an additional energy efficiency grant in the amount of \$1,084. The project costs incurred totaled \$1,084 (2018) and \$0 (2017). The payback terms related to this project are 36 months estimated to begin December 2018. The obligation related to this project recorded in *Deferred income and other liabilities* is \$1,084 (2018) and \$0 (2017).

## 12. DERIVATIVES

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The University uses floating-to-fixed interest rate swap agreements of various durations to manage both its funding cost and the interest rate risk associated with variable rate debt. Under these swap agreements, the University pays a fixed rate and receives from its counterparty a variable rate payment, each calculated by reference to specified notional principal amounts during the agreement period. Operations are charged the variable rate interest on the corresponding bonds; the difference between the fixed and variable interest amounts under the swap agreements is recorded in non-operating revenues and expenses as *Investment income*.

The University follows accounting guidance that defines fair value, establishes a framework for measuring fair value, and expands disclosure requirements about fair value measurements, including derivatives. The University's interest rate swaps are valued by an independent swap consultant that uses the mid-market levels, as of the close of business, to value

the agreements. The valuations provided are derived from proprietary models based upon well-recognized financial principles and reasonable estimates about relevant future market conditions and the University's credit worthiness. The University's interest rate swap arrangements have inputs that can generally be corroborated by market data and are classified as Level 2 in the fair value hierarchy. Under four agreements in effect at June 30, 2018, the counterparty pays a variable interest rate equal to a percentage of the one month LIBOR.

The following table provides detailed information on the interest rate swaps at June 30, 2018, with comparative fair values for June 30, 2017. Information related to the interest rate swap agreements and the liability recognized in the consolidated statements of financial position in *Deferred income and other liabilities* are as follows:

Notional Amount	Interest Rate	Commencement	Termination Date	Basis	2018		2017	
					Level 2 Fair Market Value			
\$ 8,405	4.34%	Aug. 12, 2004	Oct. 1, 2022	LIBOR	\$ (589)	\$ (1,005)		
15,000	4.43%	Jun. 5, 2002	Jun. 5, 2022	LIBOR	(1,441)	(2,244)		
15,000	3.60%	Sept. 25, 2002	Sept. 25, 2022	LIBOR	(1,035)	(1,732)		
35,000	3.81%	Aug. 4, 2004	Aug. 1, 2034	LIBOR	(7,606)	(9,709)		
<b>TOTAL INTEREST RATE SWAP AGREEMENT LIABILITY</b>					<b>\$ (10,671)</b>	<b>\$ (14,690)</b>		

Changes in the fair value of derivative instruments are recorded in non-operating revenues and expenses as *Investment income*. The provisions of the swap agreements require that on a weekly basis the University place into an escrow fund collateral sufficient to limit the counter-party's financial exposure to the University to no

more than \$20,000. The University had placed \$0 (2018 and 2017) into such a fund.

Interest expense recorded for the swap agreements in the non-operating activities for the year ended June 30 was \$2,157 (2018) and \$4,236 (2017).

### 13. RESTRICTED NET ASSETS

The University's restricted net assets as of June 30 were as follows:

<b>June 30, 2018</b>	Temporarily Restricted	Permanently Restricted	Total
Endowment			
True endowment	\$ 538,176	\$ 643,849	\$ 1,182,025
Funds functioning as endowment (FFE)	296,604		296,604
Total true endowment and FFE	834,780	643,849	1,478,629
Funds held in trust by others		347,459	347,459
<b>TOTAL UNIVERSITY ENDOWMENT</b>	<b>\$ 834,780</b>	<b>\$ 991,308</b>	<b>\$ 1,826,088</b>
Other net assets			
Pledges receivable	85,594	49,818	135,412
Funds held in trust by others, unused income	8,729		8,729
Student loan funds		37,316	37,316
Split-interest agreements	99	12,033	12,132
Purpose restricted gifts	138,210	10,730	148,940
<b>TOTAL NET ASSETS</b>	<b>\$ 1,067,412</b>	<b>\$ 1,101,205</b>	<b>\$ 2,168,617</b>



<b>June 30, 2017</b>	Temporarily Restricted	Permanently Restricted	Total
<b>Endowment</b>			
True endowment	\$ 501,891	\$ 627,883	\$ 1,129,774
Funds functioning as endowment (FFE)	288,060		288,060
Total true endowment and FFE	789,951	627,883	1,417,834
Funds held in trust by others		337,553	337,553
<b>TOTAL UNIVERSITY ENDOWMENT</b>	<b>\$ 789,951</b>	<b>\$ 965,436</b>	<b>\$ 1,755,387</b>
<b>Other net assets</b>			
Pledges receivable	94,343	38,665	133,008
Funds held in trust by others, unused income	7,463		7,463
Student loan funds		37,125	37,125
Split-interest agreements	143	18,396	18,539
Purpose restricted gifts	120,936	7,876	128,812
<b>TOTAL NET ASSETS</b>	<b>\$ 1,012,836</b>	<b>\$ 1,067,498</b>	<b>\$ 2,080,334</b>

#### 14. SUBSEQUENT EVENTS

The University has performed an evaluation of subsequent events through October 20, 2018, the date

on which the consolidated financial statements were issued.

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## APPENDIX C

### CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT

The following are summaries of the Trust Agreement, the Lease and the Tax Agreement. These summaries do not purport to set forth all of the provisions of such documents, to which reference is made for the complete and actual terms thereof.

Certain terms used in the Trust Agreement, the Lease, the Base Lease, and the Tax Agreement are defined below unless otherwise defined herein or the context clearly indicates otherwise. When and if such terms are used in this Offering Circular they shall have the meanings set forth below. Any capitalized term used in this Offering Circular regarding the Trust Agreement, the Lease and the Tax Agreement and not defined herein shall have the meaning given such term by the Trust Agreement, the Lease and the Tax Agreement.

“**Act**” means Chapter 3377 and Sections 9.98 to 9.983 of the Revised Code.

“**Additional Payments**” means the amounts required to be paid by the University pursuant to the provisions of Section 3.2 of the Lease.

“**Applicable Rate**” means the FRN Rate applicable from time to time to the Bonds.

“**Assignment**” means the Assignment of Rights Under Lease dated as of March 1, 2019 from the Commission, as assignor, to the Trustee, as assignee, as amended or supplemented from time to time.

“**Authenticating Agent**” means the Trustee and the Registrar and any other bank, trust company or Person designated as an Authenticating Agent for the Bonds by or in accordance with Section 6.13 of the Trust Agreement, each of which shall be a transfer agent registered in accordance with Section 17A(c) of the Securities Exchange Act of 1934, as amended.

“**Base Lease**” means the Base Lease dated as of March 1, 2019 between the University, as lessor, and the Commission, as lessee, as amended or supplemented from time to time, relating to the Bonds.

“**Bond Counsel**” means any attorney or firm of attorneys of nationally recognized standing on the subject of municipal bonds acceptable to the Commission.

“**Bond Documents**” means the Bond Legislation, the Base Lease, the Lease, the Guaranty, the Tax Agreement, the Assignment, the Trust Agreement, and the Bond Purchase Agreement.

“**Bond Fund**” means the Bond Fund created under the Trust Agreement and held by the Trustee.

“**Bond Legislation**” means the resolution adopted by the Commission providing for the issuance of the Bonds and approving the Base Lease, the Lease, the Trust Agreement, the Assignment, the Bond Purchase Agreement and related matters, as that resolution may from time to time be amended or supplemented.

“**Bond Purchase Agreement**” means the Bond Purchase Agreement providing for the sale of the Bonds among J.P. Morgan Securities LLC, on behalf and as representative of the underwriters identified therein, the University and the Commission.

“**Bond Purchase Fund**” means the Bond Purchase Fund created under the Trust Agreement and held by the Trustee.

**“Bond Service Charges”** means, for any period or payable at any time, the principal of (whether on an Interest Payment Date, at stated maturity, by mandatory sinking fund redemption, if any, by acceleration or otherwise) and premium, if any, and interest on the Bonds for that period or due and payable at that time as the case may be.

**“Bonds”** or **“Bond”** means the State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2019A and issued by the Commission pursuant to the Trust Agreement, including any portion thereof or any beneficial interest therein, as applicable.

**“Book entry form”** or **“book entry system”** means, with respect to the Bonds, a form or system, as applicable, under which (i) the ownership of beneficial interests in Bonds and Bond Service Charges may be transferred only through a book entry and (ii) physical Bond certificates in fully registered form are registered only in the name of a Depository or its nominee as Holder, with the physical Bond certificates “immobilized” in the custody of the Depository or of the Trustee on behalf of the Depository. The book entry system is maintained by and is the responsibility of the Depository and is not the responsibility of the Commission or the Trustee. The book entry is the record that identifies, and records the transfer of the interests of, the owners of beneficial (book entry) interests in the Bonds.

**“Business Day”** means any day other than (i) a Saturday or a Sunday, (ii) a day on which banking institutions in the city in which the designated offices of the Trustee are located and authorized by law or executive order to close and are closed, (iii) any day on which the Federal Reserve Bank of Cleveland is closed, (iv) a day on which the Depository is closed, or (v) a day on which the New York Stock Exchange is not open for business.

**“Calculation Agent”** means (i) during the Direct Purchase Period, the Direct Purchaser or any affiliate thereof during any Direct Purchase Period, or any Person, financial institution or financial advisory firm appointed by the University, with the consent of the Direct Purchaser to serve as Calculation Agent for the Bonds, and (b) during the FRN Mode or the Window Mode, any Person, financial institution or financial advisory firm appointed by the University prior to a Conversion to any such interest rate mode to serve as Calculation Agent for the Bonds, initially The Bank of New York Mellon Trust Company, N.A.

**“Calculation Agent Agreement”** means any Calculation Agent Agreement, as amended or supplemented from time to time, between the University and a Calculation Agent whereby the Calculation Agent undertakes to perform the duties of the Calculation Agent under the Trust Agreement with respect to the Bonds.

**“Code”** means the Internal Revenue Code of 1986, the regulations (whether 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 any applicable successor section or provision and such applicable Regulations, rulings, announcements, notices, procedures and determinations pertinent to that section.

**“Commission”** means the Ohio Higher Educational Facility Commission, a body both corporate and politic, constituting an agency or instrumentality of the State.

**“Continuing Disclosure Agreement”** means the Continuing Disclosure Agreement dated as of March 1, 2019 between the University and the Trustee relating to the Bonds and as amended or supplemented from time to time.

**“Conversion”** means a conversion of all or a portion of the Bonds from one Interest Rate Mode to one or more other Interest Rate Modes in accordance with the terms and provisions of Section 2.15 of the Trust Agreement and shall also include (a) a conversion from any Direct Purchase Period to the next Direct Purchase Period; (b) a conversion of the FRN Bonds into a new FRN Period; (c) a conversion from one Fixed Period to a new Fixed Period; (d) a conversion from any Short Term Period to a new Short Term Period; and (e) a conversion from any Long Term Period to a new Long Term Period.

**“Conversion Date”** means the effective date of a Conversion of the Bonds or a portion of the Bonds.

**“Credit Facility”** means an irrevocable direct-pay letter of credit or other credit enhancement or liquidity support facility, or any combination thereof, delivered to and in favor of the Trustee for the benefit of the owners of the Bonds, and includes any Alternate Credit Facility delivered to the Trustee pursuant to Section 14.03 of the Trust Agreement.

**“Credit Facility Issuer”** means the commercial bank, bond insurer, or other financial institution issuing (or having primary obligation, or acting as agent for the financial institutions obligated, under) a Credit Facility then in effect“

**“Default”** means any circumstance that, with the passage of time or the giving of notice or both, would constitute an “Event of Default” under the applicable Bond Document.

**“Defeasance Obligations”** means

(a) Direct Obligations;

(b) certificates or receipts representing direct ownership of future interest or principal payments on direct obligations of, or obligations fully guaranteed by, the United States of America or any of its agencies or instrumentalities the obligations of which are backed by the full faith and credit of the United States of America, which obligations are (i) held by a custodian in safekeeping on behalf of the holder of such receipts and (ii) rated or assessed in the highest category for long-term debt by a Rating Service then maintaining a rating on the Bonds; or

(c) obligations of any state or any political subdivision of any state, other than the Commission, which are rated in the highest category for long-term debt by a Rating Service, the interest on which is excluded from gross income for federal income tax purposes and the full and timely payment of the principal of and any premium and the interest on which is fully and unconditionally payable from obligations of the character described in (a) or (b) above.

**“Depository”** means The Depository Trust Company (a limited purpose trust company), New York, New York, until any successor Depository shall have become such pursuant to the applicable provisions of the Trust Agreement and, thereafter, “Depository” shall mean the successor Depository. Any Depository shall be a securities depository that is a clearing agency under federal law operating and maintaining, with its participants or otherwise, a book entry system to record ownership of beneficial interests in Bonds or Bond Service Charges, and to effect transfer of beneficial interests in the Bonds, in book entry form.

**“Determination of Taxability”** means and shall be deemed to have occurred on the first to occur of the following:

(i) on the date when the University files any statement, supplemental statement or other tax schedule, return or document which discloses that an Event of Taxability shall have in fact occurred;

(ii) on the date when the Bondholder or any former Bondholder notifies the Commission and the University that it has received a written opinion by a nationally recognized firm of attorneys of substantial expertise on the subject of tax exempt municipal finance which is ranked in the top 25 bond counsel firms by *The Bond Buyer* (or successor ranking data provider) by either (i) number of long term bond issues or (ii) principal amount of transactions to the effect that an Event of Taxability shall have occurred unless, within 180 days after receipt by the University of such notification from the Bondholder or any former Bondholder, the University shall deliver to the Bondholder and any former Bondholder a ruling or determination letter issued to or on behalf of the Commission or the University by the Commissioner or any District Director of the Internal Revenue Service (or any other governmental official exercising the same or a substantially similar function from time to time) to the effect that, after taking into consideration such facts as form the basis for the opinion that an Event of Taxability has occurred, an Event of Taxability shall not have occurred;

(iii) on the date when the Commission or the University shall be advised in writing by the Commissioner or any District Director of the Internal Revenue Service (or any other government official or agent exercising the same or a substantially similar function from time to time) that, based upon filings of the

University, or upon any review or audit of the University or upon any other ground whatsoever, an Event of Taxability shall have occurred; or

(iv) on the date when the University shall receive notice from the Bondholder or any former Bondholder that the Internal Revenue Service (or any other government official or agency exercising the same or a substantially similar function from time to time) has assessed as includable in the gross income of such Bondholder or such former Bondholder the interest on the Bonds due to the occurrence of an Event of Taxability;

provided, however, no Determination of Taxability shall occur under subparagraph (iii) or (iv) hereunder unless the University has been afforded the opportunity, at its expense, to contest any such assessment, and, further, no Determination of Taxability shall occur until such contest, if made, has been finally determined.

**“Direct Obligations”** means direct obligations of the United States of America (whether in certificated or book-entry form), and securities the timely payment of the principal of and interest on which is fully and unconditionally guaranteed by the United States of America, provided that the full faith and credit of the United States of America must be pledged to any such direct obligation or guarantee.

