NEW ISSUE – Book-Entry-Only

Ratings: Moody's: Aaa
S&P: AAA
(See "RATINGS" herein)

In the opinion of Hinckley, Allen & Snyder LLP, Bond Counsel, based upon an analysis of existing law and assuming, among other matters, compliance with certain covenants, interest on the Bonds is excluded from gross income for federal income tax purposes under the Internal Revenue Code of 1986, as amended (the "Code"). Interest on the Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. Under existing law, interest on the Bonds and any profit on the sale of the Bonds are exempt from Massachusetts personal income taxes and the Bonds are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the accrual or receipt of interest on, the Bonds. See "TAX EXEMPTION" herein.

$346,680,000
MASSACHUSETTS DEVELOPMENT FINANCE AGENCY
Revenue Bonds
Harvard University Issue, Series 2020A

Dated: Date of Delivery **Due: as shown on the inside cover**

The Bonds (as defined herein) will be issued only as fully-registered bonds without coupons and, when issued, will be registered in the name of Cede & Co., as Bondowner and nominee for The Depository Trust Company, New York, New York ("DTC"). Purchases of the Bonds will be made in book-entry-only form. So long as Cede & Co. is the Bondowner, as nominee of DTC, references herein to the Bondowners or registered owners shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners of the Bonds. The Bonds will be issued in minimum denominations of $5,000 and whole multiples thereof. The Bank of New York Mellon Trust Company, N.A. will act as Trustee.

Principal and semiannual interest on the Bonds will be paid by the Trustee. So long as DTC or its nominee, Cede & Co., is the Bondowner, such payments will be made directly to such Bondowner, as more fully described herein. Interest on the Bonds will be payable on October 15, 2020, and semiannually thereafter on each April 15 and October 15 to the Bondowners of record as of the close of business on the first day of the month of such interest payment date.

The Bonds are not subject to redemption prior to maturity as set forth in this Official Statement. See "THE BONDS—Redemption" herein.

The Bonds shall be special obligations of the Massachusetts Development Finance Agency (the "Issuer") payable solely from the Revenues of the Issuer paid to the Trustee for the account of the Issuer by President and Fellows of Harvard College (the "Institution") in accordance with the provisions of the Loan and Trust Agreement, dated as of April 1, 2020 (the "Agreement"), among the Issuer, the Institution and the Trustee. The payments pursuant to the Agreement are a general obligation of the Institution.

THE BONDS DO NOT CONSTITUTE A GENERAL OBLIGATION OF THE ISSUER OR A DEBT OR PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF MASSACHUSETTS OR ANY POLITICAL SUBDIVISION THEREOF. THE PRINCIPAL AND REDEMPTION PRICE OF AND INTEREST ON THE BONDS ARE PAYABLE SOLELY FROM THE REVENUES AND FUNDS PLEDGED FOR THEIR PAYMENT UNDER THE AGREEMENT. THE ISSUER HAS NO TAXING POWER UNDER THE ACT.

The Bonds are offered when, as and if issued and received by the Underwriters, subject to prior sale, to withdrawal or modification of the offer without notice, and to the approval of their legality and certain other matters by Hinckley, Allen & Snyder LLP, Boston, Massachusetts, Bond Counsel to the Issuer. Certain legal matters will be passed upon for the Institution by its counsel, Ropes & Gray LLP, Boston, Massachusetts, and for the Underwriters by its counsel, Orrick, Herrington & Sutcliffe LLP, New York, New York. It is expected that the Bonds will be available in definitive form for delivery to DTC in New York, New York or its custodial agent on or about April 29, 2020.

Goldman Sachs & Co. LLC **J.P Morgan** **Wells Fargo Securities**
Barclays **BofA Securities** **Citigroup** **Morgan Stanley** **TD Securities**

Dated: April 14, 2020

$346,680,000
MASSACHUSETTS DEVELOPMENT FINANCE AGENCY
Revenue Bonds
Harvard University Issue, Series 2020A

Due October 15,	Amount	Interest Rate	Yield	CUSIP Number*
2025	$57,780,000	5.000%	0.890%	57584YZJ1
2026	57,780,000	5.000	0.920	57584YZK8
2027	57,780,000	5.000	0.950	57584YZL6
2028	57,780,000	5.000	1.000	57584YZM4
2029	57,780,000	5.000	1.060	57584YZN2
2030	57,780,000	5.000	1.130	57584YZP7

* CUSIP® is a registered trademark of the American Bankers Association. CUSIP Global Services ("CGS") is managed on behalf of the American Bankers Association by S&P Capital IQ. Copyright© 2020 CUSIP Global Services. All rights reserved. CUSIP® data herein is provided by CUSIP Global Services. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. The CUSIP® numbers listed above are being provided solely for the convenience of Bondowners only at the time of issuance of the Bonds, and no representation is made with respect to the correctness thereof. The CUSIP® number for a specific maturity is subject to being changed after the issuance of the Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity. None of the Instituion, the Underwriter or the Trustee has agreed to, nor is there any duty or obligation to, update this Official Statement to reflect any change or correction in the CUSIP® numbers printed above.

IN CONNECTION WITH THE OFFERING OF THE BONDS, THE UNDERWRITERS MAY OVER ALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICE OF THE BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME. THE UNDERWRITERS MAY OFFER AND SELL THE BONDS TO CERTAIN DEALERS (INCLUDING DEALERS DEPOSITING BONDS INTO INVESTMENT TRUSTS) AND DEALER BANKS AND OTHERS AT PRICES LOWER THAN THE PUBLIC OFFERING PRICE STATED ON THE COVER PAGE HEREOF AND SAID OFFERING PRICES MAY BE CHANGED FROM TIME TO TIME BY THE UNDERWRITERS.

No dealer, broker, salesperson or other person has been authorized by the Issuer, the Institution or the Underwriters to give any information or to make any representations with respect to the Bonds, other than those contained in this Official Statement and the Appendices hereto, and if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, and there shall not be any sale of the Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The Issuer neither has nor assumes any responsibility as to the accuracy or completeness of the information contained in this Official Statement, other than that appearing under the captions “THE ISSUER” and “LEGAL MATTERS” (but only insofar as it relates to the Issuer). The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the matters described herein since the date hereof.

Certain information contained herein has been obtained from the Institution, The Depository Trust Company, and other sources which 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 Issuer or the Underwriters. The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibility 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. The information herein relating to the Institution and its affairs and condition has been provided by such entity, and none of the Issuer or the Underwriters make any representation with respect to or warrants the accuracy of such information. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Official Statement 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 since the date hereof.

The Institution has agreed to enter into a Continuing Disclosure Agreement pursuant to which the Institution will provide certain continuing disclosure to the extent required by law. The purpose of the Continuing Disclosure Agreement is to assist the Underwriters in complying with Rule 15c2-12, as amended, of the Securities and Exchange Commission. See “CONTINUING DISCLOSURE” herein.

This Official Statement is submitted in connection with the sale of securities referred to herein and may not be used, in whole or in part, for any other purpose. The information and expression of opinions set forth herein are subject to change without notice and neither the delivery of this Official Statement 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 since the date hereof. The order and placement of materials in this Official Statement, including the Appendices, are not deemed to be a determination of relevance, materiality or importance, and this Official Statement, including the Appendices, must be considered in its entirety.

UPON ISSUANCE, THE BONDS WILL NOT BE REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR UNDER ANY STATE SECURITIES LAW, AND THE AGREEMENT HAS NOT BEEN QUALIFIED UNDER THE TRUST INDENTURE ACT OF 1939, AS AMENDED, IN RELIANCE UPON THE EXEMPTIONS CONTAINED IN SUCH ACTS. THE BONDS WILL NOT BE LISTED ON ANY STOCK OR OTHER SECURITIES EXCHANGE AND NEITHER THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION NOR ANY OTHER FEDERAL, STATE OR GOVERNMENTAL ENTITY OR AGENCY WILL HAVE PASSED UPON THE ACCURACY OR ADEQUACY HEREOF. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

This Official Statement, including Appendix A, contains statements which should be considered "forward-looking statements," meaning they refer to possible future events or conditions. Such statements are generally identifiable by the words such as "plan," "expect," "estimate," "budget" or similar words. The achievement of certain results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements described to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Neither the Issuer nor the Institution expect or intend to issue any updates or revisions to those forward-looking statements if or when its expectations, or events, conditions or circumstances on which such statements are based occur.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for the purposes of Rule 15c2-12 by the Securities and Exchange Commission under the Securities Exchange Act of 1934.

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OFFICIAL STATEMENT
Relating to

$346,680,000
MASSACHUSETTS DEVELOPMENT FINANCE AGENCY
Revenue Bonds
Harvard University Issue, Series 2020A

INTRODUCTION

Purpose of this Official Statement

This Official Statement, including the cover page, and appendices hereto, sets forth certain information in connection with the issuance and sale of the Massachusetts Development Finance Agency (the "Issuer") Revenue Bonds, Harvard University Issue, Series 2020A (the "Bonds"). The Issuer is a body corporate and politic and a public instrumentality of The Commonwealth of Massachusetts (the "Commonwealth") and is authorized under Chapter 23G and, to the extent incorporated therein, Chapter 40D of the Massachusetts General Laws (said Chapters, collectively and as amended, the "Act"), and pursuant to a resolution of the Issuer adopted on April 9, 2020, to issue the Bonds. The Bonds will be issued under a Loan and Trust Agreement, dated as of April 1, 2020 (the "Agreement") by and among the Issuer, President and Fellows of Harvard College (the "Institution") and The Bank of New York Mellon Trust Company, N.A., as Trustee (the "Trustee"). The information contained in this Official Statement is provided for use in connection with the initial sale of the Bonds. The definitions of certain terms used and not defined herein are contained in Appendix C – "DEFINITIONS OF CERTAIN TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE AGREEMENT."

Plan of Financing

It is anticiapted that the proceeds of the Bonds will be applied to refinance certain outstanding commerical paper obligations of the Institution, refinance certain bonds previously issued for the benefit of the Institution and pay the costs of issuance of the Bonds. See "PLAN OF FINANCING" and "ESTIMATED SOURCES AND USES" herein.

The Institution expects that concurrently with the issuance of the Bonds, the Institution will issue $500,000,000 principal amount of its Taxable Bonds, Series 2020B (the "Series 2020B Bonds"), for general corporate purposes of the Institution and to pay costs of issuance of the Series 2020B Bonds. If issued, the Series 2020B Bonds will be an unsecured general obligation of the Institution and will be offered pursuant to a separate offering memorandum. The issuance of the Bonds is not contingent on the issuance of the Series 2020B Bonds, and the issuance of the Series 2020B Bonds is not contingent on the issuance of the Bonds.

SOURCES OF PAYMENT AND SECURITY FOR THE BONDS

The Issuer, the Institution and the Trustee shall execute the Agreement, which provides that, to the extent permitted by law, the obligation of the Institution to make the payments thereunder is a general obligation of the Institution and that the full faith and credit of the Institution are pledged to its performance. The Agreement also provides, among other things, that the Institution shall make payments to the Trustee equal to principal and interest on the Bonds and certain other payments required by the Agreement. The Agreement shall remain in full force and effect until such time as all of the Bonds and the interest thereon have been fully paid or until adequate provision for such payments has been made. The obligation of the Institution to make payments under the Agreement is unsecured.

The Bonds are special obligations of the Issuer, equally and ratably secured by and payable from a pledge of and lien on, to the extent provided by the Agreement, the moneys received with respect to the Bonds by the Trustee for the account of the Issuer pursuant to the Agreement.

Under the Agreement, the Issuer assigns and pledges to the Trustee in trust upon the terms of the Agreement (i) all Revenues to be received from the Institution or derived from any security provided thereunder, (ii) all rights to receive such Revenues and the proceeds of such rights, (iii) all funds and investments held from time to time in the funds established under the Agreement and (iv) all of its right, title and interest in the Agreement, including enforcement rights and remedies but excluding certain rights of indemnification and to reimbursement of certain expenses as set forth in the Agreement. Under the Act, to the extent authorized or permitted by law, the pledge of Revenues is valid and binding from the time when such pledge is made and the Revenues and all income and receipts earned on funds held by the Trustee for the account of the Issuer shall immediately be subject to the lien of such pledge without any physical delivery thereof or further act, and the lien of such pledge shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Issuer irrespective of whether such parties have notice thereof.

The assignment and pledge by the Issuer does not include (i) the rights of the Issuer pursuant to provisions of the Agreement for consent, concurrence, approval or other action by the Issuer, notice to the Issuer, or the filing of reports, certificates or other documents with the Issuer, (ii) the right of the Issuer to any payment or reimbursement pursuant to the Agreement or (iii) the powers of the Issuer as stated in the Agreement to enforce the rights set forth in subclauses (i) and (ii) of this sentence.

As additional security for its payment obligations under the Agreement, the Institution, pursuant to the Agreement, grants to the Trustee a security interest in the moneys and other investments and any proceeds thereof held in the funds established under the Agreement.

The Institution's payment obligations under the Agreement constitute unsecured general obligations of the Institution. Such payment obligations are not secured by a reserve fund, mortgage lien or security interest on or in any funds or other assets of the Institution. The Institution is not required to pay to the Trustee amounts necessary to pay the principal of and interest on the Bonds until the opening of business on the Business Day next preceding the date on which such payment is due; therefore, the funds held from time to time by the Trustee for the benefit of Bondowners under the Agreement are expected to be minimal.

The Institution has other unsecured general obligations outstanding. As of June 30, 2019, the Institution had approximately $4.82 billion principal amount of indebtedness outstanding, including long-term debt and commercial paper. Subsequent to June 30, 2019, the Institution paid down approximately $118.4 million principal amount of long-term debt and drew down an additional $100.1 million of commercial paper, leaving approximately $4.81 billion principal amount outstanding. Upon delivery of the Bonds and the Series 2020B Bonds, and excluding the commercial paper to be defeased with the proceeds of the Bonds, the total outstanding principal amount of indebtedness is expected to be approximately $5.22 billion. See, "PLAN OF FINANCING" herein.

The Institution is not restricted by the Agreement or otherwise from incurring additional indebtedness. Such additional indebtedness, if issued, may be either secured or unsecured and may be entitled to payment prior to the Institution's payment obligations under the Agreement. The Agreement also does not contain any financial covenants limiting the ability of the Institution to encumber or dispose of its property or merge with any other entity, or any covenants. Further, the Institution is not required by the Agreement to produce revenues at any specified level or to obtain any insurance with respect to its property or operations.