**“Eligible Investments”** means, to the extent permitted by law:

(a) Direct Obligations;

(b) direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; senior debt obligations of the Federal Home Loan Banks; certificates of beneficial ownership of the Rural Economic Community Development Administration (formerly the Farmers Home Administration (“FMHA”)); participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation (“FHLMCs”) rated, at the time of purchase, “Aaa” by Moody’s and “AAA” by S&P; debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities that are valued greater than par on the portion of unpaid principal at the time of purchase) and senior debt obligations of the Federal National Mortgage Association (“FNMA”) rated, at the time of purchase, “Aaa” by Moody’s and “AAA” by S&P; participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed pass-through obligations of the Government National Mortgage Association (“GNMA”); senior debt obligations of the Student Loan Marketing Association; project notes, local authority bonds, new communities debentures and U.S. public housing notes and bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financings of the U.S. Maritime Administration; and Resolution Funding Corporation obligations;

(c) direct obligations of any state of the United States of America or any subdivision or agency thereof whose long-term, unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, “Aa” or better by Moody’s and “AA” or better by S&P, or any obligation fully and unconditionally guaranteed by any state, subdivision or agency whose long-term, unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, “Aa” or better by Moody’s and “AA” or better by S&P;

(d) commercial paper (having original maturities of not more than 270 days) rated, at the time of purchase, “Prime-1” or better by Moody’s and “A-1” or better by S&P;

(e) unsecured certificates of deposit (including those placed by a third party pursuant to an agreement between the Trustee and the University), demand deposits (including interest-bearing money market accounts, trust accounts, overnight bank deposits and interest-bearing deposits), other deposit products, trust deposits, time deposits or bankers acceptances (in each case having maturities of not more than 360 days) of any domestic bank (including the Trustee and its respective affiliates) including a branch office of a foreign bank, which branch office is located in the United States, provided that legal opinions are received to the effect that full and timely payment of such deposit or similar obligation is enforceable against the principal office or any branch of such bank, which, at the time of purchase, has a short-term “Bank Deposit” rating of “Prime-1” or “A-3” or better by Moody’s and a “Short-Term CD” rating of “A-1” or better by S&P;

(f) deposits of any bank or savings and loan association (including the Trustee and any bank affiliated with the Trustee) that has combined capital, surplus and undivided profits of not less than \$30,000,000, provided that such deposits are continuously and fully insured by the Bank Insurance Fund or the Savings Association Insurance Fund of the Federal Deposit Insurance Corporation (“FDIC”);

(g) investments in money-market funds (including those for which the Trustee or any of its affiliates provide services for a fee, whether as an investment advisor, custodian, transfer agent, registrar, sponsor, distributor, manager or otherwise) registered under the Federal Investment Company Act of 1940, as amended, whose shares are registered under the Federal Securities Act of 1933, as amended, rated, at the time of purchase, “AAAm”, “AAA-G” or “AAm” or the equivalent by Moody’s or S&P, provided that if such money-market funds of the Trustee are not rated, such funds shall be invested only in Direct Obligations;

(h) repurchase agreements collateralized by Direct Obligations, GNMAAs, FNMAAs or FHLMAAs (the “Collateral Securities”) with any registered broker/dealer subject to the jurisdiction of the Securities Investors’ Protection Corporation or any commercial bank whose deposits are insured by the FDIC (including the Trustee or any broker/dealer affiliated with the Trustee), if such broker/dealer or bank has an uninsured, unsecured and unguaranteed obligation, at the time of purchase, rated “Prime-1” or “A3” or better by Moody’s, and “A-1” or “A” or better by S&P, provided that:

(i) a master repurchase agreement or other specific written repurchase agreement governs the transaction; and

(ii) the Collateral Securities are held free and clear of any lien by the Trustee (as may be evidenced by an opinion of counsel acceptable to the Trustee) or an independent third party acting solely as agent (“Agent”) for the Trustee, and such third party is (1) a Federal Reserve Bank, or (2) a bank that is a member of the FDIC and has combined capital, surplus and undivided profits of not less than \$50,000,000; and

(iii) the Trustee receives an opinion of counsel acceptable to the Trustee that a perfected first security interest under the Uniform Commercial Code is created in, or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. are followed with respect to, the Collateral Securities for the benefit of the Trustee; and

(iv) the repurchase agreement has a term of 30 days or less, and the Trustee or the Agent will value the Collateral Securities no less frequently than weekly and will liquidate the Collateral Securities if any deficiency in the required collateral percentage is not restored within two Business Days of such valuation; and

(v) the fair market value of the Collateral Securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 104%, provided that it shall be 105% if the Collateral Securities are FNMAAs or FHLMAAs;

(i) investment agreements with a bank, insurance company or other provider (including the Trustee or any affiliate of the Trustee) that has an unsecured, uninsured and unguaranteed obligation (or claims-paying ability) rated “A3” or better by Moody’s and “A-” or better by S&P at the time of purchase, or is a lead bank of a parent bank holding company with an uninsured, unsecured and unguaranteed obligation meeting such rating requirements, provided that:

(i) interest is paid at least semiannually at a fixed rate during the entire term of the agreement, consistent with bond payment dates,

(ii) money invested thereunder may be withdrawn without any penalty, premium or charge upon not more than one day’s notice (provided such notice may be amended or canceled at any time prior to the withdrawal date),

(iii) the agreement is not subordinated to any other obligations of such bank, insurance company or other provider,

(iv) the same guaranteed interest rate will be paid on any future deposits made to restore the reserve to its required amount, and

(v) the Trustee receives an opinion of counsel that such agreement is an enforceable obligation of such bank, insurance company or other provider;

(j) corporate notes or bonds rated, at the time of purchase, “A” or better by Moody’s and “A” or better by S&P;

(k) such other investments as may be permitted under State and federal law, provided that such investments shall be made only for the purpose of preventing any Bonds from becoming “arbitrage bonds” under Section 148 of the Code, and provided further that prior to such investment, the Trustee or University Representative, as the case may be, shall have obtained the written opinion of bond counsel that such investment will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes.

Investments or deposits in certificates of deposit or in investment contracts shall not be made without complying with Treasury Regulations § 1.148-5(d) (6) (ii) and (iii), respectively, or with any successor provisions thereto or other similar applicable provisions. In determining whether the rating assigned by a Rating Service to an investment complies with the rating categories provided in this definition of Eligible Investments, the rating category shall be determined at the time of investment without regard to any numerical or plus or minus modifier, unless otherwise expressly provided above.

“**Escrow Fund**” means the Escrow Fund created under the Trust Agreement.

“**Event of Default**” means an Event of Default as defined in the applicable Bond Document.

“**Event of Taxability**” means a (i) change in law or fact or the interpretation thereof, or the occurrence or existence of any fact, event or circumstance (including, without limitation, the taking of any action by the University, or the failure to take any action by the University, or the making by the University of any misrepresentation herein or in any certificate required to be given in connection with the issuance, sale or delivery of the Bonds) which has the effect of causing interest paid or payable on the Bonds to become includable, in whole or in part, in the gross income of the Bondholder or any former Bondholder for federal income tax purposes or (ii) the entry of any decree or judgment by a court of competent jurisdiction, or the taking of any official action by the Internal Revenue Service or the Department of the Treasury, which decree, judgment or action shall be final under applicable procedural law, in either case, which has the effect of causing interest paid or payable on the Bonds to become includable, in whole or in part, in the gross income of the Bondholder or any former Bondholder for federal income tax purposes with respect to the Bonds.

“**Executive**” means the Chair, Vice Chair, Secretary or Deputy Secretary of the Commission.

“**Favorable Opinion of Bond Counsel**” means an opinion of Bond Counsel, addressed to the Commission, the Remarketing Agent, if any, the Direct Purchaser, if any, the University and the Trustee, to the effect that the action proposed to be taken is authorized or permitted or not prohibited by or in contravention of the Trust Agreement and will not result in the inclusion of interest on the Bonds in gross income of the Holders thereof for federal income tax purposes.

“**FRN Bonds**” means Bonds that bear interest at FRN Rates.

“**FRN Index**” means (a) during the Initial FRN Period, One Month LIBOR, and (b) on and after an FRN Conversion Date, (i) the SIFMA Index, (ii) One Month LIBOR, or (iii) such other index as the University shall select in consultation with the Remarketing Agent not less than five Business Days prior to the FRN Rate Conversion Date



as an index, which in the opinion of nationally recognized tax counsel, is reasonably expected to measure contemporaneous variations in the cost of newly borrowed funds or inflation, as applicable.

“**FRN Index Percentage**” means (a) during the Initial FRN Period, 70%, and (b) on and after an FRN Conversion Date, the percentage determined by the Remarketing Agent pursuant to Section 2.10(d) of the Trust Agreement with respect to the determination of the FRN Rate.

“**FRN Interest Rate Period**” means each period during the FRN Period during which FRN Rates are in effect, as described in Section 2.10(a) of the Trust Agreement.

“**FRN Mode**” means the Interest Rate Mode during which the Bonds bear interest at FRN Rates.

“**FRN Period**” means the entire period during which Bonds constitute FRN Bonds with a specified FRN Index Percentage and FRN Spread, which FRN Period shall generally be comprised of multiple FRN Interest Rate Periods, during which FRN Rates are in effect.

“**FRN Rate**” means, with respect to the FRN Bonds in a particular FRN Interest Rate Period, the interest rate per annum on FRN Bonds during such FRN Interest Rate Period determined on a periodic basis as provided in Section 2.10 of the Trust Agreement, which is equal to the sum of (a) the FRN Index multiplied by the FRN Index Percentage, plus (b) the FRN Spread.

“**FRN Rate Adjustment Date**” means (a) during the Initial FRN Period, the first Business Day of each month and (b) on and after an FRN Conversion Date, the day as determined by the Remarketing Agent prior to the FRN Rate Conversion Date, pursuant to Section 2.10(a) of the Trust Agreement.

“**FRN Rate Conversion Date**” means a date on which there is (a) a continuation of the FRN Bonds in a new FRN Period and (b) a conversion of the FRN Bonds to an FRN Period from an Interest Rate Period other than an FRN Period.

“**FRN Rate Determination Date**” means (a) during the Initial FRN Period, two Business Days prior to the FRN Rate Adjustment Date and (b) on and after an FRN Conversion Date, with respect to any FRN Bonds, the Business Day on which the FRN Rate is determined by the Calculation Agent during each FRN Interest Rate Period, as determined by the Remarketing Agent pursuant to Section 2.10(d) of the Trust Agreement.

“**FRN Rate Hard Put Bonds**” means those FRN Bonds that are required to be purchased on an FRN Rate Hard Put Mandatory Purchase Date, pursuant to the election of the University under Section 2.10(c) of the Trust Agreement.

“**FRN Rate Hard Put Mandatory Purchase Date**” means, with respect to the FRN Rate Hard Put Bonds, the first day following the last day of each FRN Period.

“**FRN Rate Mandatory Purchase Date**” means (a) during the Initial FRN Period, April 1, 2022, and (b) on and after an FRN Conversion Date, each FRN Rate Hard Put Mandatory Purchase Date and FRN Rate Soft Put Mandatory Purchase Date.

“**FRN Rate Soft Put Bonds**” means any FRN Bonds that, pursuant to the election of the University under Section 2.10(c), are required to be purchased on an FRN Rate Soft Put Mandatory Purchase Date, but only to the extent that (a) remarketing proceeds, (b) funds made available from a Credit Facility or a Liquidity Facility or (c) other amounts made available by the University, in its sole discretion, are available for such purchase.

“**FRN Rate Soft Put Mandatory Purchase Date**” means, with respect to the FRN Rate Soft Put Bonds, the first day following the last day of each FRN Period.

“**FRN Spread**” means (a) during the Initial FRN Period, 0.42% per annum, and (b) on and after an FRN Conversion Date, the spread, determined by the Remarketing Agent in accordance with Section 2.10(d) prior to the

commencement of a new FRN Period, based on the relative spreads of securities that bear interest based on the FRN Index and FRN Index Percentage that, in the reasonable judgment of the Remarketing Agent under prevailing market conditions, are otherwise comparable to the Bonds or affecting the market for the Bonds or affecting such other comparable securities in a manner which, in the reasonable judgment of the Remarketing Agent, will affect the market for the Bonds (assuming for these purposes that the Bonds were to bear interest at FRN Rates for a particular FRN Period).

“**Guaranty**” means the Guaranty Agreement dated as of March 1, 2019 between the University and the Trustee, as amended or supplemented from time to time, relating to the Bonds.

“**Holder**” or “**Holder of a Bond**” or “**Bondholder**” means the Person in whose name a Bond is registered on the Register.

“**Independent Counsel**” means any attorney or firm of attorneys who is (i) duly admitted to practice law before the highest court of the State, (ii) not a full-time employee of the Commission, the University or the Trustee and (iii) not unacceptable to the Trustee.

“**Index Reset Date**” means the first Business Day of each calendar month.

“**Initial FRN Period**” means the period commencing on the issuance date of the Bonds and ending the day immediately preceding the FRN Rate Mandatory Purchase Date.

“**Interest Payment Date**” or “**Interest Payment Dates**” means the first Business Day of each calendar month.

“**Issuance Expenses Fund**” means the Issuance Expenses Fund created under the Trust Agreement.

“**Lease**” means the Lease dated as of March 1, 2019 between the Commission, as lessor, and the University, as lessee, as amended or supplemented from time to time.

“**Liquidity Facility**” means a line of credit, letter of credit, standby purchase agreement, loan, guarantee, or similar liquidity facility for the Bonds issued by a commercial bank or other financial institution which, by its terms, provides for the payment of the Purchase Price of Bonds tendered and not remarketed, and delivered to the Trustee in accordance this Trust Agreement or, in the event of the delivery of an Alternate Liquidity Facility, such Alternate Liquidity Facility. To the extent a Credit Facility provides for such payment, it shall also be deemed a Liquidity Facility.

“**Liquidity Facility Issuer**” means the commercial bank or other financial institution issuing (or having primary obligation, or acting as agent for the financial institutions obligated, under) a Liquidity Facility then in effect.

“**London Banking Day**” means any day on which commercial banks are open for general business, including dealings in U.S. dollars and foreign exchange and foreign currency, in London, England.

“**Mandatory Purchase Date**” means any Purchase Date on which Bonds are subject to mandatory purchase pursuant to Sections 4.07, 4.08 or 4.09 of the Trust Agreement, including as set forth in the applicable Supplemental Bond Indenture or Bondholder Agreement.

“**Maturity Date**” means October 1, 2044.

“**Maximum Interest Rate**” means the lesser of (a) 12% per year, and (b) the maximum interest rate permitted by law.

“**Offering Circular**” means this Offering Circular with respect to the Bonds.

**“One Month LIBOR”** means the offered rate (rounded up to the next highest on one-thousandth of one percent (0.001%) for deposits in U.S. dollars with one-month period that appears on the Bloomberg Screen as of 11:00 a.m., London time, two London Banking Days prior to the Index Reset Date. If such rate is not available at such time for any reason or is illegal to offer by the Calculation Agent, then the Calculation Agent, in consultation with the University, shall determine a substitute or replacement rate to effect, to the extent practicable, an aggregate all-in interest rate comparable to the LIBOR-based rate in effect prior to its replacement; provided that if the Calculation Agent determines that there is an industry-accepted successor rate to the one-month LIBOR, then the Calculation Agent shall use such rate (the “Alternative Rate”). As part of such substitution, the Calculation Agent will, as directed by the University, make such adjustments to the Alternative Rate, as well as the business day convention, interest determination dates and related provisions and definitions, in each case that are consistent with accepted market practice for the use of such Alternative Rate for the Bonds. If, however, there is no clear market consensus, as determined by the University, as to whether any rate has replaced LIBOR in customary market usage, Raymond James Associates, Inc., or another financial advisor with expertise in the area of municipal obligations and selected by the University, will determine an appropriate Alternative Rate and any adjustments thereto, and such determinations will be binding on the Issuer, the University, the Trustee, the Calculation Agent and the Bondholders.

**“Outstanding Bonds”, “Bonds outstanding” or “outstanding”** as applied to the Bonds means, as of the applicable date, all Bonds that have been authenticated and delivered, or are being delivered, by the Trustee under the Trust Agreement, except:

- (a) Bonds cancelled upon surrender, exchange or transfer, or cancelled because of payment or redemption on or prior to that date;
- (b) Bonds, or the portion thereof, for the payment, redemption or purchase for cancellation of which sufficient money shall have been deposited and credited with the Trustee or any Paying Agents on or prior to that date for that purpose (whether upon or prior to the maturity or redemption date of those Bonds); provided that, if any of those Bonds are to be redeemed prior to their maturity, notice of that redemption shall have been given or arrangements satisfactory to the Trustee shall have been made for giving notice of that redemption, or waiver by the affected Holders of that notice satisfactory in form to the Trustee shall have been filed with the Trustee;
- (c) Bonds, or the portion thereof, that are deemed to have been paid and discharged or caused to have been paid and discharged pursuant to the provisions of the Trust Agreement; and
- (d) Bonds in lieu of which others have been authenticated under Section 3.02 of the Trust Agreement.

**“Paying Agent”** means the Trustee and any bank or trust company designated as a Paying Agent for the Bonds by or in accordance with the Trust Agreement.

**“Permitted Encumbrances”** means, as of any particular time:

- (a) the Base Lease and the Lease and any sublease authorized under such Base Lease and Lease;
- (b) liens for ad valorem taxes, governmental charges and special assessments not then delinquent, or if then delinquent, being contested in accordance with the Lease;
- (c) utility, access and other easements and rights-of-way, mineral rights, restrictions and exceptions that an architect certifies will not interfere with or impair the operations being or to be conducted on the Project (or if no operations are being conducted thereon, the operations for which the Project was designed or last modified);
- (d) security interests, mortgages, easements, restrictions and other encumbrances existing as of the date of delivery of the Base Lease;

(e) purchase money mortgages, purchase money security interests and other similar interests to the extent permitted by the Lease;

(f) minor defects, irregularities, encumbrances, easements, rights-of-way and clouds on title of a nature that exist normally with respect to properties of a character similar to that of the Project and that, in the opinion of an architect or Independent Counsel, in the aggregate do not materially and adversely affect the value or marketable title of the Project or impair materially the property affected thereby for the purpose for which it was acquired or is held;

(g) liens resulting from governmental regulations on the use of the Project;

(h) any other lease between the Commission and the University entered into in connection with bonds issued by the Commission to provide for additional improvements to the Project or the Project Site or for the refunding of all or a portion of the Bonds or in connection with subsequent issues of bonds by the Commission for such purposes; and

(i) any lien, mortgage, security interest, lease or other encumbrance otherwise permitted by the Lease and the Trust Agreement or identified in the documents providing for the issuance of (including related base leases, leases and trust agreements) or securing any of the following:

- State of Ohio Higher Educational Facility Revenue Bonds Series 1990, dated as of July 15, 1990 as to Current Interest Bonds and dated as of July 30, 1990 as to Capital Appreciation Bonds
- State of Ohio Higher Educational Facility Revenue Bonds Series 1994, dated as of December 15, 1994
- State of Ohio Higher Educational Facility Revenue Bonds Series 2001, dated as of February 28, 2001
- State of Ohio Higher Educational Facility Commercial Paper, dated as of February 1, 2000
- State of Ohio Higher Educational Facility Revenue Bonds Series 2002, Series A and B, dated as of May 15, 2002
- State of Ohio Higher Educational Facility Revenue Bonds (Case Western Reserve University 2006 Project)
- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) 2012 Series A
- State of Ohio Higher Educational Facility Revenue Notes (Case Western Reserve University Commercial Paper Program II)
- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2013
- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) 2014 Series A
- State of Ohio Higher Educational Facility Revenue Bonds (Case Western Reserve University Project) Series 2015A
- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2015B

- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2016
- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2018
- State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2019A

“**Person**” or words importing persons mean firms, associations, partnerships (including without limitation, general and limited partnerships), limited liability companies, joint ventures, societies, estates, trusts, corporations, public or governmental bodies, other legal entities and natural persons.

“**Project**” means the Project Facilities and the Project Site, including, as applicable, the interests of the Commission in and to the Project, and constituting a “project” as defined by the Act, and consisting of the facilities financed by the Refunded Bonds and the sites thereof.

“**Project Facilities**” means the educational facilities generally identified in Exhibit A of the Lease, including any additions, improvements, modifications, substitutions and renewals thereof, and further includes other facilities and uses as are permitted by the Act and the Lease.

“**Project Site**” means the real estate described in Exhibit B of the Lease, together with any additions thereto and less any removals therefrom, in the manner and to the extent provided in the Lease and Trust Agreement.

“**Purchase Date**” means each date on which Bonds are subject to optional or mandatory purchase pursuant to the Trust Agreement and shall include each Mandatory Purchase Date and each date on which the University provides funds pursuant to the proviso contained in Section 4.14(b) of the Trust Agreement following return of the Bonds to the Holders pursuant to Section 4.14(a) of the Trust Agreement.

“**Purchase Price**” means, with respect to a Bond subject to purchase on a Purchase Date, an amount equal to the principal amount thereof plus accrued interest to, but not including, the Purchase Date; provided, however, that:

(a) if the Purchase Date for any Purchased Bond is an Interest Payment Date, the Purchase Price thereof shall be the principal amount thereof, and interest on such Bond shall be paid to the Holder of such Bond pursuant to the Trust Agreement; and

(b) in the case of a purchase on the first day of an Interest Rate Period which is preceded by a Long Term Period and which commences prior to the day originally established as the last day of such preceding Long Term Period, “Purchase Price” of any Purchased Bonds means the optional redemption price set forth in Section 4.01(g) of the Trust Agreement which would have been applicable to such Bond if the preceding Long Term Period had continued to the day originally established as its last day, plus accrued interest, if any.

“**Rating Service**” means Moody’s Investors Service, Inc. (“Moody’s”), S&P Global Ratings (“S&P”) or Fitch Ratings (“Fitch”), each of New York, New York, or their successors, or if any one of which shall be dissolved or no longer assigning credit ratings to long-term debt, then any other nationally recognized entity assigning credit ratings to long-term debt designated by an Executive.

“**Rebate Fund**” means the Rebate Fund created under the Trust Agreement.

“**Refunded Bonds**” means 2014A Bonds refunded in accordance with the Escrow Agreement.

“**Record Date**” or “**Regular Record Date**” means, with respect to any Interest Payment Date, the Business Day immediately preceding such Interest Payment Date.

**“Register”** means the books kept and maintained by the Registrar for the registration and transfer of Bonds pursuant to the Trust Agreement.

**“Registrar”** means the Trustee, until a successor Registrar shall have become such pursuant to applicable provisions of the Trust Agreement; each Registrar shall be a transfer agent registered in accordance with Section 17A(c) of the Securities Exchange Act of 1934, as amended.

**“Reimbursement Obligations”** means those amounts required to be reimbursed to a Credit Facility Provider or Liquidity Facility Provider upon payment under a Credit Facility or Liquidity Facility.

**“Remarketing Agent”** means the applicable Remarketing Agent appointed pursuant to Section 13.01 of the Trust Agreement and its successors.

**“Remarketing Agreement”** means any Remarketing Agreement executed by the University and the Remarketing Agent pursuant to Article XIII of the Trust Agreement, as amended from time to time

**“Rental Payment Date”** means each Interest Payment Date.

**“Rental Payments”** means the amounts required to be paid by the University to the Trustee pursuant to the Lease and the Assignment.

**“Revenues”** means (a) Rental Payments, (b) amounts held in, or for the credit of, the Special Funds, (c) all other rentals, revenue, income, charges and money received or to be received by the Commission, or the Trustee for the account of the Commission, from the lease, sale or other disposition of the Project (except Additional Payments), and (d) all income and profit from the investment of the Rental Payments and the Special Funds and such other money. The term “Revenues” does not include any money or investments in the Rebate Fund, the Bond Purchase Fund, the Escrow Fund or the Issuance Expenses Fund.

**“Revised Code”** means the Revised Code of the State of Ohio.

**“SIFMA”** means the Securities Industry & Financial Markets Association (formerly the Bond Market Association).

**“SIFMA Index”** means, on any date, a rate determined on the basis of the seven day high grade market index of tax exempt variable rate demand obligations, as produced by Bloomberg (or successor organizations) and published or made available by SIFMA or any Person acting in cooperation with or under the sponsorship of SIFMA and acceptable to the University and effective from such date or if such index is no longer produced or available, either (i) the S&P Municipal Bond 7 Day High Grade Rate Index as produced and made available by S&P Dow Jones Indices LLC (or successor organizations) or (ii) with a Favorable Opinion of Bond Counsel, such other index designed to measure the average interest rate on weekly interest rate reset demand bonds similar to the Bonds as selected by the University.

**“Special Funds”** means, collectively, the Bond Fund and any other funds or accounts permitted by, established under or identified in the Trust Agreement or the Bond Legislation and identified as such, except the Escrow Fund, the Rebate Fund, the Bond Purchase Fund and the Issuance Expenses Fund.

**“State”** means the State of Ohio.

**“Tax Agreement”** means the Tax Certificate and Agreement relating to the Bonds among the Commission, the University and the Trustee, as amended or supplemented from time to time.

**“Trust Agreement”** means the Trust Agreement dated as of March 1, 2019 securing the Bonds, between the Commission and the Trustee, as amended or supplemented from time to time.

“**Trustee**” means the Trustee under the Trust Agreement, originally The Bank of New York Mellon Trust Company, N.A., a national banking association duly organized and validly existing under the laws of the United States of America, and any successor Trustee, as determined or designated under the Trust Agreement.

“**Unassigned Rights**” means the rights of the Commission under the Lease that are not assigned to the Trustee, consisting of the rights of the Commission (i) to receive Additional Payments, (ii) to be held harmless and to be indemnified, (iii) to be reimbursed for attorney’s fees and expenses, to the extent permitted by law, (iv) to give or withhold consent to amendments of the Lease and the Base Lease, (v) the right to enter into subsequent leases of the Project as and to the extent permitted by the Lease and the Base Lease and (vi) to enforce those rights.

“**University**” means Case Western Reserve University, an Ohio nonprofit corporation and an educational institution, as defined in the Act, and its lawful successors and assigns, including without limitation any surviving, resulting or transferee corporation or entity, as permitted under the Lease.

## THE TRUST AGREEMENT

The following is a summary of certain provisions of the Trust Agreement. Such summary does not purport to be complete or definitive and reference is made to the Trust Agreement for a full and complete statement of the terms and provisions and for the definition of capitalized terms used in this summary and not otherwise defined under “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT.” The Trust Agreement provides that the Bonds may bear interest from time to time, subject to the terms of the Trust Agreement at any of the following interest rates: Daily Rate; Two Day Rate; Weekly Rate; Short Term Rate; Long Term Rate; Flexible Rate; FRN Rate; VRO Rate; Window Rate; Direct Purchase Rate; and Fixed Rate; the other interest rates provided for in the Trust Agreement and the provisions of the Trust Agreement relating to those interest rates are not described in this Offering Circular.

**Pledge and Assignment.** In order to secure the payment of the principal of, and interest and premium, if any, on the Bonds issued under the Trust Agreement whether on an Interest Payment Date, at maturity, upon acceleration or upon redemption according to their tenor and effect, and to secure the performance and observance by the Commission of all the covenants and obligations contained in the Trust Agreement and in the Bonds, the Commission will assign to the Trustee for the benefit of the Holders all of the Commission’s rights to, and interests in, the Revenues, the Lease (except for the Unassigned Rights), the Base Lease (except for the Unassigned Rights and effective only upon an Event of Default under the Lease and for so long as such an Event of Default continues to exist), and the proceeds of the Bonds to the extent included in the Revenues and the Guaranty.

**Replacement Bonds.** If any Depository determines not to continue to act as a Depository for the Bonds for use in a book entry system or the Commission at the request of the University determines to terminate the services of any Depository (after determining that the continuation of such book entry system services by such Depository is not in the best interests of the Commission, the University or the beneficial owners of the Bonds), the Commission, at the request of the University, may attempt to have established a securities depository/book entry system relationship with another qualified Depository under the Trust Agreement. If the Commission does not or is unable to do so, the Commission and the Trustee, after the Trustee has made provision for notification of the owners of beneficial interests in the Bonds by appropriate notice to the then Depository, shall withdraw the Bonds from the Depository, and shall prepare, sign, authenticate and deliver Bond certificates in fully registered form to the assignees of the Depository or its nominee. Such withdrawal, preparation, signing, authentication and delivery shall be at the cost and expense (including costs of printing or otherwise preparing, and delivering, such replacement Bonds) of the University.

**Books.** The Commission will cause books for the registration and registration of transfer of the Bonds as provided in the Trust Agreement to be kept by the Registrar.

**Transfer and Exchange.** The Bonds shall be transferred and exchanged as provided in the Trust Agreement, provided that the transfer or exchange of any Bonds subject to redemption is not required to be made (i) between the 15th day preceding the mailing of notice of Bonds to be redeemed and the date of that mailing, or (ii) of a particular Bond selected for redemption (in whole or in part). The ownership of a Bond will be transferable only by presentation and surrender of such Bond at the office of the Registrar, together with an assignment duly signed by the Holder of

that Bond or by his duly authorized attorney in a form satisfactory to the Registrar. Upon any such transfer, the Registrar will deliver, in exchange for that Bond, a new Bond registered in the name of the transferee, in the aggregate principal amount equal to the unmatured and unredeemed principal amount of the Bond presented.

As a condition to the exchange or transfer of any Bond, the Commission or the Registrar may charge the Holder for any tax or excise required to be paid with respect to the exchange or transfer.

**Nonpresentment of Bonds.** In the event that any Bond shall not be presented for payment when the principal thereof becomes due in whole or in part, either at stated maturity or by redemption, or check or draft for interest is uncashed, if money sufficient to pay the principal then due of that Bond or of such check or draft has been made available to the Trustee for the benefit of its Holder, all liability of the State or the Commission to that Holder for such payment of the principal then due on the Bonds or of such check or draft thereupon shall cease and be discharged completely. Thereupon, it shall be the duty of the Trustee to hold that money, without liability for interest thereon, in a separate account in the Bond Fund for the exclusive benefit of the Holder, who shall be restricted thereafter exclusively to that money for any claim of whatever nature on its part under the Trust Agreement or on, or with respect to, the principal then due of that Bond or of such check or draft. All money so held by the Trustee shall be held uninvested and without liability for interest thereon.

Pursuant to the Trust Agreement, any money that shall be held by the Trustee and that remains unclaimed by the Holder of a Bond not presented for payment or check or draft not cashed for a period of four years after the due date thereof shall be paid upon written request to do so to the University free of any trust or lien. Thereafter, the Holder of that Bond shall look only to the University for payment and then only to the amounts so received by the University without any interest thereon, and the Trustee shall not have any responsibility with respect to that money. In the absence of any such written request, the Trustee shall from time to time deliver such unclaimed funds to or as directed by pertinent escheat authority, as identified by the Trustee in its sole discretion, pursuant to and in accordance with applicable unclaimed property laws, rules or regulations. Any such delivery will be in accordance with the customary practices and procedures of the Trustee and the escheat authority. Before making any payment described hereunder, the Trustee is entitled to receive at the University's expense an opinion of counsel to the effect that such payment is permitted under applicable law.

**Creation of Funds and Accounts; Deposit of and Use of Money.** The funds and any separate accounts within the Funds created with respect to the Bonds under the Trust Agreement shall be held and administered by the Trustee in accordance with the terms of the Trust Agreement and as described below concerning certain Funds:

*Use of Bond Proceeds.* The proceeds of the sale of the Bonds will be deposited by the Trustee as follows: to the Bond Fund, proceeds representing accrued interest, if any; to the Issuance Expenses Fund, the amount necessary to pay certain issuance costs (see "PLAN OF REFUNDING AND USE OF PROCEEDS – Sources and Uses of Funds"); and to the Escrow Fund, the balance of the proceeds as set forth in the Trust Agreement.

*Escrow Fund.* The amounts in the Escrow Fund shall be applied to the refunding of the Refunded Bonds in accordance with the Trust Agreement. Funds in the Escrow Fund shall be held uninvested or invested in "Eligible Investments" under the Trust Agreement related to the Refunded Bonds provided funds are available to make the aforementioned payment on April 1, 2019.

*Issuance Expenses Fund.* The money and Eligible Investments held in and to the credit of the Issuance Expenses Fund will not constitute part of the Revenues assigned to the Trustee as security for the payment of Bond Service Charges. Money will be disbursed from the Issuance Expenses Fund only upon proper requisition by the University or the Commission, to pay, or to reimburse the University for payment of, the fees, charges and expenses incurred in connection with the issuance of the Bonds.

On the earlier of (i) the date that is six months from the date of the Trust Agreement or (ii) the date when all fees, charges and expenses relating to the Bonds have been paid or provision for their payment have been made, the Trustee will transfer any balance remaining in the Issuance Expenses Fund to the Bond Fund.



*Bond Fund.* All Rental Payments related to the payment of debt service on the Bonds received from the University or the Commission will be deposited in the Bond Fund. The Bond Fund and the money and Eligible Investments therein shall be used solely and exclusively for the payment of the Bond Service Charges; provided that no part thereof shall be used to redeem any Bonds prior to maturity, except as may be provided otherwise in the Lease or the Trust Agreement.

*Bond Purchase Fund.* The funds in the Bond Purchase Fund shall be used solely to pay the purchase price of Bonds purchased pursuant to Trust Agreement. The Bond Purchase Fund and the accounts and subaccounts therein shall be maintained as separate and segregated accounts and any moneys held therein shall not be commingled with moneys in any other such account or subaccount or with any other funds of the Paying Agent, shall be held on and after any purchase date solely for the benefit of the owners of Bonds purchased on such purchase date pursuant to Trust Agreement, shall not secure any other Bonds or be available for any purpose except as the Trust Agreement.

*Rebate Fund.* The Trust Agreement establishes the Rebate Fund that is to be maintained by the Trustee. The provisions relating to rebate under the Code are set forth in the Tax Agreement. The amounts on deposit in the Rebate Fund will not be part of the Revenues assigned under the Trust Agreement to the Trustee.

*Investment of Funds.* Any money held in the Bond Fund, the Issuance Expenses Fund, and the Rebate Fund will, at the direction of the University, be invested or reinvested by the Trustee in Eligible Investments in accordance with the Trust Agreement.

The University has agreed in the Lease to restrict the investment, reinvestment and use of the proceeds of the Bonds in such manner and to such extent, if any, as may be necessary, after taking into account reasonable expectations at the time of issuance of the Bonds, so that the Bonds will not constitute arbitrage bonds under federal tax laws.

An investment made from money credited to any of the Special Funds, the Issuance Expenses Fund and the Rebate Fund will constitute part of the respective Fund. Each respective Fund will be credited with all proceeds of sale and income from investment of money credited thereto, except any investment income earned from the investment of the Issuance Expenses Fund will be credited to, and transferred to, the Bond Fund to pay interest on the Bonds.

Money in the Bond Purchase Fund shall not be invested.

**Lien.** The Commission shall not create any lien upon the Revenues, other than the liens created by the Trust Agreement.

**Payment of Interest.** When Bonds are held in a book entry system registered in the name of the Depository or its nominee, interest on the Bonds will be payable on each Interest Payment Date in immediately available funds wired by the Trustee to the registered owner (the Depository or its nominee) as of the Regular Record Date applicable to that Interest Payment Date.

If and to the extent there is a default in the payment of interest on any Bonds on any Interest Payment Date, that interest in default will cease to be payable to the person who was the Holder of that Bond as of the close of business on the applicable Regular Record Date. When money becomes available for the payment of the defaulted interest, the Trustee will establish a special record date for the payment of that defaulted interest (the "Special Record Date"), and the Trustee will cause notice of the proposed payment and Special Record Date to be mailed by first class mail or electronically to each Holder at its address as it appears on the Register not fewer than 10 days but not more than 30 days prior to the Special Record Date. Such notice having been so mailed, the defaulted interest will be payable to the persons who are the Holders of the Bonds at the close of business on that Special Record Date.

**Payment of Principal and Premium.** When Bonds are held in a book entry system registered in the name of the Depository or its nominee, principal of any premium on the Bonds will be payable on the payment date therefor in immediately available funds wired by the Trustee to the registered owner (the Depository or its nominee).

**Redemption; Tender.** The Bonds shall be subject, pursuant to the terms of the Trust Agreement, to extraordinary optional redemption, optional redemption and purchase in lieu of redemption prior to maturity. See

“THE BONDS – Redemption,” as applicable, for a description of the provisions regarding redemption and purchase in lieu of redemption. The Bonds shall be subject to mandatory tender pursuant to the terms of the Trust Agreement. See “THE BONDS – Mandatory Tender and Conversions,” for a description of the provisions regarding mandatory tender.

**No Pecuniary Liability.** Each and every covenant made in the Trust Agreement is predicated upon the condition that the Commission will not have any pecuniary liability for the payment of the principal of and premium, if any, or interest on the Bonds, or performance of any pledge, mortgage, obligation or agreement created by or arising out of the Trust Agreement or the issuance of the Bonds. Neither the Bonds nor the interest on the Bonds nor any obligation or agreement of the Commission under the Trust Agreement or the other Bond Documents will be construed to constitute an indebtedness of the Commission, the State or any political subdivision thereof within the meaning of any constitutional or statutory provision.