Acceleration

The Trustee may declare all of the Bonds immediately due and payable prior to maturity at par, plus accrued interest, upon an Event of Default under the Agreement. See Appendix C – "DEFINITIONS OF CERTAIN TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE AGREEMENT – Events of Default."

THE BONDS DO NOT CONSTITUTE A GENERAL OBLIGATION OF THE ISSUER OR A DEBT OR PLEDGE OF THE FAITH AND CREDIT OF THE ISSUER OR A DEBT OR PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF MASSACHUSETTS OR ANY POLITICAL SUBDIVISION THEREOF. THE PRINCIPAL OR REDEMPTION PRICE OF AND INTEREST ON THE BONDS ARE PAYABLE SOLELY FROM THE REVENUES AND FUNDS PLEDGED FOR THEIR PAYMENT UNDER THE AGREEMENT. THE ISSUER HAS NO TAXING POWER UNDER THE ACT.

THE ISSUER

The Issuer is authorized and empowered under the laws of the Commonwealth, including the Act, to issue the Bonds for the purposes described herein and to enter into the Agreement and other agreements and instruments necessary to issue and secure the Bonds.

The Members of the Board of Directors and the officers of the Issuer authorized to sign documents related to bond transactions are as follows:

Members of the Board of Directors

Ex-Officio Members

Chairperson, Secretary of the Executive Office of Housing & Economic Development, The Commonwealth of Massachusetts

Secretary, the Executive Office for Administration & Finance, The Commonwealth of Massachusetts, or the Secretary's designee

Appointed Members

James W. Blake, President & CEO, HarborOne Bank

James E. Chisholm, Division President, Waypoint Commercial Solutions / Advantage Waypoint LLC

Karen Grasso Courtney, President, K. Courtney and Associates, Inc. and Executive Director, The Foundation for Fair Contracting of Massachusetts

Brian Kavoogian, Managing Partner, National Development

Francesca M. Maltese, Retired land developer

Juan Carlos Morales, Founder and Managing Director, Surfside Capital Advisors

Kristina M. Spillane, Global Enterprise Relationship Executive, DST Systems, Inc.

Christopher P. Vincze, Chairman and CEO, TRC Solutions, Inc.

Ellen M. Zane, CEO Emeritus, Tufts Medical Center

There are no vacancies on the Board of Directors.

Officers of the Issuer Authorized to Sign Bond Documents:

Lauren A. Liss, Executive Director/President and Chief Executive Officer

Robert M. Ruzzo, Senior Executive Vice President, Executive Vice President for Operations, Deputy Director and Chief Operating Officer

Ricks P. Frazier, General Counsel and Secretary

Simon R. Gerlin, Treasurer, Chief Financial Officer and Executive Vice President for Finance & Administration

Laura L. Canter, Executive Vice President of Finance Programs

Steven J. Chilton, Senior Vice President, Investment Banking

Except for the information contained herein under the captions "THE ISSUER" and "LEGAL MATTERS" insofar as it relates to the Issuer, the Issuer has not provided any of the information contained in this Official Statement. The Issuer is not responsible for and does not certify as to the accuracy or sufficiency of the disclosures made herein or any other information provided by the Institution, the Underwriters or any other person.

THE ISSUER MAKES NO REPRESENTATION THAT INTEREST ON THE BONDS IS EXCLUDED FROM THE GROSS INCOME OF THE OWNERS THEREOF FOR FEDERAL INCOME TAX PURPOSES OR THAT INTEREST ON THE BONDS IS EXEMPT FROM MASSACHUSETTS INCOME TAX.

THE BONDS

Description of the Bonds

The Bonds will be issued in the aggregate principal amount set forth on the cover page hereof, will be dated the date of original issuance and will bear interest from such date, payable on October 15, 2020 and each April 15 and October 15 thereafter at the respective rates set forth on the cover page hereof and will mature as set forth on the cover page hereof. Interest on the Bonds will be calculated on the basis of twelve 30-day months for a 360-day year.

Subject to the provisions discussed under "—Book-Entry-Only System" below, the Bonds are issuable as fully-registered bonds without coupons in the minimum denomination of $5,000 or any multiple thereof. Principal and redemption price of the Bonds will be payable at the principal corporate trust office of the Trustee, and interest on the Bonds will be paid by check or draft mailed to the registered owner as of the first (1st) day of the month in which interest is to be paid for the Bonds (the "Record Date") or by wire transfer as provided in the Agreement.

Redemption

The Bonds are not subject to redemption prior to maturity.

Book-Entry-Only System

DTC will act as the securities depository for the Bonds. The Bonds will be issued as fully-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 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," and together with Direct Participants, "Participants"). 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.

Purchases of the 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 the 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 the 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 will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to DTC. If less than all of the Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity of Bonds to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 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 Issuer 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).

Payments of principal and redemption price of and interest 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 Issuer or the Trustee, on the 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 Underwriters, the Trustee, the Institution or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal or redemption price of, and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer 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 securities depository with respect to the Bonds at any time by giving reasonable notice to the Issuer or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, such Bond certificates are required to be printed and delivered. The Issuer may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, the Bond certificates will be printed and delivered to DTC. See "Certificated Bonds" below.

The information herein concerning DTC and DTC's book-entry system has been obtained from sources that the Issuer, the Institution and the Underwriters believe to be reliable, but the Issuer, the Institution and the Underwriters take no responsibility for the accuracy thereof.

Each person for whom a Participant acquires an interest in the Bonds, as nominee, may desire to make arrangements with such Participant to receive a credit balance in the records of such Participant, and may desire to make arrangements with such Participant to have all notices of redemption or other communications to DTC, which may affect such persons, to be forwarded in writing by such Participant and to have notification made of all interest payments. NONE OF THE ISSUER, THE INSTITUTION, THE UNDERWRITERS OR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO SUCH PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE BONDS.

So long as Cede & Co. is the registered owner of the Bonds, as nominee for DTC, references herein to Bondowners or registered owners of the Bonds (other than under the heading "TAX EXEMPTION" herein) shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners of the Bonds.

When reference is made to any action which is required or permitted to be taken by the Beneficial Owners, such reference shall only relate to those permitted to act (by statute, regulation or otherwise) on behalf of such Beneficial Owners for such purposes. When notices are given, they shall be sent by the Trustee to DTC only.

For every transfer and exchange of Bonds, the Beneficial Owner may be charged a sum sufficient to cover any tax, fee or other governmental charge that may be imposed in relation thereto.

The Issuer, in its sole discretion and without the consent of any other person, may terminate the services of DTC with respect to the Bonds if the Issuer determines that (i) DTC is unable to discharge its responsibilities with respect to the Bonds, or (ii) a continuation of the requirement that all of the Outstanding Bonds be registered in the registration books kept by the Trustee in the name of Cede & Co., as nominee of DTC, is not in the best interests of the Beneficial Owners. In the event that no substitute securities depository is found by the Issuer or restricted registration is no longer in effect, Bond certificates will be delivered.

NONE OF THE ISSUER, THE INSTITUTION OR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DIRECT PARTICIPANTS, TO INDIRECT PARTICIPANTS, OR TO ANY BENEFICIAL OWNER WITH RESPECT TO (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY DIRECT PARTICIPANT, OR ANY INDIRECT PARTICIPANT; (II) ANY NOTICE THAT IS PERMITTED OR REQUIRED TO BE GIVEN TO THE OWNERS OF THE BONDS UNDER THE AGREEMENT; (III) THE SELECTION BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY PERSON TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL REDEMPTION OF THE BONDS; (IV) THE PAYMENT BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OR REDEMPTION PRICE OF OR INTEREST DUE WITH RESPECT TO THE BONDS; (V) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS THE OWNER OF THE BONDS; OR (VI) ANY OTHER MATTER.

Certificated Bonds

DTC may discontinue providing its services as securities depository with respect to the Bonds at any time by giving reasonable notice to the Issuer or the Trustee. In addition, the Issuer may determine that continuation of the system of book-entry transfers through DTC (or a successor securities depository) is not in the best interests of the Beneficial Owners. If for either reason the Book-Entry-Only system is discontinued, Bond certificates will be delivered as described in the Agreement and the Beneficial Owner, upon registration of certificates held in the Beneficial Owner's name, will become the Bondowner. Thereafter, the Bonds may be exchanged for an equal aggregate principal amount of the Bonds in other authorized denominations and of the same maturity, upon surrender thereof at the principal corporate trust office of the Trustee. The transfer of any Bond may be registered on the books maintained by the Trustee for such purpose only upon assignment in form satisfactory to the Trustee. For every exchange or registration of transfer of the Bonds, the Issuer and the Trustee may make a charge sufficient to reimburse them for any tax or other governmental charge required to be paid with respect to such exchange or registration of transfer, but no other charge may be made to the Bondowner for any exchange or registration of transfer of the Bonds. The Trustee will not be required to register the transfer of or exchange any Bond during the notice period preceding any redemption if such Bond (or any part thereof) is eligible to be selected or has been selected for redemption.

PLAN OF FINANCING

The proceeds of the Bonds are expected to be applied to (i) refinance approximately $450,000,000 of the Institution's outstanding commercial paper (the "Commercial Paper") and (ii) pay the costs of issuance of the Bonds.

The proceeds of the Series 2020B Bonds are expected to used for general corporate purposes of the Institution and to pay costs of issuance of the Series 2020B Bonds.

Simultaneously with the issuance and delivery of the Bonds, a portion of the proceeds thereof will be deposited in escrow with the Trustee, and will be used to purchase defeasance securities. It is anticipated that Causey Demgen & Moore P.C. will provide a verification report certifying as to the sufficiency of such Defeasance Securities to defease the Commercial Paper. Upon such defeasance, the Commercial Paper will be deemed to have been paid and will no longer be outstanding.

ESTIMATED SOURCES AND USES OF FUNDS

The table below sets forth the estimated sources and uses of funds (rounded to the nearest dollar) in connection with the issuance of the Bonds.

	Total
Sources of Funds:	
Principal Amount of Bonds	$346,680,000
Net Original Issue Premium	105,351,430
Equity Contribution	1,445,793
Total Sources	$453,477,223
Uses of Funds:	
Refinancing of Commerical Paper	$451,386,144
Costs of Issuance[(1)]	2,091,079
Total Uses	$453,477,223

(1) Includes the Underwriters' compensation and other costs of issuing the Bonds.

RATINGS

Moody's Investors Service, Inc. has assigned a rating of "Aaa" with a stable outlook to the Bonds and S&P Global Ratings has assigned a rating of "AAA" with a stable outlook to the Bonds. Such ratings reflect only the views of such organizations and any desired explanation of the significance of such ratings should be obtained only from the rating agency furnishing the same. Generally, a rating agency bases its rating on the information and materials furnished to it and investigations, studies and assumptions of its own. There is no assurance that such ratings will continue for any given period of time or that they will not be revised, either downward or upward, or withdrawn entirely by the rating agencies, if in the judgment of such rating agencies, circumstances so warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the market price of the Bonds.

UNDERWRITING

Goldman Sachs & Co. LLC, as representative of the underwriters named on the cover herof (collectively, the "Underwriters"), will agree to purchase the Bonds at an aggregate purchase price of $450,821,459.46 (representing the principal amount of the Bonds, plus an aggregate original issue premium of $105,351,429.60 and less an underwriting discount of $1,209,970.14), pursuant to a purchase contract. 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 price stated on the cover page hereof. The contract for the purchase of the Bonds by the Underwriters is subject to certain conditions and provides that the Underwriters will purchase all the Bonds if any are purchased and requires the Institution to make certain representations and to indemnify the Underwriters and the Issuer and certain other parties against losses, claims, damages or liabilities arising out of any incorrect statements or information, including any omission of material facts, contained in certain portions of this Official Statement described in the fifth paragraph under the heading "MISCELLANEOUS". The public offering prices set forth on the cover page hereof may be changed after the initial offering by the Underwriters.

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, each of CS&Co. and LPL may 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.

Wells Fargo Securities is the trade name for certain securities-related capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association, which conducts its municipal securities sales, trading and underwriting operations through the Wells Fargo Bank, NA Municipal Finance Group, a separately identifiable department of Wells Fargo Bank, National Association, registered with the Securities and Exchange Commission as a municipal securities dealer pursuant to Section 15B(a) of the Securities Exchange Act of 1934. Wells Fargo Bank, National Association, acting through its Municipal Finance Group ("WFBNA"), one of the Underwriters of the Bonds, has entered into an agreement (the "WFA Distribution Agreement") with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name "Wells Fargo Advisors") ("WFA"), for the distribution of certain municipal securities offerings, including the Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting compensation with respect to the Bonds with WFA. WFBNA has also entered into an agreement (the "WFSLLC Distribution Agreement") with its affiliate Wells Fargo Securities, LLC ("WFSLLC"), for the distribution of municipal securities offerings, including the Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC's expenses based on its municipal securities transactions. WFBNA, WFSLLC, and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.

BofA Securities, Inc., one of the Underwriters of the Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S"). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Bonds.

Citigroup Global Markets Inc., one of the Underwriters of the Bonds, has entered into a retail distribution agreement with Fidelity Capital Markets, a division of National Financial Services LLC (together with its affiliates, "Fidelity"). Under this distribution agreement, Citigroup Global Markets Inc. may distribute municipal securities to retail investors at the original issue price through Fidelity. As part of this arrangement, Citigroup Global Markets Inc. will compensate Fidelity for its selling efforts.

Morgan Stanley & Co. LLC, one of the Underwriters of the Bonds, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the Bonds.

TD Securities (USA) LLC ("TD Securities"), one of the Underwriters of the Bonds, has entered into a negotiated dealer agreement (the "TD Dealer Agreement") with TD Ameritrade for the retail distribution of certain securities offerings, including the Bonds at the original issue price. Pursuant to the TD Dealer Agreement, TD Ameritrade may purchase Bonds from the Underwriters at the original issue prices less a negotiated portion of the selling concession applicable to any of the Bonds TD Ameritrade sells.

The Underwriters and their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, investment management, principal investment, hedging, financing and brokerage activities. The Underwriters and their affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Issuer or the Institution, 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 and securities activities may involve securities and instruments of the Issuer or the Institution.

CONTINUING DISCLOSURE

No financial or operating data concerning the Issuer is material to any decision to purchase, hold or sell the Bonds and the Issuer will not provide any such information. The Institution has undertaken all responsibilities for any continuing disclosure to owners of the Bonds as described below, and the Issuer shall have no liability to the owners of the Bonds or any other person with respect to such disclosures

The Institution has covenanted for the benefit of holders and beneficial owners of the Bonds to provide certain financial information and operating data relating to the Institution (the "Annual Report") by not later than March 1 of each year and to provide notices of the occurrence of certain enumerated events, if material. The Annual Report and the notices of material events are to be filed by the Institution, or by the Trustee on behalf of the Institution, in electronic form with the Electronic Municipal Market Access system ("EMMA") maintained by the Municipal Securities Rulemaking Board (the "MSRB"). These covenants have been made in order to assist the Underwriters in complying with Securities and

Exchange Commission Rule 15c2-12(b)(5). On the date of delivery of the Bonds, the Institution and the Trustee will enter into the Continuing Disclosure Agreement substantially in the form attached hereto as Appendix E – "FORM OF CONTINUING DISCLOSURE AGREEMENT." The Institution has entered into previous continuing disclosure undertakings in connection with certain bonds issued by the Issuer or its predecessor issued for the benefit of the Institution. The Institution filed its annual reports for the fiscal years ended June 30, 2015 through June 30, 2019 on a timely basis under its existing continuing disclosure agreements with respect to all series other than the Issuer's Revenue Bonds, Harvard University Issue, Series 2010B.

TAX EXEMPTION

In the opinion of Hinckley, Allen & Snyder LLP, Bond Counsel to the Issuer ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings, and court decisions, and assuming, among other matters, compliance with certain covenants, 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"). Bond Counsel is of the further opinion that interest on the Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Bond Counsel expresses no opinion regarding any other federal tax consequences arising with respect to the ownership or disposition of, or the accrual or receipt of interest on, the Bonds.

The Code imposes various requirements relating to the exclusion from gross income for federal income tax purposes of interest on obligations such as the Bonds. Failure to comply with these requirements may result in interest on the Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Bonds. The Issuer and the Institution have covenanted to comply with such requirements to ensure that interest on the Bonds will not be included in federal gross income. The opinion of Bond Counsel assumes compliance with these covenants.

Bond Counsel is also of the opinion that, under existing law, interest on the Bonds and any profit on the sale of the Bonds are exempt from Massachusetts personal income taxes and that the Bonds are exempt from Massachusetts personal property taxes. Bond Counsel expresses no opinion regarding any other Massachusetts tax consequences arising with respect to the Bonds. Prospective Bondowners should be aware, however, that the Bonds are included in the measure of Massachusetts estate and inheritance taxes, and the Bonds and the interest thereon are included in the measure of certain Massachusetts corporate excise and franchise taxes. Bond Counsel has not opined as to the taxability of the Bonds or the income therefrom under the laws of any state other than Massachusetts. A complete copy of the proposed form of opinion of Bond Counsel with respect to the Bonds is set forth in Appendix D hereto.

To the extent the issue price of any maturity of the Bonds is less than the amount to be paid at maturity of such Bonds by at least the defined "de minimis" amount (excluding amounts stated to be interest and payable at least annually over the term of such Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each owner thereof, is treated as interest on the Bonds which is excluded from gross income for federal income tax purposes and is exempt from Massachusetts personal income taxes. For this purpose, in general, the issue price of a particular maturity of the Bonds may be established by reference to the first price at which a substantial amount of such maturity of the Bonds is sold to the public. The original issue discount with respect to any maturity of the Bonds accrues daily over the term to maturity of such Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such Bonds. Bondowners should consult their own tax advisors with respect to the tax consequences of ownership of Bonds with original issue discount, including the treatment of purchasers who do not purchase such Bonds in the original offering to the public at the issue price established therefor.

Bonds purchased, whether at original issuance or otherwise, for an amount greater than the stated principal amount to be paid at maturity of such Bonds, or, in some cases, at the earlier redemption date of such Bonds ("Premium Bonds"), will be treated as having amortizable bond premium for federal income tax purposes and Massachusetts personal income tax purposes. No deduction is allowable for the amortizable bond premium in the case of obligations, such as the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, a Bondowner's basis in a Premium Bond will be reduced by the amount of amortizable bond premium properly allocable to such Bondowner. Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

Prospective Bondowners should be aware that certain requirements and procedures contained or referred to in the Agreement and other relevant documents may be changed and certain actions (including, without limitation, defeasance of the Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring) after the date of issuance of the Bonds may adversely affect the value of, or the tax status of interest on, the Bonds.

On December 22, 2017, H.R. 1 (Public Law 115-97), commonly referred to as the Tax Cuts and Jobs Act (the "2017 Tax Act"), was enacted into law. The 2017 Tax Act does not adversely affect the exclusion from gross income of interest on the Bonds. Among other things, however, Section 13532 of the 2017 Tax Act amends Section 149(d)(1) of the Code to provide that nothing in federal law shall be construed to provide an exemption from federal income tax for any bond issued after December 31, 2017 to advance refund another bond. The 2017 Tax Act also contains provisions lowering the income tax rates applicable to many corporations and individuals and repealing the alternative minimum tax on corporations for their tax years beginning after December 31, 2017.

Prospective Bondowners should be aware that from time to time legislation, apart from the 2017 Tax Act, is or may be proposed which, if enacted into law, could result in interest on the Bonds being subject directly or indirectly to federal income taxation, or otherwise prevent Bondowners from realizing the full benefit provided under current federal tax law of the exclusion of interest on the Bonds from gross income. To date, no such legislation has been enacted into law. However, it is not possible to predict whether any such legislation will be enacted into law. Further, no assurance can be given that any pending or future legislation, including amendments to the Code, if enacted into law, or any proposed legislation, including amendments to the Code, or any future judicial, regulatory or administrative interpretation or development with respect to existing law, will not adversely affect the market value and marketability of, or the tax status of interest on, the Bonds. Prospective Bondowners are urged to consult their own tax advisors with respect to any such legislation, interpretation or development.

Although Bond Counsel is of the opinion that interest on the Bonds is excluded from gross income for federal income tax purposes and is exempt from Massachusetts personal income taxes, the ownership or disposition of, or the accrual or receipt of interest on, the Bonds may otherwise affect a Bondowner's federal or state tax liability. The nature and extent of these other tax consequences will depend upon the particular tax status of the Bondowner or the Bondowner's other items of income, deduction or exclusion. Bond Counsel expresses no opinion regarding any such other tax consequences, and Bondowners should consult with their own tax advisors with respect to such consequences.

LEGALITY OF BONDS FOR INVESTMENT AND DEPOSIT

The Act provides that the Bonds are securities in which all public officers and public bodies of the Commonwealth and its political subdivisions, all Massachusetts insurance companies, trust companies, savings banks, co-operative banks, banking associations, investment companies, executors, administrators, trustees and other fiduciaries may properly and legally invest funds, including capital in their control or belonging to them. Under the Act, the Bonds are securities which may properly and legally be deposited with and received by any Commonwealth or municipal officer of any agency or political subdivision of the Commonwealth for any purpose for which the deposit of bonds or obligations of the Commonwealth is now or may hereafter be authorized by law.

COMMONWEALTH NOT LIABLE ON BONDS

The Bonds are not a general obligation of the Issuer and shall not be deemed to constitute a debt or liability of the Commonwealth or any political subdivision thereof, or a pledge of the faith and credit of the Issuer or the Commonwealth or any such political subdivision, but shall be payable solely from and to the extent of the payments made by the Institution pursuant to the Agreement and any other funds held under the Agreement for such purpose. Neither the faith and credit of the Issuer or the Commonwealth nor the taxing power of the Commonwealth or any political subdivision thereof is pledged to the payment of the principal of or interest on the Bonds. The Act does not in any way create a so-called moral obligation of the Commonwealth or of any political subdivision thereof to pay debt service in the event of default by the Institution. The Issuer has no taxing power under the Act.

LEGAL MATTERS

All legal matters incidental to the authorization and issuance of the Bonds by the Issuer are subject to the approval of Hinckley, Allen & Snyder LLP, Boston, Massachusetts, Bond Counsel, whose opinion approving the validity and tax exempt status of the Bonds will be delivered with the Bonds. A copy of the proposed form of such opinion is attached hereto as Appendix D – "PROPOSED FORM OF BOND COUNSEL OPINION." Certain legal matters will be passed on for the Institution by its counsel, Ropes & Gray LLP, Boston, Massachusetts, and for the Underwriters by its counsel, Orrick, Herrington & Sutcliffe LLP, New York, New York.

There is no litigation pending against the Issuer or, to the knowledge of the officers of the Issuer, threatened against the Issuer seeking to restrain or enjoin the issuance or delivery of the Bonds or in any way contesting the existence or the powers of the Issuer relating to the issuance of the Bonds. See Appendix A with respect to the absence of material litigation affecting the Institution.

VERIFICATION OF MATHEMATICAL COMPUTATIONS

Causey Demgen & Moore, P.C. will deliver to the Institution, on or before the settlement date of the Bonds, its verification report indicating that it has verified, in accordance with attestation standards established by the American Institute of Certified Public Accountants, the mathematical accuracy of the mathematical computations of the adequacy of the cash and the maturing principal of and interest on the obligations purchased, to pay, when due, the Commercial Paper, as described in the "PLAN OF FINANCING" herein.

The verification performed by Causey Demgen & Moore, P.C. will be solely based upon data, information and documents provided to Causey Demgen & Moore, P.C. by the Institution, the Underwriters and their representatives. Causey Demgen & Moore, P.C. has restricted its procedures to recalculating the computations provided by the Institution and its representatives and has not evaluated or examined the assumptions or information used in the computations.

INDEPENDENT ACCOUNTANTS

The financial statements of the Institution as of and for the fiscal year ended June 30, 2019, included in Appendix B to this Official Statement, have been audited by PricewaterhouseCoopers LLP, independent accountants, as stated in their report appearing in Appendix B hereto.

MISCELLANEOUS

The references to the Act and the Agreement are brief summaries of certain provisions thereof. Such summaries do not purport to be complete, and reference is made to the Act and the Agreement for full and complete statements of such provisions. The agreements of the Issuer with the Bondowners are fully set forth in the Agreement, and neither any advertisement of the Bonds nor this Official Statement is to be construed as constituting an agreement with the Bondowners. So far as any statements are made in this Official Statement involving matters of opinion, whether or not expressly so stated, they are intended merely as such and not as representations of fact. Copies of the documents mentioned in this paragraph are on file at the offices of the Issuer and the Trustee.

Appendix A to this Official Statement sets forth certain operating and financial information of the Institution. Appendix B to this Official Statement sets forth the "Harvard University Financial Report Fiscal Year 2019," which includes the audited financial statements of the Institution for the fiscal year ended June 30, 2019. While the information contained in such Report is believed to be reliable, neither the Issuer nor the Underwriters make any representations or warranties whatsoever with respect to such information.

Appendix C – "DEFINITIONS OF CERTAIN TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE AGREEMENT" and Appendix D – "PROPOSED FORM OF BOND COUNSEL OPINION," attached hereto, have been prepared by Hinckley, Allen & Snyder LLP, Bond Counsel to the Issuer.

All appendices hereto are incorporated herein as an integral part of this Official Statement.

The Institution has reviewed the portions of this Official Statement describing the Institution, "ESTIMATED SOURCES AND USES OF FUNDS," "PLAN OF FINANCING" and the second paragraph under the heading "CONTINUING DISCLOSURE," has furnished Appendix A and Appendix B to this Official Statement, and has approved all such information for use with this Official Statement. At the closing, the Institution will certify that such portions of this Official Statement do not contain an untrue statement of a material fact or omit a statement of material fact necessary to make the statements made therein, in the light of the circumstances under which they are made, not misleading.

The Issuer has consented to the use of this Official Statement. The Issuer is responsible only for the statements contained under the caption "THE ISSUER" and the information pertaining to the Issuer under the caption "LEGAL MATTERS," and the Issuer makes no representation as to the accuracy, completeness or sufficiency of any other information contained herein. Except as otherwise stated herein, neither the Issuer nor the Underwriters make any representations or warranties whatsoever with respect to the information contained herein.

APPENDIX A

CERTAIN INFORMATION CONCERNING THE INSTITUTION

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April 14, 2020

H A R V A R D   U N I V E R S I T Y

MASSACHUSETTS HALL
CAMBRIDGE, MASSACHUSETTS 02138

The following is information with respect to President and Fellows of Harvard College ("Harvard" or the "University").

The University

Harvard is one of the nation's oldest and most prestigious institutions of higher education, dedicated to teaching and research to push the boundaries of human knowledge. Harvard is an educational corporation incorporated in 1650 by act of the Colony of Massachusetts Bay confirmed, as amended, in the Constitution of 1780 of The Commonwealth of Massachusetts. It is exempt from federal income tax pursuant to Section 501(c)(3) of the Internal Revenue Code. Its principal sites are in Cambridge, Massachusetts and the Allston and Longwood areas of Boston, Massachusetts. The University consists of Harvard College, eleven graduate schools and several research institutes and museums.

By charter, Harvard has two governing boards – President and Fellows (also known as the "Corporation") and the Board of Overseers (the "Board"). The Corporation consists of the President and Treasurer, along with eleven Fellows. Members of the Corporation (including the President and Treasurer) are elected by the Corporation, subject to the counsel and consent of the Board. The Corporation oversees the management of the financial affairs of the University without need of consent by the Board to specific transactions. The members of the Corporation are:

Name	Title
Lawrence S. Bacow	President and Professor of Public Policy, Harvard University
Paul J. Finnegan	Treasurer, Harvard University Co-CEO, Madison Dearborn Partners
Timothy R. Barakett	Chairman, TRB Advisors
Kenneth I. Chenault	Chairman and Managing Director, General Catalyst
Mariano-Florentino Cuéllar	Justice, Supreme Court of California
William F. Lee	Partner, Wilmer Cutler Pickering Hale and Dorr LLP
Biddy Martin	President and Professor of German and Sexuality, Women's and Gender Studies, Amherst College
Karen Gordon Mills	Senior Fellow, Harvard Business School Former Administrator, U.S. Small Business Administration President, MMP Group
Penny Pritzker	Founder and Chairman, PSP Partners
David M. Rubenstein	Co-Founder and Co-Executive Chairman, The Carlyle Group
Shirley M. Tilghman	President Emerita, Princeton University Professor of Molecular Biology and Public Affairs, Princeton University
Theodore V. Wells, Jr.	Partner, Paul, Weiss, Rifkind, Wharton & Garrison LLP

The Board consists of the President and the Treasurer *ex-officiis* and 30 persons elected by the alumni of the University for six-year staggered terms. A member of the Board may serve more than one term. The consent of the Board is required for certain acts of the Corporation, including the election of successors to Fellows, certain academic and administrative appointments (including the President and the Treasurer) and the awarding of degrees. The Board also reviews the academic performance of the University through more than 50 visiting committees composed of both Board members and others.