**No Personal Liability.** No covenant, stipulation, obligation or agreement of the Commission in the Trust Agreement, the Bonds, the Lease or any other Bond Document will be deemed to be a covenant, stipulation, obligation or agreement of any present or future elected or appointed official, officer, member, employee or agent of the Commission in his or her individual capacity, and neither the members of the Commission nor any official executing the Bonds, the Trust Agreement, the Lease or any amendment or supplement thereto will be liable personally on the Bonds or be subject to any personal liability or accountability by reason of the issuance of the Bonds or by reason of the covenants, stipulations, obligations or agreement of the Commission contained in the Lease or the Trust Agreement.

**Performance of Covenants of the Commission; Representations.** The Commission will perform any and all covenants, undertakings, stipulations and provisions to be observed or performed on its part contained in the Trust Agreement, in any and every Bond executed, authenticated and delivered under the Trust Agreement, and in all proceedings of the Commission pertaining to the Bonds.

**No Disposition of Trust Estate.** Except as permitted by the Trust Agreement or the other Bond Documents, the Commission will not sell or otherwise dispose of all or any part of its interest in the Project or assign or grant a security interest in the Revenues or create or suffer to create any debt, lien or charge thereon.

**Removal of Trustee.** The Trustee may be removed upon 30 days prior notice at any time by an instrument or document or concurrent instruments or documents in writing delivered to the Trustee, the Commission and the University, and signed by or on behalf of the Holders of not less than a majority in aggregate principal amount of the Bonds then outstanding. The Trustee also may be removed upon 30 days prior notice at any time for any willful misconduct or for acting or proceeding in violation of, or for failing to act or proceed in accordance with, any provision of the Trust Agreement with respect to the duties and obligations of the Trustee by any court of competent jurisdiction upon the application of the Commission or the Holders of not less than 25% in aggregate principal amount of then Outstanding Bonds. In either instance, the University may solicit the Holders or the Commission to make such an application, and at the request of the University, the Trustee shall permit the University to inspect the Register for this purpose. The Commission shall promptly consider such a request from the University. In addition, the Commission, or the Commission at the written direction of the University (so long as there is no Event of Default under the Trust Agreement or Lease and no condition exists that, with the passage of time or giving of notice, or both, would constitute such an Event of Default), may remove the Trustee upon 30 days prior notice at any time for any reason. The removal of the Trustee shall not take effect until the appointment of a successor Trustee and the acceptance by that successor Trustee.

#### **Events of Default.**

The occurrence of any of the following events constitutes an “Event of Default” under the Trust Agreement:

- (a) Payment of any interest on any Bond shall not be made when and as that interest shall become due and payable;

(b) Payment of the principal or redemption price of any Bond shall not be made when and as that principal or redemption price shall become due and payable, whether at stated maturity, by redemption, by acceleration or otherwise;

(c) Payment of the purchase price of any Bond tendered for purchase pursuant to the provisions of the Trust Agreement shall not be made when and as that purchase price becomes due and payable;

(d) The Trustee shall receive written notice from the Credit Facility Issuer of an “event of default” under and as defined in the Credit Facility Agreement by reason of which the Trustee has been directed by the Credit Facility Issuer to accelerate the Bonds;

(e) Receipt by the Bond Trustee of a written notice from the Credit Facility Provider that amounts available to pay interest under the Credit Facility will not be reinstated following a drawing thereunder to pay interest and directing the Bond Trustee to declare the principal of the outstanding Bonds secured by such Credit Facility immediately due and payable;

(f) The Commission or the University fails to perform or observe any covenant or agreement or obligation under the Trust Agreement, the Lease or the Tax Agreement that results in a Determination of Taxability;

(g) The Commission fails to perform or observe any other covenant, agreement or obligation on the part of the Commission, contained in the Bonds or in the Trust Agreement, which failure or default shall have continued for a period of 60 days after written notice, by registered or certified mail, to the Commission and the University specifying the failure or default and requiring the same to be remedied, which notice may be given by the Trustee in its discretion and which notice must be given by the Trustee at the written request of the Holders of not less than 25% in aggregate principal amount of Bonds then outstanding;

(h) The occurrence of an Event of Default under the Lease subject to applicable waivers and cure periods as provided therein (see “THE LEASE – Events of Default”);

(i) The University fails to perform or observe any covenant, agreement or obligation on the part of the University contained in the Guaranty, giving effect to any notices and grace periods therein; and

(j) A decree or order of a court or agency or supervisory authority, having jurisdiction in the premises for the appointment of a conservator or receiver or liquidator in any insolvency, readjustment of debt, marshalling of assets and liabilities or similar proceeding, or for the winding-up or liquidation of its affairs, shall have been entered against the Credit Facility Issuer or the Credit Facility Issuer shall have consented to the appointment of a conservator or receiver or liquidator in any insolvency, readjustment of debt, marshalling of assets and liabilities or similar proceedings of or relating to the Credit Facility Issuer or of or relating to all or substantially all of its property.

**Acceleration of Maturity.** Upon the occurrence and continuance of any Event of Default under the Trust Agreement, as defined in (a), (b), (c) or (f) under “THE TRUST AGREEMENT – Events of Default” above, the Trustee may, with the prior written consent of the Credit Facility Issuer, or upon the written request of the Holders of not less than 25% in aggregate principal amount of all Bonds then outstanding under this Trust Agreement and with the prior written consent of the Credit Facility Issuer, shall, or (ii) the occurrence of any Event of Default described in subsection (d) or (e) under “THE TRUST AGREEMENT – Events of Default” above, the Trustee shall, by written notice to the Commission, the University and any Credit Facility Issuer, declare the principal of all Bonds then outstanding under the Trust Agreement (if not then due and payable), and the accrued and unpaid interest thereon, to be due and payable immediately. Interest on the Bonds shall accrue at the rates per annum borne by the Bonds to the date determined by the Trustee for the tender of payment to the Holders pursuant to that declaration, which date, if the Bonds are then secured by a Credit Facility, shall be not more than five Business Days from the date of such declaration; provided, that interest on any unpaid principal of Bonds outstanding shall continue to accrue from the date determined by the Trustee for the tender of payment to the Holders of those Bonds until that principal amount has been paid or made available to the Trustee for the benefit of the Holders; provided further that any date determined

for payment of Holders shall be within the period that the Credit Facility may be drawn upon to pay the outstanding principal of and accrued interest on the Bonds on and to that date.

**Other Remedies.** Upon the happening and continuance of an Event of Default under the Trust Agreement, the Commission, upon the demand of the Trustee, is required to surrender the possession of the Project, subject to the University's rights under the Lease to the Trustee to hold, operate and manage the same.

Upon the occurrence and continuance of an Event of Default under the Trust Agreement, the Trustee may pursue any available remedies to enforce the payment of the debt service on the Bonds and the Trustee may pursue any available remedy to enforce the observance and performance of any other covenant, agreement or obligation under the Trust Agreement, the Lease, the Guaranty or any other instrument providing security, directly or indirectly, for the Bonds. If requested to do so by (i) the Credit Facility Issuer, if the Event of Default is under (d) of "THE TRUST AGREEMENT – Events of Default" above, or (ii) the Holders of at least 25% in aggregate principal amount of Bonds outstanding, the Trustee is required to exercise such of the rights and powers conferred upon it under the Trust Agreement as the Trustee.

All money collected pursuant to any remedy, right or power exercised under the Trust Agreement by the Trustee prior to the payment in full of all outstanding Bonds and the interest accrued thereon will be held by the Trustee.

**Actual Notice of Events of Default.** The Trustee shall give written notice of the Event of Default, by registered or certified mail, to the Commission, the University, the Registrar, the Paying Agent, the Authenticating Agent, the Remarketing Agent and the Credit Facility Issuer promptly after the Trustee has knowledge of the Event of Default. If an Event of Default occurs of which the Trustee has notice pursuant to the Trust Agreement, the Trustee shall give written notice thereof, within 30 days after the Trustee's receipt of notice of its occurrence, to the Holders of all Bonds then outstanding as shown by the Register at the close of business 15 days prior to the mailing of that notice.

**Rescission or Annulment of Acceleration.** If, at any time after such principal and premium, if any, and interest shall have been so declared due and payable and prior to the entry of a judgment in a court of law or equity for enforcement hereunder or the appointment, and the confirmation thereof, of a receiver after an opportunity for hearing by the Commission and the University, all amounts payable hereunder except the principal of, and interest accrued after the next preceding Interest Payment Date on, the Bonds that have not reached their stated maturity dates and that are due and payable solely by reason of said declaration shall have been duly paid or provided for by deposit with the Trustee or Paying Agents and all existing Defaults shall have been remedied, then and in every such case such payment or provisions for payment shall, ipso facto, constitute a waiver of such Default and Event of Default and its consequences and an automatic rescission and annulment of such declaration under the above paragraph; provided, however, that if a Credit Facility was drawn upon as a result of such declaration of acceleration, the Trustee shall not so waive the Event of Default unless the Trustee has received notice from the Credit Facility Issuer that the Credit Facility has been reinstated in full, but no such waiver or rescission shall extend to or affect any subsequent Event of Default or impair any rights consequent thereon.

**Waivers of Events of Default.** Except as provided in the Trust Agreement, at any time, the Trustee may waive any Event of Default under the Trust Agreement and its consequences and may rescind and annul any declaration of maturity of principal of the Bonds. The Trustee will do so upon the written request of the Holders of (a) at least a majority in aggregate principal amount of all Bonds then outstanding in respect of which an Event of Default in the payment of the debt service on the Bonds exists, or (b) at least 25% in aggregate principal amount of all Bonds then outstanding, in the case of any other Event of Default under the Trust Agreement. Such written request will take priority over other actions requested or authorized by the Bondholders.

There will not be so waived, however, any Event of Default described in (i) item (a), (b) or (c) of "THE TRUST AGREEMENT – Events of Default" above or any declaration of acceleration in connection therewith rescinded or annulled, unless at the time of that waiver or rescission and annulment payments of the amounts provided in the Trust Agreement for waiver and rescission and annulment in connection with acceleration of maturity have been made or provision has been made therefor, or (ii) item (d) or (e) of "THE TRUST AGREEMENT – Events of Default" above or its consequences unless the Trustee shall have received the above described written request and a written

notice from the Credit Facility Issuer or the Holder, whichever is applicable, stating that the Credit Facility has been reinstated in full, if applicable, and, if the Credit Facility Issuer has delivered to the Trustee written notice of an event of default under the Credit Facility Agreement or if the Holder has delivered to the Trustee written notice of an event of default under the Bondholder Agreement, also a written notice stating that it is rescinding its notice to the Trustee of an event of default under the Credit Facility Agreement or Bondholder Agreement, whichever the case may be.

**Restoration to Former Position.** In case any proceedings taken by the Trustee on account of default of the Bonds have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, the Commission, the Trustee and the Holders will be restored to their respective former positions and rights under the Trust Agreement, and all rights, remedies, powers and duties of the Trustee will continue as though no such proceeding had been taken.

**Bondholders' Right to Direct Proceedings.** Anything to the contrary in the Trust Agreement notwithstanding, the Credit Facility Issuer, if there is an Event of Default is under subsection (d) of "THE TRUST AGREEMENT – Events of Default" above, or if the Event of Default is under any other subsection of "THE TRUST AGREEMENT – Events of Default" above, the Holders of a majority in aggregate principal amount of Outstanding Bonds shall have the right at any time to direct, by an instrument or document or instruments or documents in writing signed and delivered to the Trustee, the method and place of conducting all proceedings to be taken in connection with the enforcement of the terms and conditions of the Trust Agreement, or any other proceedings under the Trust Agreement; provided that (i) any direction shall not be other than in accordance with the provisions of law and of the Trust Agreement, (ii) the Trustee shall be indemnified as provided in the Trust Agreement and (iii) the Trustee may take any other action that it deems to be proper and that is not inconsistent with the direction.

**Limitation on Bondholders' Right to Institute Proceedings.** No Bondholder has any right to institute any suit, action or proceeding for the enforcement of the Trust Agreement, for the execution of any trust under the Trust Agreement or for any other remedy under the Trust Agreement unless (i) an Event of Default under the Trust Agreement has occurred and is continuing, of which the Trustee has been notified or is deemed to have notice, (ii) the Holders of not less than 25% in aggregate principal amount of Bonds then outstanding have made a written request to the Trustee and have afforded the Trustee reasonable opportunity to proceed to exercise the remedies, rights and powers provided in the Trust Agreement or to institute such action, suit or proceeding in its own name and have offered to the Trustee indemnity as provided in the Trust Agreement and (iii) the Trustee thereafter has failed or refused to exercise its remedies, rights and powers under the Trust Agreement or to institute such action, suit or proceeding in its own name.

It is understood and intended that, except as otherwise provided above, (i) no one or more Bondholders has any right in any manner whatsoever to affect, disturb or prejudice the security of the Trust Agreement or to enforce any right thereunder except in the manner therein described, (ii) all proceedings at law or in equity shall be maintained in the manner therein provided and for the benefit of all Holders of the Outstanding Bonds and (iii) that any individual right of action or other right given by law to one or more of such Holders is restricted by the Trust Agreement to the rights and remedies therein.

**No Remedy Exclusive.** No remedy conferred upon or reserved to the Trustee or to the Bondholders under the Trust Agreement is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Trust Agreement or now or in the future existing at law or in equity or by statute.

**No Waiver of Remedies.** No delay or omission of the Trustee or of any Bondholder to exercise any right or power accruing upon any default will impair any such right or power or be construed to be a waiver of any such default, or an acquiescence in the default. Every power and remedy given under the Trust Agreement to the Trustee and to the Bondholders may be exercised from time to time and as often as may be deemed expedient.

**Application of Money.** All money received by the Trustee pursuant to any remedial action will be applied first to the payment of the costs and expenses of the proceedings resulting in the collection of the money and any amount required to be deposited in the Rebate Fund, the balance of such money will be applied to the payment of Reimbursement Obligations, Purchase Price and principal of, premium, if any, and interest on the Bonds, in the order of priority set forth in the Trust Agreement.

**Limitations on Modifications of the Trust Agreement and the Lease.** Neither the Trust Agreement nor the Lease shall be modified, supplemented or amended in any respect subsequent to the first issuance of the Bonds except as provided in and in accordance with and subject to the provisions of the Trust Agreement.

**Supplemental Trust Agreement Without Bondholder Consent.** The Commission and the Trustee may, from time to time and at any time, without the consent of or notice to the Bondholders, but only with the consent of the University, enter into a Supplemental Trust Agreement as follows:

- (a) to make such provisions for the purpose of curing any ambiguity, inconsistency or omission, or of curing or correcting any defective provision, contained in the Trust Agreement, or in regard to matters or questions arising under the Trust Agreement, including but not limited to reflecting the creation of separate Series or sub Series for the Bonds, reflecting the serialization of the Bonds upon their Conversion to a Fixed Mode or reflecting the conversion of serial Bonds to term Bonds or other adjustments to the amortization and payment schedule in connection with their Conversion from a Fixed Mode, as the Commission or the Trustee may deem necessary or desirable and not inconsistent with the Trust Agreement, and which shall not materially adversely affect the interests of the Holders of the Bonds;
- (b) to grant to or confer upon the Trustee for the benefit of the Bondholders any additional rights, remedies, powers or authority that lawfully may be granted to or conferred upon the Holders or the Trustee;
- (c) to assign additional revenues under the Trust Agreement;
- (d) to accept additional security and instruments and documents of further assurance with respect to the Project and the Bonds;
- (e) to add to the covenants, agreements and obligations of the Commission under the Trust Agreement, other covenants, agreements and obligations to be observed for the protection of the Holders, or to surrender or limit any right, power or authority reserved to or conferred upon the Commission in the Trust Agreement;
- (f) to evidence any succession to the Commission and the assumption by its successor of the covenants, agreements and obligations of the Commission under the Trust Agreement, the Base Lease, the Lease and the Bonds;
- (g) to permit the Trustee or the Commission to comply with any obligations imposed upon it by law including the Code, so long as such change would not be to the material prejudice of the Trustee or the Holders;
- (h) to specify further the duties and responsibilities of, and to define further the relationship among, the Trustee, the Registrar, the Credit Facility Issuer, the Remarketing Agent and any Authenticating Agents or Paying Agents;
- (i) to achieve compliance of the Trust Agreement with any applicable federal securities or tax law, provided that in the opinion of Independent Counsel such supplemental trust agreement does not adversely affect the validity or security of the Bonds;
- (j) to permit the exchange of Bonds, at the option of the Holder or Holders thereof, for coupon Bonds payable to bearer, in an aggregate principal amount not exceeding the unmatured and unredeemed principal amount of those Bonds, bearing interest at the same rate or rates and maturing on the same date or dates, with coupons attached representing all unpaid interest due or to become due thereon if the Trustee has received an opinion of Bond Counsel to the effect that the exchange would not adversely affect the exclusion from gross income for federal income tax purposes of the interest on the Bonds outstanding;

- (k) to adopt procedures for the disclosure of information to Bondholders and others with respect to the Bonds, the University and the Commission in accordance with applicable federal securities laws or with any guidelines for such purpose promulgated by any appropriate national organization;
- (l) in connection with the use of a book entry system;
- (m) to permit any other amendment that is not to the material prejudice of the Trustee or the Holders
- (n) to provide for the implementation of a conversion of the Applicable Rate;
- (o) if a Credit Facility or Liquidity Facility is then in effect, or shall be in effect upon the effective date of such amendments, to make any amendments required to secure a rating on the Bonds from a rating service equal to the rating of the unsecured indebtedness of the Credit Facility Issuer or the parent of such Credit Facility Issuer or the Liquidity Facility Issuer or the parent of such Liquidity Facility Issuer, as applicable, which amendments are not to the material prejudice of the Holders;
- (p) to make any amendments appropriate or necessary to provide for or facilitate the delivery of any Credit Facility or Alternate Credit Facility, any Liquidity Facility or Alternate Liquidity Facility, any Self Liquidity Arrangement, any credit facility, any municipal bond insurance policy or any other type of credit enhancement or support facility; or
- (q) to obtain or maintain a rating on the Bonds from a Rating Service.