Administration

The academic affairs of the University are managed by the President, the Provost and the deans of the University's faculties. The non-academic affairs of the University are managed by the President, the Treasurer, the Executive Vice President and nine Vice Presidents. The principal administrative officers of the University are as follows:

Name	Title
Lawrence S. Bacow	President
Alan M. Garber	Provost
Paul J. Finnegan	Treasurer
Katherine N. Lapp	Executive Vice President
Paul Andrew	Vice President for Public Affairs and Communications
Marc Goodheart	Vice President and Secretary of the University
Marilyn Hausammann	Vice President for Human Resources
Thomas J. Hollister	Vice President for Finance and Chief Financial Officer
Diane Lopez	Vice President and General Counsel
Anne H. Margulies	Vice President and Chief Information Officer
Brian K. Lee	Vice President for Alumni Affairs and Development
Martha Whitehead	Vice President for the Harvard Library
Meredith Weenick	Vice President for Campus Services

Harvard Management Company

Harvard Management Company, Inc. ("HMC"), a wholly owned subsidiary of Harvard University founded in 1974, has delegated authority to manage the General Investment Account and substantially all of the financial assets of the University pursuant to an Investment Advisory Agreement. Led by CEO, N. P. "Narv" Narvekar, HMC's mission is to help ensure that Harvard University has financial resources to maintain and expand its teaching, learning, and research activities.

HMC is governed by a Board of Directors, which includes the President, Treasurer, and Chief Financial Officer of the University, and the President of HMC. Information on other members of HMC's management team, as of the date hereof, is available at: https://www.hmc.harvard.edu/about.

HMC's approach to endowment management employs a mix of internal and external management teams that focus on specific investment areas. This "hybrid model" of investing provides depth and breadth to HMC's market perspectives.

Allston Development

On October 17, 2013, the Boston Redevelopment Authority unanimously approved Harvard's Institutional Master Plan ("IMP"), a ten-year development plan for the extension of its campus in Allston. The IMP outlines seven new building projects and two major renovations on the Allston campus, which the University anticipates will eventually encompass a total of 1.4 million square-foot new construction and 500,000 square-foot renovation spaces for facilities such as new academic and faculty buildings, an addition/renovation to Harvard Stadium, and a hotel and conference center. The IMP also features a description of the future development of an Enterprise Research Campus ("ERC") on the former CSX rail yards. This 36-acre tract, often referred to as Allston Landing North, is intended to attract private and non-profit entities to interact with faculty and students of the University and other area institutions. Work on each of these projects is progressing. In November 2018, Harvard formed a wholly owned subsidiary, the Harvard Allston Land Company ("HALC"), to oversee development of the ERC and, in December 2019, HALC designated a preferred developer for the initial phase of the ERC.

Outside of the regulatory scope of the IMP, other projects are also in process. Among them is the Science and Engineering Complex, future home of the Harvard John A. Paulson School of Engineering and Applied Sciences. This project was unanimously approved in April 2016 by the Boston Redevelopment Authority, and construction is nearly complete. The complex is scheduled to open in 2020. The University also engaged a third-party real estate partner, Samuels and Associates, to develop Barry's Corner at the intersection of Western Avenue and North Harvard Street. Work there includes Continuum, a mixed-use residential and retail project that includes 325 rental apartments, shops and street side restaurants. Continuum opened its doors to residents in August 2015.

When the IMP projects are combined with previously permitted projects such as Continuum and the Science and Engineering Complex, the University's plans in Allston over the next decade are expected to include more than 2.5 million square feet of development and renovation. Throughout this time, the University expects to continue to focus on property improvements, property leasing, and community engagement with respect to its Allston development projects.

Student Applications and Enrollment

The University receives applications substantially in excess of the number of students it can accept into its undergraduate and graduate programs. The following table shows applications received and the number of freshmen admitted to and enrolled in Harvard College for the fall terms of the academic years indicated.

Recent Application Statisitics

Academic Year	Freshman Applications Received	Freshmen Admitted	Freshmen Enrolled	Selectivity (%)	Yield (%)
2015-16	37,307	2,080	1,660	5.6%	79.8%
2016-17	39,041	2,110	1,663	5.4%	78.8%
2017-18	39,506	2,037	1,687	5.2%	82.8%
2018-19	42,749	2,024	1,653	4.7%	81.7%
2019-20	43,330	2,009	1,649	4.6%	82.1%

Source: University Records

The following table shows the total number of full-time equivalent undergraduate students and graduate-degree students enrolled for the fall term of the academic years indicated. (Figures do not include the Harvard Division of Continuing Education.)

Student Enrollment			
Academic Year	Undergraduate	Graduate	Total
2015-16	6,634	12,729	19,363
2016-17	6,645	12,836	19,481
2017-18	6,697	13,032	19,729
2018-19	6,722	13,206	19,928
2019-20	6,716	13,410	20,126

Source: University Records

Tuition, Fees and Room & Board

The following table shows undergraduate charges for the academic years indicated.

Tuition, Fees and Room & Board			
Academic Year	Tuition and Fees	Average Room and Board	Total
2015-16	$45,278	$15,381	$60,659
2016-17	$47,074	$15,951	$63,025
2017-18	$48,949	$16,660	$65,609
2018-19	$50,420	$17,160	$67,580
2019-20	$51,925	$17,682	$69,607

Source: University Records

Student Financial Aid

The University undergraduate admissions policy provides that admissions is need-blind, which allows the University to bring the best students to Harvard College, regardless of their ability to pay. Approximately 54% of Harvard College students receive need-based scholarships, and 20% of these students pay nothing to attend. The average family contribution is $12,000. Typically, undergraduate aid packages consist of grants and employment, with a small percentage of students electing loans.

Harvard participates in the U.S. Department of Education's William D. Ford Federal Direct Student Loan Program. The net outstanding amount of student loans from University sources as of June 30, 2019 included $0.2 million of loans issued by Harvard under federally guaranteed programs, $47.9 million of loans made under federally funded revolving loan programs and $84 million of loans funded through gifts or unrestricted funds of the faculties. The following table shows the net outstanding amount of student loans from all University sources, as of June 30 of each of the years indicated.

Student Loans Outstanding (net of reserves for bad debt)

(in $ millions)

2015	2016	2017	2018	2019
$162.7	$162.1	$156.0	$143.7	$132.1

Source: University Records

Faculty and Staff

Harvard employs approximately 2,500 faculty. Faculty tenure decisions are subject to the approval of the President, while certain other appointments (such as the Provost, faculty deans, vice presidents, University Professors, and selected others) are subject to the approval of the governing boards' Joint Committee on Appointments. The University had approximately 19,512 employees as of October 31, 2019 (not including graduate student appointments and similar positions and temporary or less than half-time workers). Each school at the University has significant autonomy in establishing its own staffing policies, which include hiring and wage and salary administration.

Labor Relations

The University considers its relations with its employees to be good. Approximately 6,400 of its employees are covered under seven collective bargaining agreements, represented by ten labor unions. Bargaining units consist of clerical and technical workers; dining service workers; custodians; arborists and gardeners; maintenance tradespersons; police officers; and museum, parking and security guards. The collective bargaining agreements covering these employees have varying expiration dates between calendar years 2020 and 2023.

Negotiations with a newly formed union, the Harvard Graduate Students Union-United Auto Workers, which represents approximately 5,000 graduate students, are currently underway and there is no contract in place.

Litigation

The University is subject to various suits, audits, investigations and other legal proceedings in the course of its operations. While the University's ultimate liability, if any, is not determinable at present, no such proceedings are pending or threatened that, in management's opinion, would be likely to have a material adverse effect on the University's ability to meet its commitments related to the Bonds (as defined in the Official Statement to this transaction).

Additional Information

For the fiscal year ended June 30, 2019 the return on the Harvard endowment was 6.5%. The value of the endowment on June 30, 2019 was $40.9 billion.

COVID-19 Disclosure

The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, has been declared a pandemic by the World Health Organization. Harvard is closely monitoring the COVID-19 pandemic and its impact on the University community. To protect the health of its students, faculty and staff, the University has taken significant steps to promote social distancing in the University community. Since the week of March 23, 2020, undergraduate and graduate course instruction has been conducted through virtual means. Most students have vacated the campus, with those who remain subject to "social distancing" measures and reduced on-campus services. Students will continue to meet their academic requirements virtually for the remainder of the 2019 – 20 academic year. While some faculty and staff are working on-campus to ensure continuity of essential research and operations, most faculty and staff have transitioned to remote work. Given the uncertainty over the progression of the virus and governmental emergency orders to close non-essential businesses, there is no timetable for when instruction, research and campus operations will return to normal.

The COVID-19 pandemic has negatively affected national, state, and local economies and global financial markets, and the higher education landscape in general. While the financial impact on the University cannot be quantified at this time, the pandemic may have a material adverse effect on the current and future financial profile and operating performance of the University. While the impact on the University's endowment cannot be quantified at this time, investment performance will be impacted by the downturn in financial markets.

The University continues to monitor the course of the pandemic and is prepared to take additional measures to protect the health of the University community and promote the continuity of its research and academic mission. The full impact of the COVID-19 pandemic and the scope of any adverse impact on the University's finances and operations cannot be determined at this time.

APPENDIX B

HARVARD UNIVERSITY FINANCIAL REPORT FISCAL YEAR 2019

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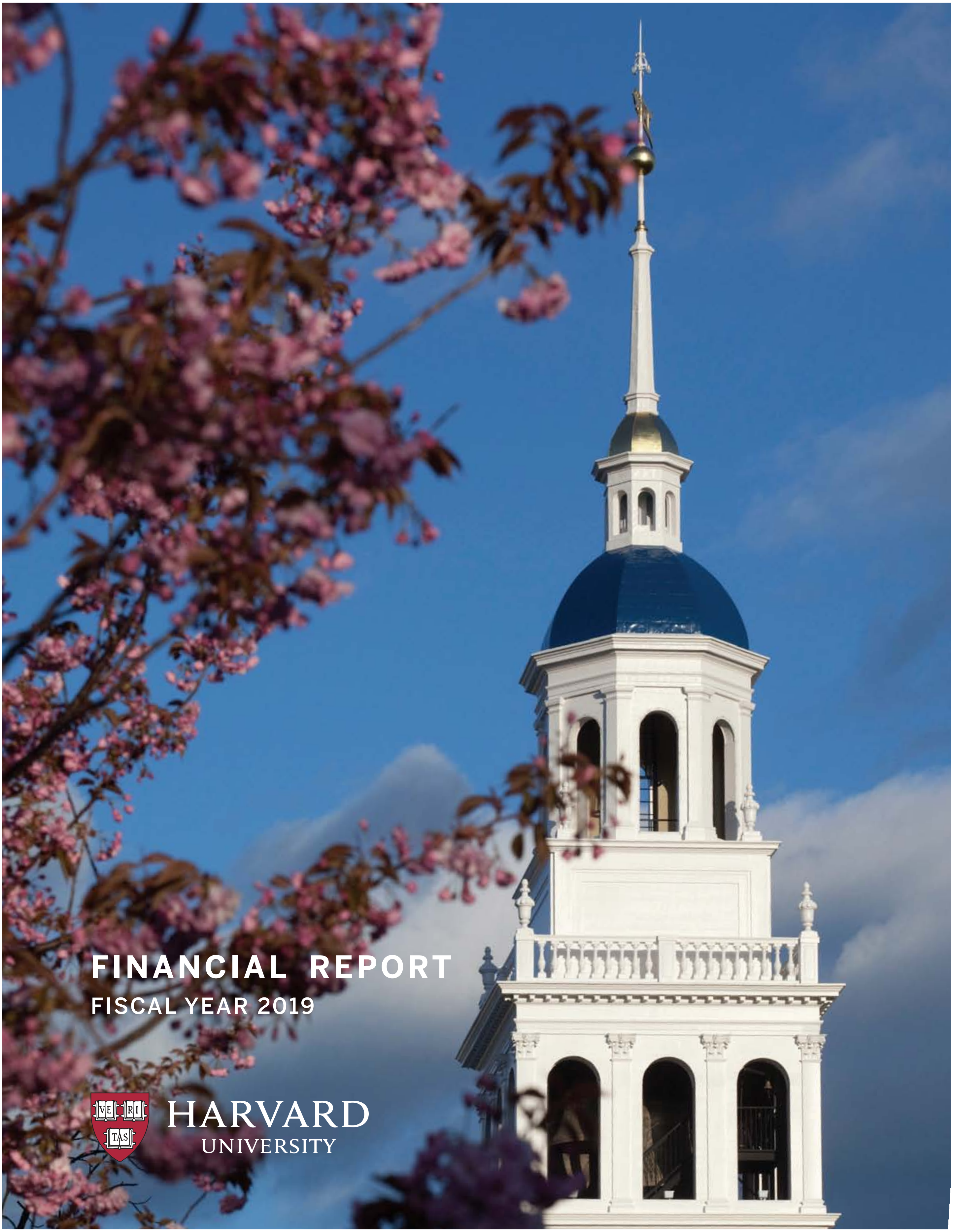

FINANCIAL REPORT

FISCAL YEAR 2019

HARVARD
UNIVERSITY

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Message from the President

I am pleased to submit Harvard University's financial results for fiscal year 2019.

In my first full year as president of Harvard, I have been privileged to witness a period of remarkable breakthroughs, discovery, and educational attainment. We celebrated the first-ever visible image of a black hole captured by researchers from the Event Horizon Telescope, a collaboration between Harvard researchers and colleagues from around the world. In Boston and Cambridge we have continued to contribute to housing, workforce development, and economic growth in the communities where we live and work. The coming year will see further progress in Allston with the opening of the new Science and Engineering Complex, further evolution of the Enterprise Research Campus, and boundary-breaking arts programming and research taking shape at the ArtLab on North Harvard Street in Barry's Corner.

By growing our financial aid budget, making the case for an immigration policy that encourages the free flow of talent and ideas, and winning a favorable judgement in the case challenging Harvard College's admissions policy, we sought to ensure that the academic experience of Harvard is accessible to a diverse array of students and scholars, committed to improving the world, from across the country and around the globe.

While our financial resources remain strong, we, along with all of our colleagues in higher education, must be conscious of the challenges in our current climate. The prospect of a long-running period of economic expansion coming to an end is very real. Uncertainty in federal research funding and the damaging tax on college and university endowments in the Tax Cuts and Jobs Act also have the potential to hinder Harvard's ability to grow investments in financial aid, teaching, and research across campus. Our challenge is to acknowledge these realities, advocate for policies and laws that will support our mission and continue to manage our finances prudently and thoughtfully so that we can make the investments in students, faculty, teaching and research that make a positive and lasting impact in the world.

I'm grateful to Harvard's friends and donors around the world, who share my confidence in the mission and values of our University, and who continue to invest in the critical work we do. This support and the careful stewardship of our resources are an essential partnership—together they enable opportunity for future generations of students and scholars who will think critically, expand the boundaries of our knowledge, and help us become the society we aspire to be.

All the best,

Lawrence S. Bacow
PRESIDENT

October 24, 2019

Financial Overview

From the Vice President for Finance and the Treasurer

Harvard University's teaching and research mission was advanced by healthy financial results during this past year, which enabled increased scholarships and financial aid, University-funded research, investments in faculty and staff, as well as renewed classroom, lab, housing and common spaces.

Please take a moment to read the Financial Overview on pages 5 through 11, to see a more detailed review of how the University's stewardship of financial resources is aimed at advancing teaching, learning, and research priorities to make a positive impact on the world.

The overall strength and financial health of the University depends upon the local management of individual schools and units. The aggregate surplus of $298 million was made possible by careful stewardship from the leaders of Harvard's schools and units in matching expenditures with revenues. Individual surpluses are earned and retained locally and are being used across the University to further advance mission-related priorities, reduce debt, and build reserve funds for future investments or inevitable "rainy days" to come.

Distributions from the endowment provided $1.9 billion or 35% of total revenue for the year, and another 9% of revenue came from current gifts of philanthropy. We are enormously grateful to Harvard's past and present donors for their generosity in providing the resources that enable the University's mission and its aspirational pursuit of excellence. We are also very supportive of the constant, painstaking progress in restructuring the endowment portfolio by Narv Narvekar and his colleagues at Harvard Management Company. We encourage you to read Narv's letter on page 12 of this report.

Throughout its history, Harvard has managed through countless different economic circumstances, each presenting unique challenges and opportunities for the University. Our ability to weather these challenges, and emerge stronger thereafter, demonstrates the University's resilience, cultivated through leadership and careful planning. This diligence in planning strengthens our capacities to manage through challenging times, sustain critical programs today and tomorrow, and maintain momentum for the future. As we monitor the current and unfolding macro environment, there are reasons to be cautious:

- Revenues in higher education are under pressure as the number of students nationally has plateaued, tuition costs have reached limits of affordability, the outlook for Federal research funding is uncertain, and expectations for return assumptions in the investment markets are muted.

- The recently passed Tax Cuts and Jobs Act has imposed new taxes upon, among other things, our endowment and is estimated to cost the University approximately $50 million this past year. This new burden is approximately equal to 1% of revenues, or viewed in the context of maintaining affordability, less money is now available for University to maintain financial aid, which totaled $193 million for undergraduates this past year.

- Although large in absolute dollars, Harvard's endowment is fully utilized in supporting current operations (see further discussion on pages 10 through 11). The use of the endowment is restricted to thousands of activities across the University and is managed to last forever. Lastly, contrary to popular perception about wealth, Harvard's endowment size trails other higher educational institutions on a per-student basis due to the size, breadth and diversity of Harvard's schools and students.

- The recent inversion of the interest rate curve and investment market volatility remind us that the current economic expansion, already the longest in United States history, cannot go on forever. Rainy day reserves will be needed.

The University has taken several steps in recent years to prepare for the end of the current economic expansion, including reducing debt levels, increasing cash holdings, and strengthening reserves. Schools and units annually prepare rolling-five year financial plans, and are including "downside" scenarios as part of this year's exercise. The University has learned from history and is preparing for the future with a collective "Recession Playbook" designed to spark planning and imagine innovative change. We are also focused on educating our community—faculty, staff, students and alumni—on Harvard's financial model and the risks and opportunities in higher education today.

The wisest thing Harvard can do with its financial resources is to allocate them to maximize excellence in its teaching, research, and scholarship. This is ideally an act of everyday stewardship as times and priorities continuously evolve, and developing the habit of reallocating resources is a successful evolutionary strategy in all economic conditions. In preparing for the next recession, our schools and units will need to focus on academic and research priorities where continuing and increased investment is essential, but also focus on activities where there may be opportunities to limit or reduce scale or scope.

In closing, we want to thank each and every donor to the University—past and present—for understanding that Harvard's excellence in teaching and research is made possible through your philanthropy. We also want to thank Harvard's faculty and staff for their vital contributions, on a daily basis, in making Harvard one of the world's preeminent institutions.

Thomas J. Hollister
VICE PRESIDENT FOR FINANCE

Paul J. Finnegan
TREASURER

October 24, 2019

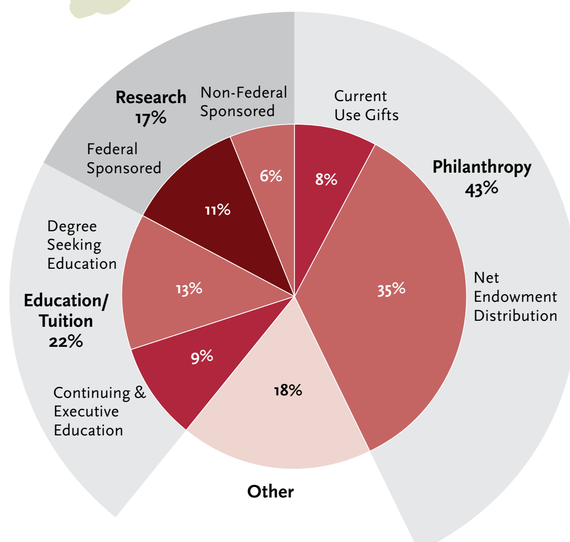
Harvard University's stewardship of its financial resources is aimed at advancing teaching, learning, and research priorities to make a positive impact in the world. This includes expanding access to education across the globe, supporting students with our strong financial aid program, fulfilling our ongoing commitment to public service, and greatly impacting how problems are understood and addressed through research. The key financial highlights for fiscal year 2019 included in this report demonstrate the University's continued commitment to advancing these priorities.

FINANCIAL OVERVIEW

The University ended fiscal year 2019 with an operating surplus of $298 million compared to $196 million in fiscal year 2018. The University's net assets increased by $2.3 billion to $49.3 billion at June 30, 2019, due to investment returns on the endowment, generous contributions, and a disciplined focus on financial management.

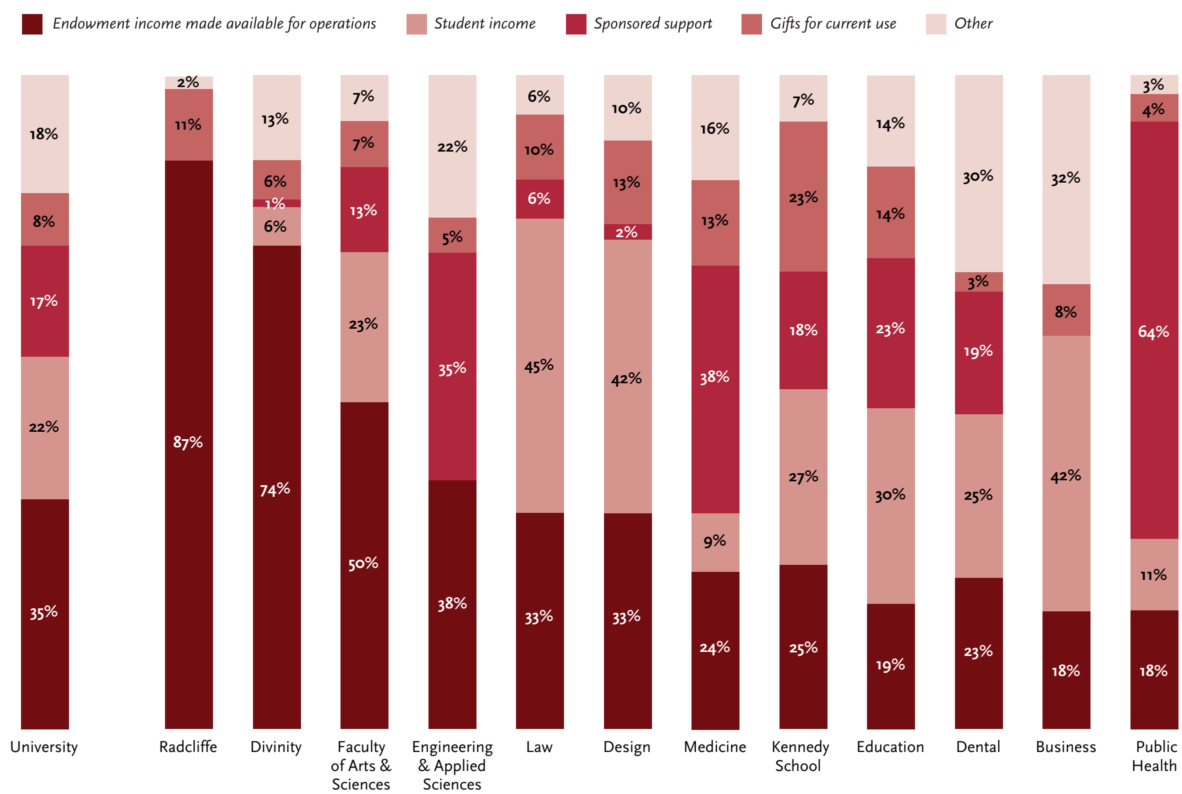
In fiscal year 2019, total operating revenue increased 6% rising to $5.5 billion. Harvard's diversified revenue portfolio relies on three main sources of revenue: education or tuition, sponsored research, and philanthropy. Total education revenue reflects tuition, board and lodging payments from both traditional degree seeking students including graduate, professional, and undergraduate, as well as executive and continuing education programs. In support of the research enterprise, our talented faculty apply for external grants to further global, research-critical priorities including curing cancer, understanding diverse cultures, and developing clean energy. This sponsored funding makes up 17% of revenue. Revenue generated each year from tuition and sponsored research is not sufficient to fund our operations and as such, the University relies on philanthropy to fill in the gap. In fiscal year 2019, our donors supported 43% of revenue through their generosity and belief in the broad impact of education and research at Harvard.

FISCAL YEAR 2019 UNIVERSITY REVENUE SOURCES



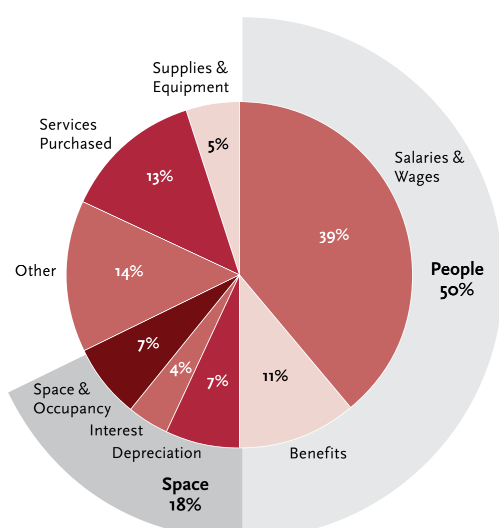
For Harvard's many schools and units, revenue profiles vary widely, with each drawing a different proportion of its budget from its endowment and other sources.

FISCAL YEAR 2019 SOURCES OF OPERATING REVENUE



The University's operating expenses increased by 4% to $5.2 billion driven by the investment in people and space, which make up nearly 70% of the University's operating expenses. People are Harvard's most valuable asset. Across our campuses, the unique backgrounds and interests of our students, faculty, and staff come together to create a community where learning and research thrive. As the fifth largest employer in Massachusetts, Harvard invests heavily in human capital; compensation expense (i.e. salaries, wages and benefits) increased 4% from the prior fiscal year and continues to represent half the University's total operating expense.

FISCAL YEAR 2019 OPERATING EXPENSES



Investment in space is the second largest portion of the University's operations. Maintaining Harvard's historic campus is an ongoing expensive investment and requires preserving architecturally significant buildings in accordance with state and local regulations while also renewing and operating spaces to facilitate the highest modes of teaching and research. The University's most recent investments in space are detailed on the next page.

BALANCE SHEET

Investments

In fiscal year 2019, the return on the endowment was 6.5% and its value (after the net impact of distributions from the endowment for operations, federal taxes, and the addition of new gifts to the endowment during the year) increased from $39.2 billion at the end of fiscal year 2018 to $40.9 billion at the end of fiscal year 2019. More information can be found in the Message from the CEO of Harvard Management Company, found on page 12 of this report.

Debt

Bonds and notes payable decreased modestly from $5.3 billion at June 30, 2018 to $5.2 billion at June 30, 2019, resulting from scheduled maturity payments. In addition, related interest expense also decreased 3% to $182 million. The University continues to closely manage its debt and has reduced its debt balance from $6.3 billion in fiscal year 2011 to $5.2 billion as of June 30, 2019.

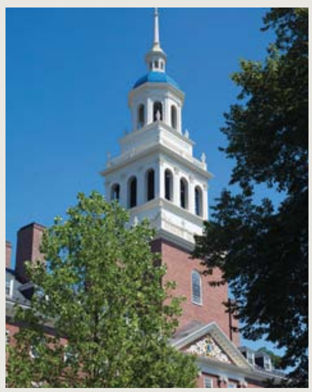
Fixed assets

The University invested $903 million in capital projects and acquisitions during fiscal year 2019, compared to $908 million in fiscal year 2018.

Significant progress on several noteworthy projects includes:

Construction of the **Harvard ArtLab**, an interdisciplinary center for creativity and innovation on the University's campus in Allston. It houses **experimental performance space** as well as art and recording studios, a workshop, and offices, and is open to students and faculty members from across the University. The ArtLab joins an "innovation" cluster that includes the iLab, the Pagliuca Life Lab, and the Launch Lab, a workspace for startups launched by University alumni.

Construction of a new building at the Law School, which will foster and expand the experiential and clinical learning and support research programs.



Completion of **Lowell House** and commencement of **Adams House** renovations for the undergraduate long-term house renewal initiative.

Completion of the **Smith Campus Center**, which offers a new front door to Harvard and will greatly enhance the public realm, enliven the area, create a useable year-round amenity, and result in a more cohesive and collaborative community.