**Supplemental Trust Agreement with Bondholder Consent.** Subject to the consent of the University, Bondholders of not less than a majority in aggregate principal amount of the Bonds then Outstanding have the right from time to time to consent to and approve the execution and delivery by the Commission and the Trustee of any supplemental trust agreement consistent with the provisions of the Trust Agreement, provided, however, that, (A) without the consent of the Holder of each Bond so affected, (i) an extension of the maturity of or the date for payment for the principal of or the interest on any Bond, (ii) a reduction in the principal amount of any Bond or the rate of interest or premium thereon, (iii) a reduction in the purchase price for any Bond, or (iv) an extension of the time or date for payment of any mandatory sinking funding obligation on the Bonds or of the purchase price of any Bond, or (B) without the consent of the Holders of all Bonds then outstanding, (i) the creation of a privilege or priority of any Bond or Bonds over any other Bond or Bonds or (ii) a reduction in the aggregate principal amount of the Bonds required for consent to a supplemental trust agreement or an amendment to the Lease.

**Notice.** If at any time the Commission requests the Trustee to enter into any supplemental trust agreement for any of the purposes described above, upon (i) being satisfactorily indemnified with respect to its expenses in connection therewith, and (ii) receipt of the University's consent to the proposed signing and delivery of the supplemental trust agreement, the Trustee shall cause notice of the proposed supplemental trust agreement to be given by mail to all Holders of Outstanding Bonds.

**No Right to Object.** If Bondholders of not less than the percentage of Bonds required by the Trust Agreement consent to and approve the execution and delivery of the supplemental trust agreement as provided in the Trust Agreement, no Bondholder will have any right to object to the execution and delivery of such supplemental trust agreement, or to object to any of the terms and provisions contained in it or to its operation, or in any manner to question the propriety of its execution and delivery, or to enjoin or restrain the Commission or the Trustee from executing and delivering the same or from taking any action pursuant to its provisions.

**Consent of the University and Credit Facility Issuer Required.** Provided the University is not in default of its obligations under the Bond Documents, a Supplemental Trust Agreement shall not become effective unless and until the University shall have consented in writing to the execution and delivery of that Supplemental Trust Agreement. A Supplemental Trust Agreement that adversely affects any rights, duties, privileges or immunities of a Credit Facility Issuer shall not become effective unless and until the Credit Facility Issuer shall have consented in writing to the execution and delivery of that Supplemental Trust Agreement.

**Discharge of Trust Agreement.** If (i) the Commission shall pay all of the Outstanding Bonds, or shall cause them to be paid and discharged, or if there otherwise shall be paid to the Holders of the Outstanding Bonds, all Bond Service Charges due or to become due thereon, and (ii) provision also shall be made for the payment of all other amounts payable under the Trust Agreement or under the Lease then the Trust Agreement shall terminate and the covenants, agreements and obligations of the Commission thereunder shall be released, discharged and satisfied.

The Trustee shall release the Trust Agreement (except for certain provisions surviving in the event the Bonds are deemed paid and discharged as described below) and shall sign and deliver to the Commission any instruments or documents in writing as shall be required to evidence that release and discharge or as reasonably may be requested and prepared by or on behalf of the Commission, and the Trustee and any other Paying Agents shall assign and deliver to the Commission any property subject at the time to the lien of the Trust Agreement that then may be in their possession, except amounts in the Bond Fund required (i) to be paid to the University as excess funds under Section 5.08 of the Trust Agreement or (ii) to be held by the Trustee and the Paying Agents in the case of nonpresentment of Bonds or otherwise for the payment of Bond Service Charges.

**Defeasance.** All or any part of the Bonds shall be deemed to have been paid and discharged within the meaning of the Trust Agreement if:

(a) the Trustee as paying agent and any Paying Agent has received, in trust for and irrevocably committed thereto, sufficient money, or

(b) the Trustee has received, in trust for and irrevocably committed thereto, Defeasance Obligations that are certified by an independent public accounting firm of national reputation firm to be of such maturities or redemption dates and interest payment dates, and to bear such interest, as will be sufficient together with any money to which reference is made in subsection (a) above, without further investment or reinvestment of either the principal amount thereof or the interest earnings therefrom (which earnings are to be held likewise in trust and so committed, except as provided in the Trust Agreement), for the payment of all Bond Service Charges on those Bonds, at their maturity or redemption dates, as the case may be, or if a Default in payment has occurred on any maturity or redemption date, then for the payment of all Bond Service Charges thereon to the date of the tender of payment; provided that if any of those Bonds are to be redeemed prior to the maturity thereof, notice of that redemption has been duly given or irrevocable provision satisfactory to the Trustee has been duly made for the giving of that notice.

Any money held by the Trustee as described above may be invested by the Trustee upon written direction by a representative of the University only in Defeasance Obligations having maturity dates, or having redemption dates that, at the option of the holder of those obligations, shall be not later than the date or dates on which money will be required for the purposes described above.

Within 15 days after any Bonds are deemed paid and discharged the Trustee shall cause a written notice to be given to each Holder as shown on the Register on the date on which those Bonds are deemed paid and discharged. Such notice shall state the numbers of the Bonds deemed paid and discharged or state that all Bonds are deemed paid and discharged, set forth a description of the Defeasance Obligations held and specify the date or dates on which any of the Bonds are to be called for redemption.

**Acceptance of Trusts.** The Trustee accepts and agrees to execute the trusts created under the Trust Agreement, but only upon the terms set forth therein, to all of which the Commission agrees and the Holders agree by their acceptance of delivery of any of the Bonds. The obligations and duties of the Trustee will be determined solely by reference to the Trust Agreement and, except as expressly set forth in the Trust Agreement, no duties, express or implied, will be imposed on the Trustee. The Trustee may execute any of the trusts or powers contained in the Trust Agreement and perform the duties required by it under the Trust Agreement by or through attorneys, agents, receivers or employees, and shall be entitled to the advice of counsel concerning all matters of trusts and its duties under the Trust Agreement and will not be responsible for any loss or damage resulting from reliance thereon in good faith. In addition, the Trust Agreement provides that the Trustee is entitled to rely on certain other instruments, and it will not be liable for any action reasonably taken or omitted to be taken by it in good faith or be responsible other than for its own negligence or willful misconduct. In case an Event of Default under the Trust Agreement has occurred and is continuing, the Trustee will exercise the rights and powers vested in it by the Trust Agreement as a prudent person



would exercise or use under the circumstances in the conduct of his or her own affairs and may in certain circumstances request under the Trust Agreement that indemnity be furnished to it by the Bondholders requesting it to take action in accordance with the Trust Agreement.

## **THE LEASE**

The following is a summary of certain provisions of the Lease. Such summary does not purport to be complete or definitive and reference is made to the Lease for a full and complete statement of the terms and provisions and for the definitions of capitalized terms used in this summary and not otherwise defined under “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT.”

### **Term of Lease**

The Commission will lease the Project from the University under the Base Lease. The Commission, in turn, will lease the Project back to the University under the Lease. The term of the Lease and Base Lease will begin on the date of the delivery of the Bonds and terminate upon the payment or provision for payment of the Bonds. The Lease may be terminated earlier in connection with the exercise by the Trustee of remedies upon the occurrence of an Event of Default. See “THE LEASE – Events of Default”.

### **Completion of the Project**

Pursuant to the Lease, the University certified and warranted that the acquisition, construction, installation, improving and equipping of the Project was completed in all material respects in accordance with all Legal Requirements (as defined in the Lease).

### **Use of the Project**

During the term of the Lease, the University has sole and exclusive charge of the operation of the Project unless there is an Event of Default and the University has been excluded from possession of the Project under the terms of the Lease. See “THE LEASE – Events of Default”.

### **Rental Payments**

The University is obligated under the Lease to pay Rental Payments and to pay other expenses and disbursements of the Trustee and the Commission, defined in the Lease as “Additional Payments”.

Rental Payments are payable to the Trustee for the account of the Commission on or before each Rental Payment Date (each Interest Payment Date) during the term of the Lease in an amount of money equal to the sum of the amount that, when added to the balance then in the Bond Fund and available therefor, will be sufficient to pay the Bond Service Charges on the Interest Payment Date occurring on such Rental Payment Date.

In any event, the amount of the Rental Payments made under the Lease must be sufficient to pay the total amount of the Bond Service Charges as and when due, whether on an Interest Payment Date, at stated maturity, by redemption or upon acceleration. The Lease serves the purpose of securing the debt service on the Bonds, while satisfying the requirements of the Act pursuant to which the Bonds are issued. If at any time when a payment of Bond Service Charges is due, the balance in the Bond Fund is insufficient to make that payment, the University will forthwith pay to the Trustee for deposit into the Bond Fund any such deficiency. Any amount, however, held at any time by the Trustee in the Bond Fund will, unless otherwise provided in the Lease, be credited against the Rental Payments next required to be paid by the University, to the extent such amount is in excess of the amounts required (i) for payment of Bonds theretofore matured or called for redemption, (ii) for payment of past due interest in all cases where such Bonds have not been presented for payment and (iii) to be deposited in the Bond Fund for use for other than payment of the interest or any premium on, or principal of, the Bonds (whether at maturity or by redemption) on the next succeeding Interest Payment Date.

The University shall pay, as a Rental Payment, the Purchase Price on the Mandatory Purchase Date. On or before each Purchase Date, the University shall pay as Rental Payments under the Lease an amount of money equal to the amount that, when the amount available from the remarketing of the Tendered Bonds in accordance with the Trust Agreement is added thereto, shall be sufficient to pay the Purchase Price on those Bonds on the applicable Purchase Date. In any event, the amount of the Rental Payments shall always be sufficient to enable the Commission and the Trustee on its behalf to pay the total amount of the Purchase Price as and when due. If at any time when a Purchase Price is due and payable, the balance in the Bond Purchase Fund is insufficient to make that payment, the University shall pay to the Trustee an amount equal to any such deficiency for deposit into the Bond Purchase Fund. Rental Payments may be used to reimburse a Credit Facility Issuer or Liquidity Facility Issuer to the extent proceeds of the related Credit Facility or Liquidity Facility were used to pay the Purchase Price of Tendered Bonds. Rental Payments for this purpose shall be deposited in the Bond Purchase Fund.

### **Absolute Obligation to Pay Rental Payments**

The obligation of the University to make Rental Payments and Additional Payments pursuant to the Lease is an absolute and unconditional general contractual obligations of the University and will survive any termination of the Lease until such time as all of the Bonds and interest and any premium thereon, and any Additional Payments, have been paid in full or provision therefor is made. The University has agreed to pay such obligations from its general funds or any other money legally available to it in the manner and at the time provided in the Lease. The University will make Rental Payments and Additional Payments without abatement, diminution or deduction regardless of any cause or circumstances whatsoever, including but not limited to, any defense, set-off, recoupment or counterclaim that the University may have or assert against the State, the Commission, the Trustee, or any other Person, any change in the tax or other laws or administrative rulings of or administrative actions by or under authority of the United States of America or of the State, or any damage to, destruction of or exercise of eminent domain with regard to the Project.

### **Maintenance of Tuition, Fees and Charges**

So long as any Bonds are outstanding, the University covenants and agrees to operate all its educational facilities, including the Project, on a revenue-producing basis. The University also covenants during such period to fix, revise as often as necessary (but not necessarily more often than annually), charge and collect such reasonable tuition fees, student fees, rates, other fees, rentals and charges for the use and occupancy of its educational facilities, including the Project or any part thereof, and for any other facilities operated by the University, in amounts so that the University shall receive gross cash receipts in each fiscal year that, together with other money legally available to it, are sufficient (as determined in accordance with generally accepted accounting principles then in effect and applicable to non-profit educational institutions) to pay the following costs (without priority of any one clause over another): (i) currently all of the University's expenses during such fiscal year for its operation, including those expenses incurred in carrying out its educational purposes, and for the operation, maintenance and repair of all its educational facilities, including the Project, and any other facilities operated by the University, (ii) all Rental Payments and Additional Payments under the Lease due in such fiscal year, (iii) all other obligations imposed by the Bond Documents upon the University payable during such fiscal year, and (iv) all indebtedness and other obligations of the University due in such fiscal year as the same become due and payable.

### **Maintenance and Insurance**

The University has agreed that during the term of the Lease it will keep the Project in good repair and good operating condition at its own cost. In the event that the University defaults under the Lease and the Lease is terminated, the University will surrender the Project to the Commission in as "good condition" as the Project was in at the time the University had full possession of the Project. "Good condition" permits loss to the Project by fire or other casualty covered by insurance, ordinary wear and tear, obsolescence, removals and replacements in accordance with the provisions of the Lease and acts of God.

The University has agreed to maintain, during the term of the Lease, insurance coverage with respect to its educational facilities, including the Project, and other properties of the University and the operation and maintenance thereof of such type and in such amounts and against such risks as are normal for educational facilities and other properties of similar type and size. Such insurance shall include (i) property insurance in an amount which shall be at least equal to the then replacement value of the Project Facilities, (ii) comprehensive general liability insurance,

(iii) workers' compensation and employer's liability coverage and (iv) fidelity bonds on all officers and employees of the University who have access to or custody of any revenues or the University funds. The University also has agreed, as long as Bonds are outstanding, (i) that the foregoing insurance policies will prohibit cancellation or substantial modification without at least 45 days' prior written notice to the University and the Trustee, (ii) to cause the Trustee and the Commission to be named as an additional party insured under the property insurance policies, and (iii) to cause the Commission and the Trustee to be named as an additional party insured under the comprehensive general liability insurance policies.

### **Annual Statement**

The University agrees to have an annual audit of its financial statements made by an independent certified public accountant and to provide that audit report to the Commission, the Trustee and the Underwriter within 150 days after the end of each fiscal year.

### **Merger, Consolidation or Transfer of Assets**

During the term of the Lease, the University is to maintain its existence as an educational institution not for profit and will not dissolve or otherwise dispose of all or a substantial part of its assets or merge into another corporation or entity or permit one or more other corporations or entities to consolidate with or merge into it, unless the corporation or entity surviving such merger or other transaction (i) holds a certificate of authorization from the Ohio Board of Regents or Ohio Chancellor of Higher Education pursuant to Section 1713.02 of the Ohio Revised Code, (ii) is a Tax Exempt Organization, (iii) has an aggregate, unrestricted net asset balance equal to at least 90% of that balance of the University prior to such merger or other transaction, (iv) if other than the University, expressly assumes all agreements of the University under the Bond Documents and any Credit Facility Agreement or Liquidity Facility Agreement by an instrument or document satisfactory to the Commission, the Credit Facility Issuer or Liquidity Facility Issuer and the Trustee, (v) shall not have assumed any obligations or liabilities not permitted by the Lease, (vi) no Event of Default under the Lease shall have occurred and be continuing and no event shall have occurred and be continuing that with the lapse of time or giving of notice or both would constitute such an Event of Default, (vii) either (a) no litigation is pending against the Surviving Institution in which the amount claimed that is not fully covered by insurance exceeds \$5,000,000 in any one suit or in the aggregate of all suits or (b) the Surviving Institution shall provide to the Trustee an opinion of Counsel satisfactory to the Trustee that, in the judgment of such Counsel, or a certificate of the University Representative (if the University is the Surviving Institution) that, the aggregate liability of the Surviving Institution in all pending litigation against it does not exceed the amount available under any and all liability policies carried (or reserves allocated) by the Surviving Institution to insure payment of amounts owing under judgments awarded in, or settlements of, such litigation, and (viii) such merger, consolidation or transfer of assets will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes.

The University will be deemed to have disposed of a substantial part of its assets if during any fiscal year it disposes of 25% or more of its assets, whether or not shown as assets on the balance sheets of the University. However, the sale or exchange of securities or real estate held for investment purposes in order to obtain other securities or real estate to be held for investment purposes will not be deemed to be a disposal of assets.

### **Indemnification of the Commission**

The University has agreed to hold the Commission harmless against all costs, liabilities, losses, expenses and claims arising from (i) any loss of or damage to property, or any injury to or death of any person, that may be occasioned by any cause pertaining to the Project or its use, nonuse or condition, (ii) any breach or default by the University under the Bond Documents, the acquisition, construction, improvement or equipping of the Project, or any act or a failure to act by the University, its agents, contractors, servants, employees or licensees, (iii) the Commission's authorization, issuance and sale of the Bonds and provision of any information or certification in connection therewith, (iv) any failure of the University to comply with any requirements of the Bond Documents or the Code, as hereinafter defined, pertaining to the exclusion of interest on the Bonds from gross income for federal income tax purposes including covenants in the Tax Agreement, (v) ownership of any interest in the Project or any part thereof; (vi) the performance of any labor or services or the furnishing of any materials or other property in respect of the Project or any part thereof; (vii) any action, claim or proceeding brought in connection with any of the foregoing; and (viii) to

the extent of the aggregate amount paid in settlement of any action, claim or proceeding commenced or threatened based upon any of the foregoing, if the settlement is effected with the written consent of the University (which consent shall not be withheld unreasonably).

### **The University's Options to Terminate Lease and Purchase the Project**

The University has the option to terminate the Lease and Base Lease at any time after the Trust Agreement has been released pursuant to its provisions and all payments due under the Lease have been made or provided for.

The University also has the option to terminate the Lease if any of the following extraordinary events occur:

(a) All or a substantial part of the Project is damaged or destroyed to such extent that (i) the Project cannot be reasonably restored within a period of six months to their condition at the time immediately preceding the damage or destruction or (ii) the University is thereby prevented from carrying on its normal operation of the Project for a period of six months;

(b) Title to, or the temporary use of, all or a substantial part of the Project is taken under the exercise of the power of eminent domain by any government authority, or person, firm or corporation acting under governmental authority, to such extent that (i) the Project cannot be reasonably restored within a period of six months to a condition comparable to its condition prior to such taking or (ii) the University is thereby prevented from carrying on its normal operation of the Project for a period of six months;

(c) As a result of any changes in the Constitution of the State or the Constitution of the United States or of legislative or administrative action (whether State or federal) or by final decree, judgment or order of any court or administrative body (whether State or federal) entered after the contest thereof by the Commission or the University in good faith, the Lease becomes void or unenforceable or impossible of performance, or if unreasonable burdens or excessive liabilities are imposed upon the Commission or the University with respect to the Project or its operation; or

(d) The University loses its status as a federally tax-exempt organization but only if such loss results in the interest on the Bonds no longer being excluded from gross income for federal income tax purposes.

For purposes of this paragraph, the term "substantial part" when used with reference to the Project means any part of the Project, the total cost of which (as determined by the University) equals or exceeds the lesser of (i) 25% of the aggregate principal amount of the Bonds originally issued or (ii) an amount equal to the aggregate principal amount of the Bonds then outstanding.

In order to exercise the option described in the preceding paragraph, the University must give written notice to the Commission (and, if applicable, the Trustee) within 90 days following the event authorizing the exercise thereof, and is required to make arrangements satisfactory to the Trustee for the redemption of all Outstanding Bonds pursuant to the provisions described herein under "THE BONDS – Redemption" and pay the sum of the following:

(a) to the Trustee, an amount of money (or provision thereof in accordance with the Trust Agreement) that, together with the money and investments held to the credit of Special Funds, will be sufficient pursuant to the provisions of the Trust Agreement to pay the principal of and any premium and interest accrued on the Bonds to the redemption date, and to discharge all then Outstanding Bonds; and

(b) to the Trustee or to the Persons to whom Additional Payments are or will become due, an amount of money (or provision therefor satisfactory to the Trustee and the Commission) equal to the Additional Payments accrued and to accrue until actual final payment and redemption of the Bonds.

The Lease provides that upon its expiration, the University shall purchase and the Commission shall sell the Commission's entire interest in the Project for a nominal sum.

## Assignment and Subleasing

The Lease may be assigned in whole or in part, and the Project may be subleased in whole or in part, by the University without the necessity of obtaining the consent of the Commission, the Credit Facility Issuer, the Liquidity Facility Issuer or the Trustee, provided that certain conditions are met, including (i) no such assignment (other than assignments pursuant to the consolidation, merger, sale or other transfer as described in “THE LEASE – University to Maintain its Existence”) will relieve the University from primary liability for any of its obligations under the Lease and the University will continue to remain primarily liable for the payment of Rental Payments and Additional Payments, (ii) any such assignment or sublease will retain for the University such rights as will permit it to perform its obligations under the Lease, (iii) the assignee or sublessee from the University assumes the obligations of the University to the extent of the interest assigned or subleased, (iv) the University furnishes copies of such assignment, sublease or grant of use to the Commission, the Credit Facility Issuer, the Liquidity Facility Issuer and the Trustee, and (v) any such assignment or sublease will not materially impair fulfillment of the purposes of the Act in providing educational facilities or adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes.

## Events of Default

The following are defined as Events of Default under the Lease:

(a) The University fails to pay any Rental Payment attributable to Bond Service Charges on or prior to the date on which that Rental Payment is due and payable.

(b) The University fails to administer, maintain or operate the Project as educational facilities in accordance with the Act.

(c) The University fails to observe or perform any other covenant, agreement or obligation contained in the Lease, if such failure continues for a period of 60 days after written notice of the failure is given to the University by the Commission, the Trustee, the Credit Facility Issuer or the Liquidity Facility Issuer requesting that it be remedied. The Commission, the Credit Facility Issuer, the Liquidity Facility Issuer and the Trustee may agree in writing to an extension of that 60-day period prior to its expiration, provided that if the University proceeds to take curative action that, if begun and prosecuted with due diligence, cannot be completed reasonably within the 60-day period, that period shall be increased without a written extension to any extent that shall be necessary to enable the University to complete the curative action diligently.

(d) Certain events of dissolution, liquidation, insolvency, bankruptcy, reorganization or other similar events with respect to the University occurs.

(e) The University fails to make any payment due under a lease or lease agreement entered into between the University and the Commission in connection with any issue of State of Ohio Higher Educational Facility Bonds issued to fund a project at the University, provided that such failure constitutes an event of default under such lease or lease agreement. The University is a party to a number of leases with the Commission in connection with outstanding bonds. See APPENDIX A – “CASE WESTERN RESERVE UNIVERSITY – Outstanding Indebtedness.”

The events described in paragraph (c) above do not constitute Events of Default if caused by Force Majeure, defined in the Lease as acts of God; strikes, lockouts or other employment related disturbances; acts or orders of any kind of any governmental authority; acts of public enemies; terrorist activities or attacks; insurrections; civil disturbances; riots; arrests; epidemics; landslides; lightning; earthquakes; fires; hurricanes; tornados; storms; droughts; floods; explosions; breakage, malfunction or accident to facilities, machinery, transmission pipes or canals; partial or entire failure of utilities; shortages of labor, materials, supplies or transportation; or any cause, circumstance or event not reasonably within the control of the University.

The declaration of an Event of Default under the Lease and the exercise of remedies upon any such declaration are subject to any applicable limitations of federal bankruptcy law affecting or precluding such declaration or exercise during the pendency of or immediately following any bankruptcy, liquidation or reorganization proceedings.

### **Remedies on Default**

If any Event of Default described above happens and is continuing, any one or more of the following remedies may be taken, although the Trustee is not required to take any remedy that in its opinion will or might cause it to expend time or money unless it has been furnished a satisfactory indemnity bond at no cost to it:

(a) In accordance with the Trust Agreement, the Trustee shall, if acceleration is declared pursuant to the Trust Agreement, and the Trustee may, if acceleration is not declared pursuant to the Trust Agreement, declare all Rental Payments, Additional Payments and other amounts payable under the Lease to be immediately due and payable, whereupon the same shall become immediately due and payable.

(b) The Trustee may (i) enter and take possession of the Project without terminating the Lease, (ii) sublease the Project or any part thereof for the account of the University, (iii) collect rentals and enforce all other remedies of the University under any lease of, or assignments or grants of rights to use or occupy, the Project, or any part thereof, but without being deemed to have affirmed the lease, assignments or grants, (iv) enter into new leases, assignments and grants on any terms that the Commission or the Trustee may deem suitable for the Project, or any part thereof, which leases, assignments and grants may provide that they shall not be terminated or affected if the University cures the Event of Default, (v) remove the University, all other Persons and all property from the Project, or any part thereof, (vi) hold, operate and manage the Project, or any part thereof, (vii) receive all earnings, income, rents, issues, profits, proceeds or other sums accruing with respect thereto and (viii) obtain an environmental assessment of all or any part of the real property constituting the Project.

(c) The Trustee may have access to and inspect, examine and make copies of the books and records and any and all accounts, data and income tax and other tax returns of the University.

(d) The Trustee may exercise any and all and any combination of rights, remedies and powers available to it under the Trust Agreement and the Lease and may appoint a receiver.

In the event that the Project or any portion thereof is also leased pursuant to any future lease between the Commission and the University in connection with an issue of revenue bonds or notes of the Commission ("Commission Obligations") for the benefit of the University ("Future Overlapping Portion"), the Trustee, prior to exercising remedies upon an Event of Default as described in paragraph (b) or the right to appointment of a receiver, is required to cooperate with the holders of any such Commission Obligations (or the trustee representing their interests) so that the interest of those holders and the holders of the Bonds is protected equally and ratably with respect to the Future Overlapping Portions of the Project and any disposition thereof. In this regard, any future lease relating to Commission Obligations is required to contain provisions to the effect that, prior to exercising any remedies upon a default under such lease relating to such Commission Obligations that are analogous to those described in paragraph (b) above or with respect to the appointment of a receiver, the future holders of those Commission Obligations (or the trustee representing their interests) shall cooperate with the Trustee so that the interests of the holders of the Bonds and the holders of those future Commission Obligations shall be protected equally and ratably with respect to any Future Overlapping Portion of the Project and any disposition thereof. In the event the Trustee receives or expects to receive pursuant to the Lease insurance proceeds or proceeds in connection with the taking of the Project under the exercise of the power of eminent domain and such funds relate to any Future Overlapping Portion, the Trustee is required to pursue an application of such funds so as to facilitate the equal and ratable treatment of other holders and trustees in the same fashion as contemplated in this paragraph. Determinations of "equal and ratable" will be made on a pro rata basis according to the then outstanding principal amount of the applicable Commission Obligations.

Subject to the Trust Agreement, notwithstanding any termination of the Lease or the exercise of any other remedy, and prior to the entry of a judgment in a court of law or equity for enforcement of the Lease after an opportunity for the University to be heard, the University may (a) at any time pay, or provide for, (i) all accrued and

unpaid Rental Payments, including all interest required to be paid in accordance with the Trust Agreement on overdue principal of any Bonds and on the principal of any Bonds required to be redeemed in accordance with the Trust Agreement, but not redeemed by reason of any Event of Default under the Lease by the University in the payment of Rental Payments, Additional Payments and other amounts payable under the Lease (except Rental Payments, Additional Payments and other amounts accelerated), (ii) all costs and expenses of the Commission and the Trustee occasioned by the Event of Default under the Lease, and (b) cure to the satisfaction of the Trustee all other Events of Default then capable of being cured.

Upon that payment, deposit and cure, (a) the Lease will be reinstated fully, (b) the University will be restored to the possession of the Project and (c) that payment, deposit and cure will constitute ipso facto a waiver of the Event of Default and its consequences and an automatic rescission of any declaration of acceleration. No waiver will extend to any subsequent Event of Default. If, by reason of any Event of Default under the Lease in the payment of Rental Payments, the payment of any principal of or interest on any Bond is not made when due, the Lease will not be reinstated if the Trustee, within ten days of such payment, deposit and cure, notifies the University in writing of its objection, based on a reasonable determination that the University will be subject to a subsequent Event of Default under the Lease, to such reinstatement.

### **Amendments of the Lease**

The Trust Agreement provides that the Lease may be amended by the Commission and the Trustee without the consent of or notice to the Holders only as may be required (i) by the provisions of the Bond Documents, (ii) for the purpose of curing any ambiguity, inconsistency or formal defect or omission in the Lease, (iii) in connection with an amendment or to effect any purpose for which there could be an amendment of the Trust Agreement without the consent of the Holders, (iv) in connection with the conversion of the Bonds to another Applicable Rate, (v) in connection with the replacement of a Credit Facility as permitted in and in accordance with Article XIV of the Trust Agreement, (vi) to implement an amendment pursuant to Section 10.1 of the Lease with respect to the removal of certain property from the operation thereof or (vii) in connection with any other change therein that does not materially, adversely affect the Trustee or the Holders. Any amendment to the Lease that would change the amount of Rental Payments, or time as of which they are required to be paid, may only be made with the consent of all of the Holders of the Bonds then outstanding. Any other amendments to the Lease may only be made with the written approval or consent of the Holders of not less than a majority in aggregate principal amount of the Bonds then outstanding.

## **THE TAX AGREEMENT**

The following is a description of certain provisions of the Tax Agreement. Such description does not purport to be complete or definitive and reference is made to the Tax Agreement for a full and complete statement of the terms and provisions and for the definition of capitalized terms used in this description and not otherwise defined in this APPENDIX C.

In the Tax Agreement, the University represents that it has taken and covenants that it will take and cause to be taken all actions that may be required of it, alone or in conjunction with the Commission, for the interest on the Bonds to be and remain excluded from gross income for federal income tax purposes and from treatment as an item of tax preference for purposes of the alternative minimum tax. The University represents that it has not taken or permitted to be taken on its behalf, and covenants that it will not take or permit to be taken on its behalf, any actions that would adversely affect those exclusions under the provisions of the Code.

Unless the University receives and provides to the Commission and the Trustee a written opinion of nationally recognized bond counsel acceptable to the Commission that such action will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes and from treatment as an item of tax preference for purposes of the alternative minimum tax, the University will not take any action or fail to take any action that would cause the Bonds not to be considered qualified 501(c)(3) bonds under the Code.

Within 30 days after the fifth Bond Year and every fifth Bond Year thereafter and within 30 days after the payment in full of all outstanding Bonds, the Trustee is required to furnish information to the University and the University will engage an independent certified public accounting firm, law firm or other firm with experience in

preparing rebate reports, which firm is acceptable to the Trustee, to calculate the Rebate Amount determined as provided in Section 148 of the Code as of the end of the applicable period. The Trustee is also to notify the University of any amount on deposit in the Rebate Fund created in the Trust Agreement and maintained by the Trustee. If the amount on deposit in the Rebate Fund is less than the Rebate Amount, the University is required to pay the amount of the deficiency to the Trustee for deposit in the Rebate Fund. If the amount on deposit in the Rebate Fund is in excess of the Rebate Amount, the excess will be paid to the University. The Trustee is required to use the money in the Rebate Fund to make payment of the Rebate Amount to the United States in accordance with provisions of the Code.

The preceding discussion does not purport to be complete or definitive and reference is made to the Tax Agreement for a full and complete statement of the terms and provisions.



## APPENDIX D

### PROPOSED FORM OF BOND COUNSEL OPINION

To: J.P. Morgan Securities, LLC, acting on behalf  
of itself and as representative

We have served as bond counsel to our client the Ohio Higher Educational Facility Commission (the “Commission”) in connection with the issuance by the Commission of \$68,160,000.00 State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2019A, dated the date of this letter (the “Bonds”) of the State of Ohio (the “State”).

The Bonds are issued pursuant to Chapter 3377 and Sections 9.98 through 9.983 of the Ohio Revised Code and the Trust Agreement, dated as of March 1, 2019 (the “Trust Agreement”), between the Commission and The Bank of New York Mellon Trust Company, N.A., Cleveland, Ohio (the “Trustee”). The Bonds are being issued for the purpose of providing funds to pay “project costs” of “educational facilities,” as those terms are defined in Section 3377.01 of the Revised Code. The educational facilities financed by the Bonds constitute the “Project.” The Project has been leased by Case Western Reserve University (the “University”), as lessor, to the Commission, as lessee, under the Base Lease dated as of March 1, 2019 (“Base Lease”) and has been leased back to the University under the Lease dated as of March 1, 2019 (the “Lease”) between the Commission, as lessor, and the University, as lessee. Pursuant to the Assignment of Rights under Lease dated as of March 1, 2019 (the “Assignment”), the Commission has assigned to the Trustee for the benefit of the holders of the Bonds substantially all of its rights under the Lease, including the Rental Payments to be made by the University. Pursuant to the Assignment, the Commission, effective solely upon an event of default under the Lease, also has assigned to the Trustee for the benefit of the Holders of the Bonds, substantially all of the rights in the Base Lease. Capitalized terms not otherwise defined in this letter are used as defined in the Lease.

In our capacity as bond counsel, we have examined the transcript of proceedings relating to the issuance of the Bonds, a copy of the signed and authenticated Bond, the Trust Agreement, the Base Lease, the Lease, the Assignment and such other documents, matters and law as we deem necessary to render the opinions set forth in this letter.

Based on that examination and subject to the limitations stated below, we are of the opinion that under existing law:

1. The Trust Agreement, the Base Lease, the Lease and the Assignment are valid and binding obligations of the Commission, enforceable in accordance with their respective terms. The Bonds are valid and binding obligations of the State in accordance with their terms.
2. The Bonds constitute special obligations of the State, and the principal of and interest and any premium on (collectively, “debt service”) the Bonds are payable solely from the revenues and other money assigned by the Trust Agreement and the Assignment to pay debt service. Those revenues and other money include the payments required to be made by the University under the Lease. The Bonds and the payment of debt service are not secured by an obligation or pledge of any money raised by taxation, and the Bonds do not represent or constitute a debt, or pledge of the faith and credit, of the State, any of its political subdivisions or the Commission.
3. Interest on the Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the “Code”), and is not an item of tax preference for purposes of the federal alternative minimum tax. Interest on, and any profit made on the sale, exchange or other disposition of, the Bonds are exempt from all Ohio state and local taxation, except the estate tax, the domestic insurance company tax, the dealers in intangibles tax, the tax levied on the basis of the total equity capital of financial institutions, and the net worth base of the corporate franchise tax. We express no opinion as to any other tax consequences regarding the Bonds.

The opinions stated above are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. In rendering all such opinions, we assume, without independent verification, and rely upon (i) the accuracy of the factual matters represented, warranted or certified in the proceedings and documents we have examined, (ii) the due and legal authorization, execution and delivery of those documents by, and the valid, binding and enforceable nature of those documents upon, any parties other than the Commission and (iii) the correctness of the legal conclusions contained in the legal opinion letter of counsel to the University delivered in connection with this matter.

We express no opinion with respect to any indemnification, contribution, penalty, choice of law, choice of forum, choice of venue, waiver or severability provisions contained in the Bonds, the Trust Agreement, the Base Lease, the Lease or the Assignment. Furthermore, we express no opinion herein with respect to the status or quality of title to, or interest in, any of the real, personal or intangible property and other assets described in, or subject to, the pledge or lien granted in the Trust Agreement, the Base Lease, the Lease or the Assignment, or the accuracy or sufficiency of the description contained therein of any of that property, or the priority of, or the remedies available to enforce, any claim on or interest in any of that property.