Construction of the **Schwartz Pavilion**, a covered, open-air performance and gathering space on the Business School's campus for exchange and socializing, recreation, and reflection. It is designed to be a dynamic hub of activity that supports seasonal and programmatic flexibility.

Ongoing construction activities for the **Allston Science and Engineering Complex**, District Energy Facility, and related infrastructure work, which will anchor an innovation area that will lead to the development of an enterprise research campus, combining science and engineering innovation with business expertise.

EDUCATION

In fiscal year 2019, across its 12 schools, Harvard enrolled 23,336 students from around the globe, with 6,722 or 29% of those students enrolled at the College.

Total student income

Total student revenue increased approximately 7% to $1.2 billion in fiscal year 2019, including $504 million related to net undergraduate and graduate programs and $500 million in net executive and continuing education. Net undergraduate and graduate tuition income increased 4% in fiscal year 2019. Due to the University's steadfast commitment to undergraduate financial aid, net undergraduate tuition contributed only 3% growth. In addition to these traditional education programs, Harvard continues to experience a rising demand for expanded continuing and executive program offerings across the University, which contributed to a 12% increase in net income from continuing and executive education.

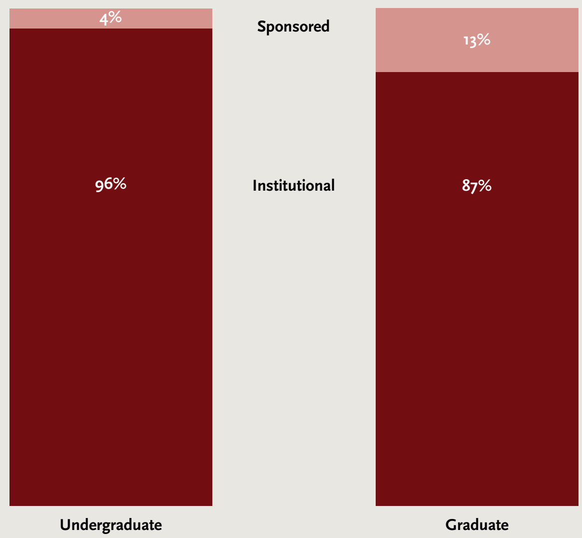
Undergraduate and graduate programs and financial aid

Harvard is committed to cultivating a diverse community of bright and talented students regardless of their ability to pay. Thanks to our groundbreaking financial aid program, approximately 54% of Harvard College students receive need-based scholarships and pay an average of $12,000. Additionally, 20% of these Harvard College students pay nothing to attend. Since launching the Harvard financial aid initiative in 2004, the College has awarded over $2 billion in grant aid, and the undergraduate financial aid budget has increased by over 140% from $80 million in 2005 to $193 million in 2019. The average cost of attendance for all Harvard College students is $38,200.

> **Since launching the Harvard financial aid initiative in 2004, the College has awarded over $2 billion in grant aid.**

During fiscal year 2019, scholarships and other student awards spending rose by $21 million or 4% from $592 million to $613 million. The following chart shows the sources of student financial aid and scholarships awarded during fiscal 2019 and reflects the institutional commitment to financial aid:

SOURCES OF STUDENT FINANCIAL AID



Executive and continuing education

Over the past decade, the University has continuously worked to extend a Harvard education to audiences beyond the traditional on-campus undergraduate and graduate student. Nine of our twelve schools have executive education programs for both individuals and organizations. These programs reach thousands of professionals around the world, helping them achieve their professional potential and make a difference in their organizations. At the Division of Continuing Education, several free courses and nearly 800 for-credit courses encourage students to explore opportunities for personal and professional growth.

Reaching an even more global audience, HarvardX offers online courses to people around the world. Content on HarvardX presents an academically diverse, high quality, innovative collection of free online learning activities empowering faculty to improve teaching and learning on-campus, online, and beyond. To date, HarvardX has offered over 90 unique courses to approximately two million unique users, including over one million international registrants.

RESEARCH

Harvard scholars conduct research in almost every field, seeking to expand human knowledge through analysis, innovation, and insight. In 2019, research was supported by $937 million of sponsored research funds. In addition, a year ago, the University funded $361 million in institutional funds, as reported in the 2018 National Science Foundation Higher Education and Research Development (HERD) Survey (2019 results are not yet available). Research is carried out both in the departments of the schools and at more than 100 research centers, on campus and around the world. Researchers include faculty members, visiting scholars, post-doctoral fellows, and graduate and undergraduate students, and they collaborate with colleagues across the University, at affiliated institutions, and at other research institutions.

> **While there is no replacing the role of the federal government as the leading source of basic research funding, Harvard is increasingly diversifying its sponsored research funding through strong partnerships with non-federal sources. The diversification is increasingly important not just as a funding source, but also as a way to collaborate with foundations and industry partners to translate discoveries into new technologies, treatments, and therapies.**

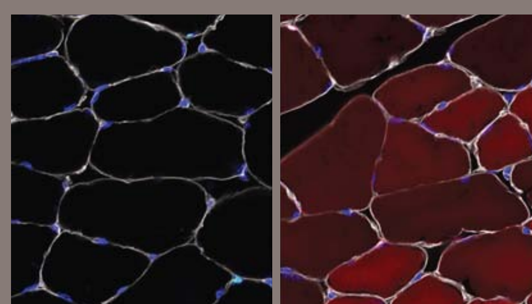
During fiscal year 2019, the University saw continued growth in research funding. In aggregate, revenue from federal and non-federal sponsored sources increased by 3% to $937 million. Federal funding, which accounted for approximately 67% of total sponsored revenue in fiscal year 2019, increased 1% to $631 million. The University's relationships with corporations, foundations and other non-federal sponsors expanded in fiscal year 2019, resulting in a 6% increase in non-federal sponsored revenues, which totaled $307 million. Nonfederal funding has been an area of growth in the past few years, as researchers look beyond the federal government for research funding support. In addition, Harvard devotes significant institutional resources to leverage these federal and non-federal investments. This funding is crucial to support the initial development or early-stage research which enables the researchers to develop an idea to a state in which it can be presented to sponsors for additional funding.

SEEING THE UNSEEABLE

After over a decade's worth of work, a global team of astronomers, led by Harvard scientists, has for the first time captured an image of a black hole. This image capture opens the door for astronomers and physicists to test Einstein's theories of gravity and general relativity under the most extreme conditions in the Universe.

TEXAS A&M AND HARVARD NASA-FUNDED ATMOSPHERIC RESEARCH PROJECT

Texas A&M and Harvard researchers are teaming up on a $30 million NASA-funded atmospheric research project. The $30 million funding came from NASA's Earth Venture program and will fund a project that will investigate how strong summertime convective storms over North America can change the chemistry of the stratosphere.



EDITING GENES AT THE SOURCE

Breakthrough research shows that stem cell genes can be edited in living systems rather than in a dish. The findings have major implications for biotechnology research and the development of therapeutics for genetic diseases as it changes the way we study stem cells in the body and it is a crucial step towards developing effective gene therapies.

PHILANTHROPY

Combining gifts for current use and Harvard's endowment distribution, philanthropy accounts for 43% of fiscal year 2019 revenue. Every gift is essential in facilitating excellence in our academic programs, recruiting and retaining our world-class faculty and staff, enhancing student life, and providing opportunities through financial aid.

Gifts for current use

In fiscal year 2019, Harvard received current use gifts from alumni, foundations, and others totaling $472 million, representing approximately 8% of operating revenues. Support for the University comes from donations of all sizes; 80% of gifts in fiscal year 2019 averaged $150 per donor. We are grateful to all donors whose generosity enables Harvard to create a vibrant culture of academic discovery.

The Harvard endowment

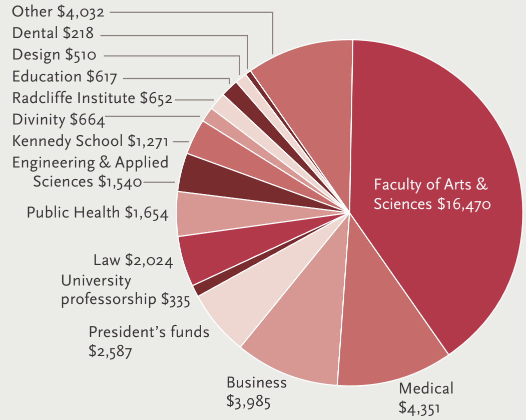
Harvard's endowment is a dedicated and permanent source of support for the University and its mission of teaching and research, in the present and forever. The aggregate endowment is made up of more than 13,000 individual endowments created over the last 350 years, which support faculty and students, including professorships and financial aid for undergraduates, graduate fellowships, and student life and activities.

Donor contributions to the endowment have enabled leading financial aid programs, groundbreaking discoveries in scientific research, and hundreds of professorships across a wide range of academic fields. Each year, a portion of the endowment is paid out as an annual distribution to support the University's annual operations. Any appreciation in excess of this annual distribution is retained in the endowment so it can grow and support future generations. As a result, the endowment can provide the financial foundation for the University for generations to come.

Cash gifts for endowment were $613 million in fiscal year 2019 compared to $646 million in fiscal year 2018.

MARKET VALUE OF THE ENDOWMENT AS OF JUNE 30, 2019

In millions of dollars



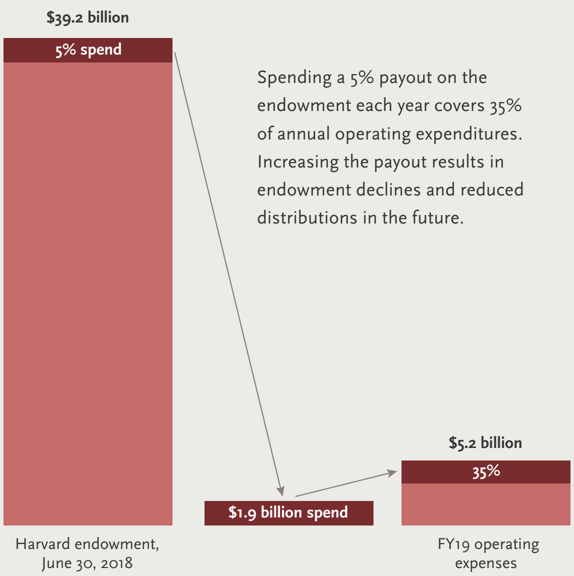
> **"Whether our colleges and universities are public or private, we all rely upon the generosity of the American people, who contribute both to research and financial aid. We are excellent because of them, and must endeavor to deserve their support. So it's up to us to remember, always our collective obligation to the public good."** — PRESIDENT LAWRENCE S. BACOW

Endowment returns made available for operations

The University's endowment spending practice has to balance two competing goals: the need to fund the operating budget with a stable and predictable distribution, and the obligation to maintain the long-term value of the endowment. There is a common misconception that endowments, including Harvard's, can be accessed like bank accounts, used for anything at any time as long as funds are available. In reality, Harvard's flexibility in spending from the endowment is limited by the fact that it is designed to last forever, which is crucial for an institution intended to serve generations of students and pursue research on big questions—questions that cannot be answered in one lifetime.

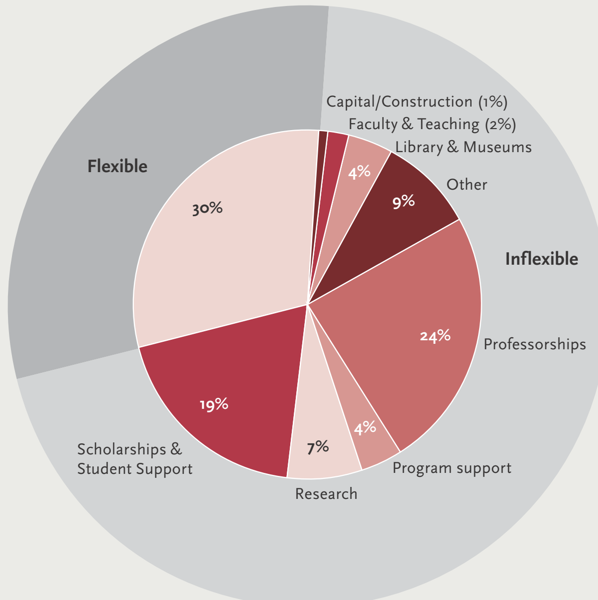
Harvard is obligated to preserve the purchasing power of the endowment by spending only a small fraction of its value each year. Spending significantly more than that over time, for whatever reason, would privilege the present over the future in a manner inconsistent with an endowment's fundamental purpose of maintaining intergenerational equity. As a general rule, Harvard targets an annual endowment payout rate of 5.0 to 5.5% of market value. In 2019, the payout rate was 5.1% compared to the 5.2% payout rate in 2018. This critical source of funding distributed $1.9 billion in the fiscal year ending June 30, 2019—representing 35% of Harvard's total operating revenue—and is the single largest source of revenue supporting the University.

ENDOWMENT PAYOUT



While the endowment is a critical source of funding, 70% of the annual distribution is restricted to specific programs, departments, or purposes and must be spent in accordance with the terms set forth by the donor. Funds without donor restriction are more flexible in nature and are critical in supporting structural operating expenses and transformative, strategic initiatives. In total, endowment funds support nearly every aspect of University operations.

ENDOWMENT SPENDING FLEXIBILITY



Tax reform

The Tax Cuts and Jobs Act of 2017 added a new series of tax burdens to the University, resulting in an estimated $49.8 million in additional taxes for fiscal year 2019. While this expense continues to be an estimate as final guidance has not been issued, generally accepted accounting principles require that an estimate be recorded during the period the expense is incurred. The final amount of tax paid will reflect the tax policies issued by the United States Treasury. Of the total tax expense, $37.7 million reflects the estimated net investment income tax for fiscal year 2019, relating to the University's investments. When these taxes are paid it will reduce the endowment funds available for the teaching and research mission. The remaining $12.1 million reflects estimated taxes for net investment income tax on operational revenues, changes to unrelated business taxable income including qualified transportation fringe taxes on commuter benefits and parking, and excise taxes on executive compensation.

HARVARD
MANAGEMENT
COMPANY

Message from the CEO

OCTOBER 2019

Dear Members of the Harvard Community,

For the most recent fiscal year ended June 30, 2019, the return on the Harvard endowment was 6.5% and the value stood at $40.9 billion. The endowment also distributed more than $1.9 billion toward the University's operating budget, in support of financial aid, research funds, faculty support, and more.