In rendering those opinions with respect to the treatment of the interest on the Bonds under the federal tax laws, we further assume and rely upon compliance with the covenants in the proceedings and documents we have examined, including those of the Commission and the University. Failure to comply with certain of those covenants subsequent to issuance of the Bonds may cause interest on the Bonds to be included in gross income for federal income tax purposes retroactively to their date of issuance.

In addition, in rendering those opinions with respect to the treatment of the interest on the Bonds under the federal tax laws, we also further assume the correctness of and rely on the opinion of Peter M. Poulos, Esq., General Counsel and Deputy Secretary to the University, regarding the current qualification of the University as an organization described in Section 501(c)(3) of the Code and the use of the facilities financed with the Bonds in activities that are not considered “unrelated trade or business” activities of the University, as defined in Section 513(a) of the Code, which opinion is subject to a number of qualifications and limitations. Failure of the University to maintain its qualification as an organization described in Section 501(c)(3) of the Code, or to use the facilities financed by the Bonds in a manner that is substantially related to the University’s exempt purpose under Section 513(a) of the Code, may cause interest on the Bonds to be included in gross income retroactively to the date of issuance of the Bonds.

The rights of the owners of the Bonds and the enforceability of the Bonds, the Trust Agreement, the Base Lease, the Lease and the Assignment are subject to bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or transfer and other laws relating to or affecting the rights and remedies of creditors generally, to the application of equitable principles, whether considered in a proceeding at law or in equity, to the exercise of judicial discretion, and to limitations on legal remedies against public entities.

No opinions other than those expressly stated herein are implied or shall be inferred as a result of anything contained in or omitted from this letter. The opinions expressed in this letter are stated only as of the time of its delivery and we disclaim any obligation to revise or supplement this letter thereafter. Our engagement as bond counsel in connection with the original issuance of the Bonds is concluded upon delivery of this letter.

Respectfully submitted,

## APPENDIX E

### BOOK-ENTRY SYSTEM

Payment of principal of and interest on the Bonds will be made directly to DTC or its nominee, Cede & Co., by the Trustee. In the event the Bonds are not in a book-entry-only system, payment of principal of and interest on the Bonds will be made as described in the Trust Agreement and summarized in APPENDIX C — “CERTAIN DEFINED TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE TRUST AGREEMENT, THE LEASE AND THE TAX AGREEMENT.”

The ownership of one fully registered Bond for each maturity in the aggregate principal amount of such maturity will be registered in the name of Cede & Co., as nominee for DTC. In the event that (1) DTC resigns as securities depository for the Bonds, after giving reasonable notice thereof to the Commission or the Trustee, or (2) the Commission, at the request of the University, determines that the continuation of the book-entry system of evidence and transfer of ownership of the Bonds is not in the best interest of the Beneficial Owners (hereinafter defined) of the Bonds, the University or the Commission, then the Commission may, at the request of the University, discontinue the book-entry system with DTC. If the Commission and the University does not establish a relationship with another qualified securities depository to replace DTC, the Commission will execute and the Trustee will authenticate and deliver replacement Bonds in the form of fully registered certificates. If no qualified securities depository is the registered owner of the Bonds, the Paying Agent will pay interest to the Beneficial Owners by check mailed to the person registered at the close of business on the Regular Record Date as owner of the Bonds. Principal of and premium, if any, on the Bonds are payable upon presentation at the principal corporate trust office of the Paying Agent. Upon the issuance of replacement Bonds, the Trustee and the Registrar may require the payment by the Bondholder of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation to the issuance of such replacement Bond.

**The description which follows of the procedures and recordkeeping with respect to beneficial ownership interests in the Bonds, payments of principal, premium, if any, and interest on the Bonds to DTC, its nominee, Direct Participants, defined below, or Beneficial Owners, confirmation and transfer of beneficial ownership interests in the Bonds and other bond-related transactions by and between DTC, Participants and Beneficial Owners is based solely on information furnished by DTC.**

DTC will act as securities depository for the Bonds. The Bonds will be issued as full-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Bond certificate will be issued for each maturity of the Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities depository, is a limited purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a S&P rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com).

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC's records. The ownership interest of each actual purchaser of each Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co., or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners shall be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, tenders, defaults, and proposed amendments to the documents relating to the Bonds. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the Trustee as registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Commission as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and interest payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the University, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, the Commission, or the University, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Commission or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the Commission or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates will be printed (or otherwise produced) and delivered.

The Commission, at the request of the University, may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, either a successor securities depository will be selected by the Commission or Bond certificates will be printed (or otherwise produced) and delivered to DTC.

The information above in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Commission and the University believe to be reliable, but neither the Commission nor the University take responsibility for the accuracy thereof.

**Neither the Commission, the University, the Registrar, the Paying Agent nor the Trustee will have responsibility or obligations to the Participants or the Beneficial Owners with respect to (1) the accuracy of any records maintained by DTC or any Participant, (2) the payment by DTC to any Participant, or by any Participant or Indirect Participant of any amount due to any Beneficial Owner, in respect of the principal of, premium, if any, or interest on the Bonds, (3) the delivery or timeliness of delivery by DTC to any Participant, or by any Participant or Indirect Participant of any notice to any Beneficial Owner, that is required or permitted under the terms of the Trust Agreement, (4) the selection of the Beneficial Owners to receive payment in the event of any partial redemption of the Bonds, or (5) any consent given or other action taken by DTC as the registered bondholder, including the effectiveness of any action taken pursuant to an Omnibus Proxy.**

**So long as Cede & Co. is the registered owner of the Bonds, as nominee of DTC, references in this Offering Circular to the Owners of the Bonds shall mean Cede & Co. and shall not mean the Beneficial Owners and the Trustee will treat Cede & Co. as the only Holders of Bonds for all purposes under the Trust Agreement.**

**The Commission may enter into amendments to the agreement with DTC, or successor agreements with a successor securities depository, relating to the book-entry system to be maintained with respect to the Bonds without the consent of Beneficial Owners or Bondholders.**

While in book-entry form, transfers of beneficial ownership of Bonds will be effected on the records of DTC and its participants pursuant to rules and procedures established by DTC and DTC Participants. If the book-entry system is discontinued, Bonds may be transferred or exchanged by delivery to the Registrar of a satisfactory written instrument of transfer executed by the Owner of the Bonds or his attorney or legal representative duly authorized in writing. The Commission, the Trustee, and the Registrar are not required to transfer or exchange any Bond (i) during a period beginning at the opening of business 15 days prior to the selection of the Bonds to be redeemed or (ii) for which notice of redemption has been given in accordance with the Trust Agreement. For every transfer and exchange of the Bonds, the Registrar may charge the Owner a sum sufficient to cover any tax, fee or other governmental charge that may be imposed in relation thereto and the charges of the Registrar.

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## APPENDIX F

### PROPOSED FORM OF CONTINUING DISCLOSURE AGREEMENT

#### CONTINUING DISCLOSURE AGREEMENT

THIS CONTINUING DISCLOSURE AGREEMENT, dated as of March 1, 2019 (the “Agreement”), is made by and between Case Western Reserve University, a nonprofit corporation duly organized and validly existing under the laws of the State of Ohio and qualified to do business in the State of Ohio (together with its lawful successors and permitted assigns, the “University”), and The Bank of New York Mellon Trust Company, N.A., a national banking association duly organized and validly existing under the laws of the United States of America, with a designed corporate trust office located in Cleveland, Ohio, as Trustee (the “Trustee”), for the benefit of the Holders and Beneficial Owners from time to time of the \$68,160,000.00 State of Ohio Higher Educational Facility Revenue Refunding Bonds (Case Western Reserve University Project) Series 2019A (the “Bonds”) authorized by Resolution No. 2019-03 adopted by the Ohio Higher Educational Facility Commission (the “Commission”) on February 20, 2019 (the “Bond Resolution”), under the circumstances set forth in the following recitals (with each capitalized term used but not otherwise defined herein having the meaning assigned to it in Section 1).

A. The Commission has determined to issue and sell the Bonds to refund all or a portion of the outstanding principal amount of certain bonds previously issued for the purpose of providing funds to pay project costs as defined in Section 3377.01 of the Ohio Revised Code and refunding obligations issued for that purpose.

B. The Bonds will be issued pursuant to and secured by the Trust Agreement under which the Commission will assign to the Trustee any rights it may have under the Lease to receive rental payments from the University for payment of principal of and interest and any premium on the Bonds.

C. The University will agree to make rental payments under the Lease directly to the Trustee to pay principal of and interest and any premium on the Bonds, and the University has represented that it is the only Obligated Person with respect to the Bonds and that there will not be any other such Obligated Person at the time the Bonds are issued.

D. The Underwriter is required as the Participating Underwriter under the Rule not to purchase or sell the Bonds in a primary offering unless the Underwriter has reasonably determined that the University has undertaken in this Agreement to provide certain information in accordance with the provisions of the Rule.

NOW, THEREFORE, in consideration of the recitals and the mutual representations and agreements hereinafter contained, the University and the Trustee agree, in accordance with the provisions of the Rule, for the benefit of the Holders and Beneficial Owners from time to time of the Bonds, as set forth in this Agreement.

Section 1. Definitions and Interpretation. In addition to the words and terms defined elsewhere in this Agreement or in the Master List of Definitions for Documents Relating to the Bonds, which is Exhibit C of the Lease referenced in the Offering Circular, the following capitalized terms shall have the following meanings unless the context or use clearly indicates otherwise.

“Annual Filing” means any Annual Information Filing provided by the University pursuant to, and as described in, Sections 3 and 4.

“Audited Financial Statements” means the audited basic financial statements of the University, prepared in conformity with generally accepted accounting principles applicable to institutions of higher education such as the University.

“Authorized Disclosure Representative” means the Senior Vice President for Finance and Chief Financial Officer of the University or an alternate or alternates, each of whom shall be designated by the University in a certificate to the Trustee, substantially in the form of Exhibit D, and have the same authority, duties and powers as such Authorized Disclosure Representative.

“Beneficial Owner” means any person that (a) has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries), or (b) is treated as the owner of any Bonds for federal income tax purposes.

“EMMA” means the Electronic Municipal Market Access system of the MSRB; information regarding submissions to EMMA is available at <http://emma.msrb.org>.

“Filing Date” means the last day of the ninth month following the end of each Fiscal Year (or the next succeeding Business Day if that day is not a Business Day), beginning March 31, 2020.

“Fiscal Year” means the fiscal year of the University, presently a 12-month period ending June 30, which may be changed by the University from time to time.

“Holder” means, with respect to the Bonds, the person in whose name a Bond is registered in accordance with the Trust Agreement.

“Interest Rate Mode” means a Daily Mode, a Two Day Mode, a Weekly Mode, a Short Term Mode, a Long Term Mode, an FRN Mode, a VRO Mode, a Window Mode, a Flexible Mode, a Direct Purchase Mode or a Fixed Mode

“MSRB” means the Municipal Securities Rulemaking Board.

“Notice Address” means:

- |                           |   |
|---------------------------|---|
| (a) as to the Trustee:    | The Bank of New York Mellon Trust Company, N.A.<br>1660 West Second Street, Suite 830<br>Cleveland, Ohio 44113  |
| (b) as to the University: | Case Western Reserve University<br>10900 Euclid Avenue<br>4 Adelbert Hall<br>Cleveland, Ohio 44106<br>Attention: President<br>with a copy to the Treasurer<br>(at the same address) |

or a different address as to which notice is given pursuant to Section 14.3 of the Lease or Section 13.03 of the Trust Agreement.

“Obligated Person” means, any person, including the issuer of municipal securities (such as the Bonds), who is generally or through an enterprise, fund or account of such person committed by contract or other arrangement to support payment of all or part of the obligations on the municipal securities being sold in an offering document (such as the Offering Circular); the University is the only Obligated Person for the Bonds.

“Offering Circular” means the Offering Circular for the Bonds dated March 13, 2019.

“Rule” means Rule 15c2-12 prescribed by the Securities and Exchange Commission pursuant to the Securities Exchange Act of 1934, as amended.



“Specified Events” means any of the events with respect to the Bonds as set forth in Section 6.

“Underwriter” means J.P. Morgan Securities LLC and Barclays Capital Inc. as the Original Purchasers of the Bonds and each a “Participating Underwriter” with respect to the Bonds under the Rule.

The captions and headings in this Agreement are solely for convenience of reference and in no way define, limit or describe the scope or intent of any Sections, subsections, paragraphs, subparagraphs or clauses hereof. Reference to a Section means a section of this Agreement and to an Exhibit means an exhibit to this Agreement, unless otherwise indicated.

Section 2. Purpose of this Continuing Disclosure Agreement. Pursuant to the Lease, this Agreement is being signed and delivered by the University and the Trustee, for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriter in complying with the Rule. The University and the Trustee acknowledge that the Commission has undertaken no responsibility with respect to any Annual Filings, reports, notices or disclosures provided or required under this Agreement, and has no liability to any Person, including any Holder or Beneficial Owner of the Bonds, with respect to the Rule.

Section 3. Provision of Annual Information: Audited Financial Statements.

The University shall provide (or cause to be provided) not later than the Filing Date to the MSRB and to the Trustee an Annual Filing that is consistent with the requirements of Section 4. The Annual Filing shall be submitted in an electronic format and contain such identifying information as is prescribed by the MSRB, and may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4; provided that the Audited Financial Statements of the University may be submitted separately from the balance of the Annual Filing and later than the Filing Date if they are not available by that date. If the University’s Fiscal Year changes, it shall give notice of such change in the same manner as for a Specified Event under Section 6.

If the University is unable to provide to the MSRB and the Trustee an Annual Filing by the Filing Date, the University shall, in a timely manner, send a notice to the MSRB and the Trustee in an electronic format as prescribed by the MSRB (“Notice of Inability to File”).

Section 4. Content of Annual Filing. The University’s Annual Filing shall contain or include by reference the following:

(a) Financial information and operating data of the type included in APPENDIX A of the Offering Circular under the caption: “CASE WESTERN RESERVE UNIVERSITY” under the captions “Research at CWRU,” “Faculty,” “Employees,” “Pension Plans,” “Enrollment,” “Tuition and Fees,” “Financial Aid,” “Unrestricted, Temporarily Restricted and Permanently Restricted Net Assets,” “Gifts, Grants and Bequests,” “Investment Assets,” “Distribution Policy Relating to Endowment and Other Assets” and (to the extent not presented in the University’s Audited Financial Statements) “Outstanding Indebtedness” and “Interest Rate Hedges.”

(b) The Audited Financial Statements of the University utilizing accounting principles applicable to institutions of higher education as described in the Offering Circular, except as may be modified from time to time and described in such financial statements.

The foregoing shall not obligate the University to prepare or update projections of any financial information or operating data.

Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the University, which have been submitted to the MSRB or the Securities and Exchange Commission. The University shall clearly identify each such other document so included by reference.

Section 5. Role of Trustee.

(a) Upon receipt of the Annual Filing, including Audited Financial Statements, from the University, the Trustee shall be entitled to assume that the University has provided the Annual Filing to the MSRB. The Trustee shall have no responsibility for providing the Annual Filing unless directed in writing to do so by the University.

(b) If the Trustee has not received the Annual Filing for a Fiscal Year or a Notice of Inability to File by its close of business on the 15th Business Day preceding the Filing Date for that Fiscal Year, the Trustee shall provide a notice to the Authorized Disclosure Representative, not later than its close of business on the next Business Day, substantially in the form of Exhibit A, by facsimile transmission (or other means similarly prompt) and by certified or registered mail, postage prepaid, return receipt requested. If the Trustee has not received that Annual Filing or a Notice of Inability to File by its close of business on the Filing Date, the Trustee shall provide a notice to the Authorized Disclosure Representative, not later than its close of business on the next Business Day, substantially in the form of Exhibit B, by facsimile transmission (or other means similarly prompt). The University shall be entitled to provide written evidence of the submission of the Annual Filing in accordance with Section 3, including a certificate of the Authorized Disclosure Representative as to the relevant facts, and, if applicable, a written statement in an electronic format and containing such identifying information as prescribed by the MSRB regarding any failure to comply with Section 3. The Trustee shall be entitled to rely conclusively upon any written evidence provided by the University regarding the provision of that information to the MSRB. If, in any instance, the required Annual Filing information was not timely filed or the University fails to provide evidence, by 4:00 p.m., Ohio time, on the second Business Day following the Filing Date, of its timely filing with MSRB or a Notice of Inability to File, the Trustee shall send or cause to be sent promptly, but in any event not later than its close of business on the third Business Day following the Filing Date, a notice substantially in the form of Exhibit C, modified to reflect the pertinent facts, to the MSRB in an electronic format and containing such identifying information as prescribed by the MSRB. The Trustee shall promptly provide a copy of such notice to the University.

Section 6. Reporting of Specified Events.

(a) The University shall provide (or cause to be provided) to the MSRB and to the Trustee in an electronic format and containing such identifying information as is prescribed by the MSRB and in a timely manner but not later than ten business days after the occurrence of the event, notice of any of the following events with respect to the Bonds, as specified by the Rule:

- (1) Principal and interest payment delinquencies;
- (2) Non-payment related defaults, if material;
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties; (a)
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties; (a)
- (5) Substitution of credit or liquidity providers, or their failure to perform; (a)
- (6) Issuance of an adverse tax opinion, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
- (7) Modifications to rights of security holders, if material;
- (8) Bond calls, if material, and tender offers; (b)
- (9) Defeasances;

- (10) Release, substitution, or sale of property securing repayment of the securities, if material;
- (11) Rating changes;
- (12) Bankruptcy, insolvency, receivership or similar event of the Obligated Person; Note: For the purposes of the event identified in this subparagraph, the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an Obligated Person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Obligated Person, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Obligated Person.
- (13) The consummation of a merger, consolidation, or acquisition involving an Obligated Person or the sale of all or substantially all of the assets of the Obligated Person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (14) Appointment of a successor or additional trustee or the change of name of a trustee, if material;
- (15) Incurrence of a financial obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of the obligated person, any of which affect security holders, if material; and
- (16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the obligated person, any of which reflect financial difficulties.

Note:

- (a) The University has not obtained or provided, and does not expect to obtain or provide, any debt service reserves, credit enhancements or credit or liquidity facilities for the Bonds.
- (b) Any scheduled redemption of Bonds pursuant to mandatory sinking fund redemption requirements does not constitute a specified event within the meaning of the Rule.
- (c) Repayment of the Bonds is not secured by a lien on any property capable of release or sale or for which other property may be substituted

For the Specified Events described in Section 6(a) (2), (6, as applicable), (7), (8, as applicable), (10), (13), (14) and (15), the University, as the Obligated Person with respect to the Bonds, acknowledges that it must make a determination whether such Specified Event is material under applicable federal securities laws in order to determine whether a filing is required.

(b) The Trustee shall promptly notify the Authorized Disclosure Representative upon obtaining actual knowledge of an occurrence which may require the University to report a Specified Event (other than a nonpayment related default, the giving of a notice of optional redemption of any Bonds or defeasance of the Bonds or any provision thereof) provided, however, that the failure of the Trustee so to notify the Authorized Disclosure Representative shall not constitute a breach by the Trustee of any of its duties and responsibilities under this Agreement or the Trust Agreement and the Trustee shall not incur any liability for any such failure. The Trustee shall have no responsibility to file any notice of such Specified Events unless directed in writing to do so by the University and provided with a copy of such notice.

Section 7. Additional Information. Nothing in this Agreement shall be deemed to prevent the University from disseminating any other information, using the means of dissemination set forth in this Agreement or providing any other means of communication, or including any other information in any Annual Filing or providing notice of the occurrence of an event, in addition to that which is required by this Agreement. If the University chooses to include any information in any document or notice of occurrence of an event in addition to that which is specifically required by this Agreement, the University shall have no obligation under this Agreement to update such information or include it in any future Annual Filing or notice of occurrence of a Specified Event.

Section 8. Amendments. The University reserves the right to amend this Agreement, and noncompliance with any provision of this Agreement may be waived, as may be necessary or appropriate to (a) achieve its compliance with any applicable federal securities law or rule, (b) cure any ambiguity, inconsistency or formal defect or omission and (c) address any change in circumstances arising from a change in legal requirements, change in law or change in the identity, nature or status of the University or type of business conducted by the University. Any such amendment or waiver shall not be effective unless this Agreement (as amended or taking into account such waiver) would have materially complied with the requirements of the Rule at the time of the primary offering of the Bonds, after taking into account any applicable amendments to or official interpretations of the Rule, as well as any change in circumstances, and until the University shall have received either (i) a written opinion of bond counsel or other qualified independent special counsel selected by the University that the amendment or waiver would not materially impair the interests of Holders or Beneficial Owners or (ii) the written consent to the amendment or waiver of the Holders of at least a majority of the principal amount of the Bonds then outstanding. An Annual Filing containing any revised operating data or financial information shall explain, in narrative form, the reasons for any such amendment or waiver and the impact of the change on the type of operating data or financial information being provided. If the amendment relates to the accounting principles to be followed in preparing Audited Financial Statements, (A) the University shall provide notice of such change in the same manner as for a Specified Event under Section 6 and (B) the Annual Filing for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements or information as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Section 9. Termination. The obligations of the University under this Agreement shall remain in effect only for such period that (a) the Bonds are outstanding in accordance with their terms and (b) the University remains an Obligated Person with respect to the Bonds within the meaning of the Rule, subject to the survival of certain provisions to the extent expressly provided in Section 12. The obligation of the University to provide the Annual Filing and notices of Specified Events set forth in Section 6 shall terminate, if and when the University no longer remains an Obligated Person with respect to the Bonds. If any person, other than the University, becomes an Obligated Person relating to the Bonds, the University shall use its best efforts to require such Obligated Person to comply with all provisions of the Rule applicable to such Obligated Person.

Section 10. University: Dissemination Agent. The University represents that it will be the only Obligated Person with respect to the Bonds at the time the Bonds are delivered by the Commission to the Underwriter. Either the University or the Trustee may, from time to time, appoint or engage an agent to act on its behalf in performing its obligations under this Agreement and may discharge any such agent, with or without appointing a successor; provided that neither the University nor the Trustee shall be relieved in any respect by appointment of an agent from primary liability for the performance of its obligations under this Agreement. An agent may resign by providing 30 days' written notice to the University and the Trustee.

Section 11. Remedy for Breach. This Agreement shall be solely for the benefit of the Holders and Beneficial Owners from time to time of the Bonds. The exclusive remedy for any breach of this Agreement by the University or the Trustee shall be limited, to the extent permitted by law and as hereinafter provided, to a right of Holders and Beneficial Owners, or the Trustee, to institute and maintain, or cause to be instituted and maintained, such proceedings as may be authorized at law or in equity to obtain the specific performance by the University or the Trustee, as applicable, of its obligations under this Agreement in a court in Cuyahoga County, Ohio. Any individual Holder or Beneficial Owner may institute and maintain, or cause to be instituted and maintained, such proceedings to require the University or the Trustee, as applicable, to provide or cause to be provided a pertinent filing if such a filing is due and has not been made. Any such proceedings to require the University to perform any other obligation under

this Agreement (including any proceedings that contest the sufficiency of any pertinent filing) may be instituted and maintained only by the Trustee, which may institute and maintain any such proceedings in its discretion and shall do so, subject to the same conditions, protections, limitations and procedures that would apply under the Trust Agreement if the breach were an Event of Default under the Trust Agreement, at the direction of Holders of at least 25% in aggregate principal amount of the Bonds then outstanding. Any failure of the University or the Trustee to comply with the provisions of this Agreement shall not be a default or failure, or an Event of Default, under the Lease, the Guaranty Agreement or the Trust Agreement. No Person or entity shall be entitled to recover monetary damages under this Agreement.

Section 12. Performance by the Trustee; Compensation.

(a) Solely for the purpose of (i) defining the standards of care and performance applicable to the Trustee in the performance of its obligations under this Agreement, (ii) the manner of execution by the Trustee of those obligations, (iii) defining the manner in which, and the conditions under which, the Trustee may be required to take any action at the direction of Holders, including the condition that indemnification be provided, and (iv) matters of removal, resignation and succession of the Trustee under this Agreement, Article VI of the Trust Agreement is hereby made applicable to this Agreement as if this Agreement were contained in the Trust Agreement; provided that the Trustee shall have only such duties under this Agreement as are specifically set forth in this Agreement, and the University agrees to indemnify and hold harmless the Trustee, its officers, directors, employees and agents, from and against any loss, cost, expense or liability that it may incur arising out of or in the exercise or performance of its obligations under this Agreement, including any costs and expenses (including the reasonable compensation and the expenses and disbursements of its counsel and of all agents and other persons regularly in its employ) of defending any claim of liability, but excluding liabilities due to the negligence or bad faith of the Trustee. For purposes of this Agreement, the Trustee shall not be deemed to have actual knowledge of any event or occurrence unless an officer or other authorized person in the Trustee's corporate trust group having primary responsibility for the administration of the Trust Agreement shall have actual knowledge of that event or occurrence.

(b) The University agrees to pay to the Trustee from time to time reasonable compensation for services provided by the Trustee under this Agreement and to pay or reimburse the Trustee upon request for all reasonable expenses, disbursements and advances incurred or made in accordance with this Agreement or as a result of the University's failure to perform its obligations hereunder (including the reasonable compensation and the expenses and disbursements of its counsel and of all agents and other persons regularly in its employ), except to the extent that any such expense, disbursement or advance is due to the negligence or willful misconduct of the Trustee.

(c) The obligations of the University under this Section shall survive resignation or removal of the Trustee and termination of other provisions of this Agreement pursuant to Section 9.

(d) The Trustee is a party to this Agreement for and on behalf of the Holders and Beneficial Owners of the Bonds and shall not be considered to be the agent of the University when performing any actions required to be taken by the Trustee under this Agreement.

(e) The Trustee shall not have any obligation under this Agreement to investigate or determine whether any filing or notice made under this Agreement complies with federal securities laws or rules.

Section 13. Notices. Except as otherwise expressly provided in this Agreement, it shall be sufficient service or giving of any notice to the parties hereto, if that notice is either mailed by first class mail, postage prepaid, addressed to the relevant party at its Notice Address, or transmitted by facsimile transmission addressed to the relevant party at its number for receipt of facsimile transmissions set forth in its Notice Address. The University and the Trustee may designate from time to time, by notice given hereunder, any further or different addresses (including facsimile transmission numbers) to which any subsequent notice shall be sent.

Section 14. Recordkeeping. The University shall maintain records of all Annual Filings and notices of Specified Events and other events including the content of such disclosure, the names of the entities with whom such disclosures were filed and the date of filing such disclosure.

Section 15. Assignment. The University may assign its obligations under this Agreement only in connection with the assignment of its obligations under and in accordance with the provisions of any contractual commitment or other arrangement to support payment of all or any part of the Bonds, including without limitation the Lease; provided that the University shall not assign its obligations under this Agreement so long as it remains an Obligated Person with respect to the Bonds and except to the assignee of its obligations under any such contractual commitment or other arrangement to support payment of the Bonds. The University may assign its obligations under any such contractual commitment or other arrangement, without remaining primarily liable for the performance of those obligations, only if the assignee of the University assumes its obligations under this Agreement. Any assignment by the University of its obligations under this Agreement shall not be effective unless and until the assignee of the University shall have expressly assumed in writing, for the benefit of the Holders and Beneficial Owners from time to time of the Bonds, by an instrument in form and substance satisfactory to the Trustee, the obligations of the University under this Agreement or enters into a new agreement for purposes of the Rule that is substantially similar to the undertaking of the University under this Agreement.

Section 16. Beneficiaries. This Agreement shall inure solely to the benefit of the Commission, the University, the Trustee and the Holders and Beneficial Owners from time to time of the Bonds, and any official, employee or agent thereof acting for and on its behalf, and shall not create any rights in any other person or entity.

Section 17. Severability. In case any section or provision of this Agreement, or any covenant, stipulation, obligation, agreement, act or action, or part thereof made, assumed, entered into, or taken thereunder or any application thereof, is for any reason held to be illegal or invalid, such illegality or invalidity shall not affect the remainder thereof or any other section or provision thereof or any other covenant, stipulation, obligation, agreement, act or action, or part thereof made, assumed, entered into, or taken thereunder (except to the extent that such remainder or section or provision or other covenant, stipulation, obligation, agreement, act or action, or part thereof is wholly dependent for its operation on the provision determined to be invalid), which shall be construed and enforced as if such illegal or invalid portion were not contained therein, nor shall such illegality or invalidity of any application thereof affect any legal and valid application thereof, and each such section, provision, covenant, stipulation, obligation, agreement, act or action, or part thereof shall be deemed to be effective, operative, made, entered into or taken in the manner and to the full extent permitted by law.

Section 18. Counterparts. This Agreement may be signed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

Section 19. Governing Law. This Agreement shall be deemed to be an agreement made under the laws of the State of Ohio and for all purposes shall be governed by and construed in accordance with the laws of the State of Ohio.

IN WITNESS WHEREOF, the University and the Trustee have caused this Agreement to be duly signed in their respective names, all as of the date set forth above.

CASE WESTERN RESERVE UNIVERSITY

By: \_\_\_\_\_  
Senior Vice President for Finance and Chief  
Financial Officer

And by: \_\_\_\_\_  
Treasurer

THE BANK OF NEW YORK MELLON  
TRUST COMPANY, N.A.,  
as Trustee

By: \_\_\_\_\_  
Vice President

**EXHIBIT A**

**STATE OF OHIO  
HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS  
(CASE WESTERN RESERVE UNIVERSITY PROJECT)  
SERIES 2019A**

**NOTICE TO UNIVERSITY OF FAILURE  
TO FILE ANNUAL INFORMATION**

TO: Senior Vice President for Finance and Chief Financial Officer  
Case Western Reserve University

The undersigned, as the trustee under the Trust Agreement, dated as of March 1, 2019, securing the captioned bonds (the "Bonds"), and as a party to the Continuing Disclosure Agreement, dated as of March 1, 2019 (the "Agreement"), between the undersigned and Case Western Reserve University, an Ohio nonprofit corporation (the "University"), hereby notifies you (with each capitalized term used but not defined herein having the meaning assigned to it in the Agreement) that the University, as of the date of this notice, has not provided or caused to be provided to the undersigned the Annual Filing or Notice of Inability to File that is required under the Agreement to be so provided not later than \_\_\_\_\_. The Annual Filing is required under the Agreement to be provided or caused to be provided both to the undersigned and to the MSRB not later than that date.

Dated: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

**EXHIBIT B**

**STATE OF OHIO  
HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS  
(CASE WESTERN RESERVE UNIVERSITY PROJECT)  
SERIES 2019A**

**SECOND NOTICE TO UNIVERSITY OF FAILURE  
TO FILE ANNUAL INFORMATION**

TO: Senior Vice President for Finance and Chief Financial Officer  
Case Western Reserve University

The undersigned, as the trustee under the Trust Agreement, dated as of March 1, 2019, securing the captioned bonds (the "Bonds"), and as a party to the Continuing Disclosure Agreement dated as of March 1, 2019 (the "Agreement"), between the undersigned and Case Western Reserve University, an Ohio nonprofit corporation (the "University"), hereby notifies you (with each capitalized term used but not defined herein having the meaning assigned to it in the Agreement) that the University, as of the date of this notice, has not provided or caused to be provided to the undersigned the Annual Filing or Notice of Inability to File that is required under the Agreement to be so provided not later than \_\_\_\_\_.

Please provide the required Annual Filing to the undersigned, together with written evidence as to whether that information has been provided to the MSRB and, if so, when it was provided. If, in any instance, the Annual Filing will not be timely provided to the MSRB in accordance with Section 3 of the Agreement, you may submit a written statement in an electronic format and containing such identifying information as prescribed by the MSRB regarding the University's failure to comply that would be provided to the MSRB with the notice that the undersigned must give of that failure to comply under Section 4 of the Agreement. Any such written evidence or statement must be received by the undersigned not later than 4:00 p.m., Cleveland, Ohio time, on \_\_\_\_\_, 20\_\_\_\_. If the undersigned has not received written evidence by that time that a timely filing was made, a notice will be filed promptly thereafter with the MSRB, substantially in the form attached as Exhibit C to the Agreement.

Dated: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_



**EXHIBIT C**

**STATE OF OHIO  
HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS  
(CASE WESTERN RESERVE UNIVERSITY PROJECT)  
SERIES 2019A**

**NOTICE TO MSRB OF FAILURE  
TO TIMELY FILE ANNUAL INFORMATION**

TO: MSRB

The undersigned, as the trustee under the Trust Agreement, dated as of March 1, 2019, securing the captioned bonds (the "Bonds"), and as a party to the Continuing Disclosure Agreement, dated as of March 1, 2019 (the "Agreement"), between the undersigned and Case Western Reserve University, an Ohio nonprofit corporation (the "University"), hereby notifies you (with each capitalized term used but not defined herein having the meaning assigned to it in the Agreement) that:

[1. The University, as of the date of this notice, has not provided or caused to be provided to the Trustee the Annual Filing for its Fiscal Year that ended June 30, 20\_\_ and has not provided any written evidence to the Trustee concerning the timeliness of its Annual Filing with the MSRB. That Annual Filing was required under the Agreement to be provided to the Trustee and the MSRB not later than \_\_\_\_\_]

[1. The University provided or caused to be provided the Annual Filing that was required to be provided to the MSRB not later than \_\_\_\_\_, 20\_\_, to the MSRB on \_\_\_\_\_, 20\_\_.]

[2. The University has provided the attached statement concerning its failure to provide or cause to be provided the Annual Filing in accordance with the Agreement. The Trustee does not assume any responsibility for the accuracy or completeness of that statement and has not undertaken, and will not undertake, any investigation to determine its accuracy or completeness.]

Dated: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

cc:

**EXHIBIT D**

**STATE OF OHIO  
HIGHER EDUCATIONAL FACILITY REVENUE REFUNDING BONDS  
(CASE WESTERN RESERVE UNIVERSITY PROJECT)  
SERIES 2019A**

**DESIGNATION OF AUTHORIZED DISCLOSURE REPRESENTATIVE**

To: The Bank of New York Mellon Trust Company, N.A., as Trustee

The undersigned hereby designates, pursuant to the Continuing Disclosure Agreement between Case Western Reserve University and The Bank of New York Mellon Trust Company, N.A., dated as of March 1, 2019, the individuals listed below as Authorized Disclosure Representative and Alternate[s], respectively, and certifies that the signatures opposite the name of each individual is the true signature of that individual.

Authorized Disclosure Representative

Signature

\_\_\_\_\_

Name and Title

\_\_\_\_\_

Alternate

\_\_\_\_\_

Name and Title

\_\_\_\_\_

Alternate

\_\_\_\_\_

Name and Title

\_\_\_\_\_

Dated: \_\_\_\_\_

By: \_\_\_\_\_

Title:





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