Performance

ASSET CLASS	ALLOCATION	RETURN
Public Equity	26%	5.9%
Private Equity	20%	16%
Hedge Funds	33%	5.5%
Real Estate	8%	9.3%
Natural Resources	4%	-12.4%
Bonds/TIPS	6%	5.7%
Other Real Assets	2%	-8.3%
Cash & Other	2%	--
Endowment	**100%***	**6.5%**

**Due to rounding, the approximate allocation adds up to more than 100.*

As was the case in FY18, the past fiscal year was another in which asset allocation — or risk level — was a major factor in returns, albeit in a more nuanced manner. More specifically, all else being equal, greater exposure to venture capital (a high-risk/high-reward asset class) would have resulted in a significantly higher return. Harvard's exposure to venture capital is notably small in the context of leading endowments. Our ongoing assessment of Harvard's risk tolerance is discussed in further detail later in this letter.

While we are not pleased with this performance, we are mindful that HMC is an organization in the midst of significant restructuring and has a portfolio with certain illiquid legacy assets that weigh significantly on performance. There is also a solid base of strong legacy assets upon which we are building. Meaningfully higher or lower one-year returns would not impact the restructuring we continue to pursue. While some changes will take years to have an impact — and we are keenly aware that we are in a marathon and not a sprint — we can already detect positive indicators of progress.

HMC Progress and Challenges

At roughly the halfway point in the five-year restructuring, and with two full fiscal years complete, it is worth discussing our progress in HMC's turnaround and the challenges we still face.

Our early efforts have involved rebuilding the organizational structure and culture, constructing a generalist investment team, and establishing new investment processes. We have also recruited additional team members for both the generalist and support teams, and put in place incentives that reward collaboration, long-term investment thinking, and calculated risk-taking.

Culture, organizational structure, and incentives were central to the deep issues that HMC faced and are crucial to our solutions. Most importantly, we operate as one team, not as siloed specialists. We will succeed thanks to the dedication and skill of all team members. While we still have much work to do, we are well on our way and generally comfortable with the progress made to affect HMC's turnaround. To be sure, our efforts to improve and evolve do not end at the five-year mark; we will always strive to be better.

The past two years' reports have focused on these organizational changes, and while that work continues, I would like to focus this year's report on the progress and challenges within HMC's investment portfolio.

Portfolio Progress and Issues

The liquid and illiquid portions of HMC's portfolio are starkly different in terms of the time needed to see the effects of our changes. With regards to the more liquid parts of the portfolio, we have already had an impact and are generally pleased with the results. However, by definition, we cannot quickly impact the performance of the illiquid parts of the portfolio beyond asset sales. We continue to work diligently to build on the strengths of our illiquid assets and solve remaining problems. Not surprisingly, the five-year timeframe of our restructuring is needed primarily to address the issues in the illiquid parts of the portfolio.

Liquid Portfolio: Public Equities and Hedge Funds

Public equities and the majority of our hedge fund positions are the most liquid (although roughly 20% of our hedge fund allocations are illiquid, the remainder of this asset class is relatively liquid) and, therefore, are the areas in which the generalist investment team has had the most immediate impact over my time at HMC.

Here is some good news. Over two fiscal years, we have outperformed benchmarks for both asset classes. More importantly, on a combined basis, they outperformed the blended benchmark by more than 2.25% annualized over the same period. I regard this performance to be very good, albeit not excellent. While we do not fixate on benchmarks, I allude to them here simply to provide an illustration of our progress. If we think about benchmarks at all, it is in this context, as these two parts of the portfolio represent about 60% of the aggregate endowment.

We are particularly pleased with our hedge fund performance, as it was not driven by positive equity markets. By design, our current hedge fund portfolio has less exposure to equity markets than any such portfolio I have overseen during my twenty-one years in endowment management. Furthermore, as noted, about 20% of the hedge fund portfolio is illiquid. Since much of this legacy illiquid group has had unremarkable returns and has been a drag on performance, we are all the more pleased with our impact on the more liquid portion of the portfolio.

While we have been able to impact this portion of the portfolio and see the positive results, two full fiscal years is far too short a period to make a meaningful assessment of the true impact. As long-term investors, we think in terms of at least ten-year performance. As we build toward that timeframe in the liquid parts of the portfolio, there will be good and bad years. We understand the need to improve even further and I am highly confident that we are on a path to doing so. What is clear is that the early results provide a positive affirmation of our approach and represent a significant step forward for HMC.

Illiquid Portfolios: Private Equity, Real Estate, and Natural Resources

As many already know, the main challenges in the endowment's performance pertain to the illiquid assets. Prudently increasing the size of certain portfolios takes years to complete, as does reducing the size of others. In direct contrast to the more liquid parts of the portfolio, we can only have limited impact on performance in a short period of time. From the day of my arrival, we have been moving with a sense of urgency to implement the turnaround and reposition the illiquid investments.

Illiquid investments are an important component of long-term investment portfolios. HMC expects, to varying degrees, significant excess return from its illiquid assets above those available in public markets for three broad reasons. First, investors must be compensated for the greater risk of these investments. Second, investors must also be compensated for significant illiquidity — typically requiring multiple years to exit these assets. Third, certain strategies provide unique opportunities for significant alpha as well.

PRIVATE EQUITY (BUYOUTS, GROWTH, AND VENTURE CAPITAL)

Let us start with the good news. The private equity portfolio at HMC has historically been strong, a credit to both current and former HMC team members. Furthermore, we are excited about the portfolio additions and adjustments we have made over the last two years, but know that it will be years before we see the effects of those investments.

Today, our central concern is that HMC's allocation to buyouts, growth, and venture capital continues to be low relative to what likely makes sense for Harvard (see Risk Tolerance section). In this context, I expressed the goal of increasing such exposure when I joined. The goal of increasing private equity exposure was not made because private equity was performing well at the time (and has continued to perform particularly well since then). In fact, recent performance, and specifically the valuation environment, serve as a restraint. We certainly understand that private equity is a higher-risk/higher-return investment that will have difficult periods. Rather, we are stating our belief that some types of private equity — certainly not all — are generally a more attractive secular source of alpha and risk for HMC than some of the other higher-risk illiquid assets currently in the portfolio. We are early in the process of making this allocation transition.

A SOBERING THOUGHT

As many know, private equity funds draw down their capital over a period of years and then invest it for several more years before exiting. For now, and for the next few years, we will suffer the impact of the private equity "J-curve" — the natural progression of a fund's value in this space, where short-term losses precede long-term gains. Many peers dealt with these growing pains years, if not decades, ago. Early in my time, we modeled it to take 7 – 9 years to attain a meaningfully higher allocation to private equity in a prudent manner (i.e., subject to maintaining high manager quality, appropriate vintage year diversification, and being mindful of an aggressive valuation environment).

While we are making deliberate progress, we are obviously still early in the multiyear timeframe needed. Of note, some of the big IPOs of this past spring were backed by venture funds with vintage years from 2008 – 2013. Harvard did not participate in those funds in that era and therefore did not benefit significantly from those rewards in fiscal year 2019. Indeed, this is a long-term game.

REAL ESTATE

One goal from the outset was to reduce the size of our real estate exposure. We are pleased that HMC's real estate exposure is roughly half of the size it was in early 2017. We are also very fortunate that the dominant portion of that exposure continues to be managed by our former HMC colleagues, now with Bain Capital. Spinning-out the team to Bain Capital was a critical milestone for us as it secured stability in the expert management of this part of the portfolio.

The reduction in exposure was the result of significant asset sales early in my time and successful exits from assets by the Bain Capital team, as well as other external managers. We have also very selectively added commitments to other external managers. Like our recent private equity investments, it will take years to see the effects of our efforts.

NATURAL RESOURCES

Another portfolio goal was to reduce our exposure to natural resources. We are obviously disappointed with persistent negative returns in this legacy part of our portfolio; however, we are pleased to have cut our exposure by more than half — from 9% to roughly 4% of the overall endowment — since my arrival. Furthermore, we are pleased to have completely rebuilt an impressive team to manage this portfolio.

OUR PORTFOLIO CONSISTS OF THREE TYPES OF ASSETS:

1. **Deeply troubled assets.** We were forced to write-down or write-off approximately $1 billion of these investments early in my time at HMC, in FY17. Since then, our natural resources team has worked hard to salvage or dispose of these remaining investments.

2. **Good, but misaligned assets.** These are assets that we believe have a risk/return/liquidity profile that is not particularly appropriate for an endowment. We have sold over $1.1 billion of these assets to more appropriate investors. We expect to close on the sale of close to another $200 million over the remainder of the current fiscal year.

3. **Aligned assets.** These are quality assets that are well suited for an endowment in terms of risk/return/liquidity and are now well positioned, having undergone significant management changes since the arrival of our new natural resources team. In addition, we have deployed over $100 million in new, promising investments in this category.

After our initial large write-down in FY17, the performance of group 1 continued to be poor and still weighs on the overall performance of the natural resources portfolio. We should note that FY19's return includes an additional write-down in group 1 assets of about $100 million. Even without this write-down, FY19 returns for natural resources would have still been -7%, largely caused by the troubled assets in group 1, described above.

Harvard Risk Tolerance

Another significant milestone of the first half of our five-year transition was to put in place a new risk framework at HMC. This is a critical tool in our portfolio management and a central input to our discussions with the University regarding Harvard's risk tolerance.

These discussions commenced this past spring and are the deepest such conversations that HMC has had in recent years with the University, involving HMC Board members and University leadership.

We are focused upon and aware that HMC generally takes lower risk and, therefore, will likely generate lower returns than many peers over a market cycle. During these discussions we will determine if this approach is appropriate or not. The tradeoff is of course higher returns versus a less volatile revenue stream. Perhaps stating the obvious, higher returns lead to a larger endowment in the long run, while lower volatility can be helpful in budgeting for an institution with significant fixed costs. I believe that we will conclude these discussions over the next eighteen months or so, which will help inform allocation decisions in future years.

Closing Thoughts

At this midway point in our transition I am encouraged by the path that we are on and our progress to date. The first half of this turnaround essentially operated on multiple tracks: HMC's organizational restructuring, process development, and the repositioning of the endowment's investment portfolio.

Thanks to the hard work of a talented and dedicated team, we have made good progress. From developing the investment processes and risk framework that allow us to make informed decisions, to the formation of a generalist team and spinning-out four internal investment platforms, these changes have been significant. However, the speed at which they have been adopted by the organization is impressive. While we implemented these changes expediently, we are constantly looking for opportunities to improve or adapt in ways that support long-term performance.

The evolution of our public equity and hedge fund portfolios is exhibiting a significant positive impact and the early returns are encouraging. That being said, we need to maintain this momentum and improve even further in the years ahead.

On the illiquid side, we are using the five-year restructuring period to work our way to the marathon's starting line. Significant parts of this portfolio are very strong — a credit to former and current team members. We must build on that strength and also prudently grow certain parts of the illiquid portfolio. Once again, we must be deliberate and strategic to maintain high-quality standards and avoid excessive vintage year concentration.

Equally important, there are still many illiquid anchors weighing down the portfolio and our performance. Put another way, parts of the legacy portfolio do not have a prospect of generating a return commensurate with the risk and the illiquidity entailed, and may not provide a return at all. Through a combination of write-downs and asset sales, this problem is much smaller than it was two years ago, but still remains a significant challenge and a major priority for HMC. As we have said, it will take some years to execute a full course correction.

The endowment is a vital resource that allows Harvard University to maintain its leadership in teaching and research. Current and future generations of Harvard students, faculty, and scholars rely on us to maintain this critical source of support. Our team is well aware that meeting those needs requires continuous improvement and overcoming the challenges referred to above. I remain highly confident in our ability to do both.

Best regards,

N.P. "Narv" Narvekar
Chief Executive Officer

Report of Independent Auditors

To the Joint Committee on Inspection of the Governing Boards of Harvard University:

We have audited the accompanying consolidated financial statements of Harvard University and its subsidiaries (the "University"), which comprise the consolidated balance sheet as of June 30, 2019, and the related consolidated statements of changes in net assets with general operating account detail, changes in net assets of the endowment and of cash flows for the year then ended.

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 audit. We conducted our audit 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 Harvard University and its subsidiaries as of June 30, 2019 and the changes in their net assets and their cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the University changed the manner in which it presents net assets and reports certain aspects of its consolidated financial statements as a not-for-profit entity in 2019. Our opinion is not modified with respect to this matter.

Other Matter

We previously audited the consolidated balance sheet as of June 30, 2018, and the related consolidated statements of changes in net assets with general operating account detail, changes in net assets of the endowment and of cash flows for the year then ended (not presented herein), and in our report dated October 25, 2018, 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, 2018 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

October 24, 2019

PricewaterhouseCoopers LLP, 101 Seaport Boulevard, Suite 500, Boston, MA 02210
T: (617) 530 5000, F: (617) 530 5001, www.pwc.com/us

BALANCE SHEETS

with summarized financial information as of June 30, 2018

In thousands of dollars	June 30 2019	2018
ASSETS:		
Cash	**$ 158,640**	$ 144,982
Receivables, net *(Note 4)*	**296,321**	301,258
Prepayments and deferred charges	**266,719**	130,925
Notes receivable, net *(Note 5)*	**373,623**	381,795
Pledges receivable, net *(Note 6)*	**2,765,827**	1,837,792
Fixed assets, net *(Note 7)*	**8,271,711**	7,732,172
Interests in trusts held by others *(Note 3)*	**420,371**	408,968
Securities pledged to counterparties, at fair value *(Note 3)*	**49,971**	162,790
Investment portfolio, at fair value *(Note 3)*	**46,723,970**	45,647,599
TOTAL ASSETS	**$ 59,327,153**	**$ 56,748,281**
LIABILITIES:		
Accounts payable	**$ 398,134**	$ 359,847
Deferred revenue and other liabilities	**1,517,022**	1,327,454
Other liabilities associated with the investment portfolio *(Notes 3 and 10)*	**875,141**	884,501
Liabilities due under split interest agreements *(Note 9)*	**859,744**	862,413
Bonds and notes payable *(Note 10)*	**5,213,349**	5,300,921
Accrued retirement obligations *(Note 11)*	**1,120,544**	983,552
Government loan advances *(Note 5)*	**66,733**	65,409
TOTAL LIABILITIES	**10,050,667**	**9,784,097**
NET ASSETS	**49,276,486**	**46,964,184**
TOTAL LIABILITIES AND NET ASSETS	**$ 59,327,153**	**$ 56,748,281**

	Without donor restrictions	With donor restrictions	June 30 2019	2018
NET ASSETS:				
General Operating Account (GOA) *(Note 8)*	$ 4,890,118	$ 2,883,299	$ 7,773,417	$ 7,171,297
Endowment *(Note 8)*	7,091,584	33,838,116	40,929,700	39,233,736
Split interest agreements *(Note 9)*		573,369	573,369	559,151
TOTAL NET ASSETS	**$ 11,981,702**	**$ 37,294,784**	**$ 49,276,486**	**$ 46,964,184**

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

STATEMENTS OF CHANGES IN NET ASSETS WITH GENERAL OPERATING ACCOUNT DETAIL

with summarized financial information for the year ended June 30, 2018

In thousands of dollars	Without Donor Restrictions	With Donor Restrictions	For the year ended June 30 2019	2018
OPERATING REVENUE:				
Student income *(Notes 2 and 12)*	$ 1,200,838		**$ 1,200,838**	$ 1,122,065
Sponsored support *(Note 13)*				
Federal government – direct costs	448,832		**448,832**	453,084
Federal government – indirect costs	181,948		**181,948**	172,223
Non-federal sponsors – direct costs	88,620	$ 178,637	**267,257**	251,997
Non-federal sponsors – indirect costs	21,532	17,821	**39,353**	36,932
Total sponsored support	740,932	196,458	**937,390**	**914,236**
Gifts for current use *(Note 14)*	190,610	281,503	**472,113**	**466,546**
Investment income:				
Endowment returns made available for operations *(Note 8)*	339,007	1,569,416	**1,908,423**	1,821,645
GOA returns made available for operations	180,634		**180,634**	176,230
Other investment income	34,289	4,845	**39,134**	25,873
Total investment income	553,930	1,574,261	**2,128,191**	**2,023,748**
Other revenue *(Note 15)*	772,038		**772,038**	688,724
Net assets released from restriction	1,987,573	(1,987,573)	**0**	0
TOTAL OPERATING REVENUE	**5,445,921**	**64,649**	**5,510,570**	**5,215,319**
OPERATING EXPENSES:				
Salaries and wages	2,038,478		**2,038,478**	1,943,836
Employee benefits *(Note 11)*	565,505		**565,505**	569,223
Services purchased	680,691		**680,691**	617,210
Space and occupancy	379,290		**379,290**	410,441
Depreciation *(Note 7)*	382,775		**382,775**	357,965
Supplies and equipment	270,623		**270,623**	268,200
Interest *(Note 10)*	181,633		**181,633**	187,883
Scholarships and other student awards *(Note 12)*	155,874		**155,874**	152,421
Other expenses *(Note 16)*	557,801		**557,801**	511,778
TOTAL OPERATING EXPENSES	**5,212,670**	**0**	**5,212,670**	**5,018,957**
NET OPERATING SURPLUS	**233,251**	**64,649**	**297,900**	**196,362**
NON-OPERATING ACTIVITIES:				
Income from GOA Investments	5,112		**5,112**	8,751
GOA realized and change in unrealized appreciation, net *(Note 3)*	261,944		**261,944**	475,207
GOA returns made available for operations	(180,634)		**(180,634)**	(176,230)
Change in pledge balances *(Note 6)*		352,553	**352,553**	28,562
Change in interests in trusts held by others		1,656	**1,656**	(740)
Gifts for facilities and loan funds *(Note 14)*		86,372	**86,372**	109,227
Change in retirement obligations *(Note 11)*	(126,744)		**(126,744)**	143,110
Other changes	(17,505)		**(17,505)**	1,871
Transfers between GOA and endowment *(Note 8)*	(103,802)	11,382	**(92,420)**	(83,207)
Transfers between GOA and split interest agreements *(Note 9)*		13,886	**13,886**	12,661
Non-operating net assets released from restrictions	226,112	(226,112)	**0**	0
TOTAL NON-OPERATING ACTIVITIES	**64,483**	**239,737**	**304,220**	**519,212**
GENERAL OPERATING ACCOUNT NET CHANGE DURING THE YEAR	**297,734**	**304,386**	**602,120**	**715,574**
Endowment net change during the year	331,683	1,364,281	**1,695,964**	2,137,262
Split interest agreements net change during the year *(Note 9)*		14,218	**14,218**	25,269
NET CHANGE DURING THE YEAR	**629,417**	**1,682,885**	**2,312,302**	**2,878,105**
Net assets, beginning of year	11,352,285	35,611,899	**46,964,184**	**44,086,079**
NET ASSETS, END OF YEAR	**$ 11,981,702**	**$ 37,294,784**	**$ 49,276,486**	**$ 46,964,184**

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

STATEMENTS OF CHANGES IN NET ASSETS OF THE ENDOWMENT

with summarized financial information for the year ended June 30, 2018

In thousands of dollars	Without Donor Restrictions	With Donor Restrictions	For the year ended June 30 2019	2018
Investment return *(Note 3)*:				
Income from general investments	$ 6,672	$ 30,517	**$ 37,189**	$ 47,775
Realized and change in unrealized appreciation/(depreciation), net	413,975	1,875,524	**2,289,499**	3,284,706
Total investment return	420,647	1,906,041	**2,326,688**	**3,332,481**
Endowment returns made available for operations	(339,007)	(1,569,416)	**(1,908,423)**	(1,821,645)
Net investment return	81,640	336,625	**418,265**	**1,510,836**
Gifts for endowment *(Note 14)*	109,612	503,675	**613,287**	646,299
Transfers between endowment and the GOA *(Note 8)*	103,802	(11,382)	**92,420**	83,207
Capitalization of split interest agreements *(Note 9)*		15,213	**15,213**	25,707
Change in pledge balances *(Note 6)*		575,155	**575,155**	(139,309)
Change in interests in trusts held by others *(Note 8)*		9,747	**9,747**	12,547
Other changes	(3,947)	(24,176)	**(28,123)**	(2,025)
Net assets released from restrictions	40,576	(40,576)	**0**	0
NET CHANGE DURING THE YEAR	**331,683**	**1,364,281**	**1,695,964**	**2,137,262**
Net assets of the endowment, beginning of year	6,759,901	32,473,835	**39,233,736**	37,096,474
NET ASSETS OF THE ENDOWMENT, END OF YEAR	**$ 7,091,584**	**$ 33,838,116**	**$ 40,929,700**	**$ 39,233,736**

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

STATEMENTS OF CASH FLOWS

with summarized financial information for the year ended June 30, 2018

In thousands of dollars	For the year ended June 30 2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Change in net assets	**$ 2,312,302**	$ 2,878,105
Adjustments to reconcile change in net assets to net cash (used in) operating activities:		
Depreciation	**382,775**	357,965
Amortization of premium and discount related to bonds and notes payable	**(27,272)**	(27,265)
Realized and change in unrealized (appreciation), net	**(2,611,556)**	(3,829,446)
Change in fair value of interest rate exchange agreements	**11,928**	(6,463)
Change in interests in trusts held by others	**(11,403)**	(11,807)
Change in liabilities due under split interest agreements	**30,786**	46,753
Gifts of donated securities	**(92,158)**	(179,131)
Proceeds from the sale of donated securities restricted for long term purposes	**14,198**	14,422
Gifts for restricted purposes	**(518,827)**	(528,138)
Loss on disposal of assets	**41,239**	8,281
Loss on sale of property		1,644
Change in accrued retirement obligations	**136,992**	(108,723)
Changes in operating assets and liabilities:		
Receivables,net	**4,937**	(39,417)
Prepayments and deferred charges	**(135,794)**	(224)
Pledges receivable, net	**(928,035)**	110,234
Accounts payable	**77,182**	(30,544)
Deferred revenue and other liabilities	**189,568**	397,015
NET CASH (USED IN) OPERATING ACTIVITIES	**(1,123,138)**	**(946,739)**
CASH FLOWS FROM INVESTING ACTIVITIES:		
Loans made to students, faculty, and staff	**(41,938)**	(48,451)
Payments received on student, faculty, and staff loans	**49,720**	47,521
Change in other notes receivable	**390**	2,198
Proceeds from the sales and maturities of investments	**15,001,898**	15,309,908
Purchase of investments	**(13,750,298)**	(14,671,506)
Change associated with repurchase agreements	**374,719**	700,881
Additions to fixed assets	**(994,830)**	(937,744)
Proceeds from sale of property		1,293
NET CASH PROVIDED BY INVESTING ACTIVITIES	**639,661**	**404,100**
CASH FLOWS FROM FINANCING ACTIVITIES:		
Change in overdrafts included in accounts payable	**(7,618)**	6,356
Change in split interest liability from new contributions, income and payments to annuitants	**(33,455)**	(25,076)
Proceeds from issuance of debt	**480,900**	453,767
Debt repayments	**(541,200)**	(556,671)
Proceeds from the sales of gifts of restricted securities	**77,960**	164,709
Contributions restricted for long term investment	**518,827**	528,138
Affiliated entity contributions and distributions, net	**397**	(16,343)
Change in government loan advances	**1,324**	(7,155)
NET CASH PROVIDED BY FINANCING ACTIVITIES	**497,135**	**547,725**
NET CHANGE IN CASH	**13,658**	**5,086**
Cash, beginning of year	**144,982**	**139,896**
CASH, END OF YEAR	**$ 158,640**	**$ 144,982**
Supplemental disclosure of cash flow information:		
Accounts payable related to fixed asset additions	$ 77,904	$ 109,181
Cash paid for interest	$ 209,923	$ 215,166

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

1. UNIVERSITY ORGANIZATION

Harvard University (the "University") is a private, not-for-profit institution of higher education with approximately 6,700 undergraduate and 13,400 graduate students. Established in 1636, the University includes the Faculty of Arts and Sciences, the John A. Paulson School of Engineering and Applied Sciences, the Division of Continuing Education, ten graduate and professional Schools, the Radcliffe Institute for Advanced Study, a variety of research museums and institutes, and an extensive library system to support the teaching and research activities of the Harvard community. The President and Fellows of Harvard College (the "Corporation"), a governing board of the University, has oversight responsibility for all of the University's financial affairs. The Corporation delegates substantial authority to the Schools and departments for the management of their resources and operations.

The University includes Harvard Management Company (HMC), a wholly owned subsidiary founded in 1974 to manage the University's investment assets. HMC is governed by a Board of Directors that is appointed by the Corporation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting and include the accounts of the University and affiliated organizations controlled by the University. Significant inter-affiliate accounts and transactions have been eliminated.

Funds transferred to the University on behalf of specific beneficiaries (agency funds) are recorded as assets and liabilities in the *Balance Sheets* and are not included in the *Statement of Changes in Net Assets with General Operating Account Detail*.

The financial statements include certain prior year summarized comparative information in total, not by net asset classification. This information is not presented in sufficient detail to conform to generally accepted accounting principles (GAAP). Accordingly, such information should be read in conjunction with the University's financial statements for the year ended June 30, 2018, from which the summarized information is derived. Certain prior year amounts have been reclassified to conform to current year presentation.

Net asset classifications

For the purposes of financial reporting, the University classifies resources into two net asset categories pursuant to any donor-imposed restrictions and applicable law. Accordingly, the net assets of the University are classified in the accompanying financial statements in the categories that follow:

WITHOUT DONOR RESTRICTIONS—Net assets not subject to donor-imposed restrictions. Funds invested in fixed assets and unrestricted endowment funds comprise 94% of the University's net assets without donor-imposed restrictions as of June 30, 2019. In addition, this category includes gifts and endowment income balances where the donor restriction has been met, University-designated loan funds, and other current funds.

WITH DONOR RESTRICTIONS—Net assets subject to legal or donor-imposed restrictions that will be satisfied either by actions of the University, the passage of time, or both. These net assets include net assets subject to donor-imposed restrictions that are invested to provide a perpetual source of income to the University. Generally, donors of these assets require the University to maintain and invest the original contribution in perpetuity, but permit the use of some or all investment returns for general or specific purposes. The appreciation on these perpetual contributions must be reported as net assets with donor restrictions until appropriated for spending in accordance with Massachusetts law. Also included in this category are gifts donated for a particular purpose and amounts subject to time restrictions such as funds pledged for future payment.

Revenues from sources other than contributions are generally reported as increases in net assets without donor restrictions. Expenses are reported as decreases in net assets without donor restrictions. Gains and losses on investments are reported as increases or decreases in net assets without donor restrictions, unless their use is restricted by donor stipulations or by law. Investment returns earned by restricted donor funds are initially classified as net assets with donor restrictions and then reclassified to net assets without donor restrictions when expenses are appropriated or incurred for their intended purpose. Expirations of donor restrictions on net assets are reported as reclassifications from net assets with donor restrictions to net assets without donor restrictions and appear as "Net assets released from restrictions" and "Non-operating net assets released from restrictions" in the *Statements of Changes in Net Assets*.

Liquidity and availability

As part of the University's liquidity management, it has a policy to structure its financial assets to be available as its general expenditures, liabilities and other obligations come due. A significant portion of the University's annual expenditures are funded by operating revenues in the current year including student income, sponsored support, endowment returns made available for operations, gifts for current use and other revenues.

The University's financial assets available within one year of the balance sheet date for general expenditure, such as operating expenses, scheduled principal payments on debt, and capital construction costs not financed with debt, are as follows (in thousands):

	June 30, 2019
FINANCIAL ASSETS	
Cash	$ 158,640
Receivables, net	296,321
Pledges receivables due in one year	221,587
Cash and short-term investments held separately by General Operating Account (GOA)[1,2]	1,013,861
Investment returns made available for operations in the following year[3]	2,175,806
TOTAL FINANCIAL ASSETS AVAILABLE WITHIN ONE YEAR	**$ 3,866,215**
LIQUIDITY RESOURCES	
Credit facility, undrawn balance	1,500,000
Taxable commercial paper, undrawn balance	2,000,000
TOTAL FINANCIAL ASSETS AND RESOURCES AVAILABLE WITHIN ONE YEAR	**$ 7,366,215**

1 *The University has a policy of maintaining a cash reserve floor outside of the General Investment Account (GIA) of $800 million.*
2 *This is net of collateral on US government securities of $22,166.*
3 *Within its investment pools as of June 30, 2019, the University holds $2.1 billion in cash and cash equivalents and $2.2 billion of unencumbered US government securities that could be liquidated in one day that could be used to fund this amount.*

Endowment and GOA returns liquidated from investments and made available for operations over the course of the fiscal year are distributed to University department and program budgets to spend, subject to donor restrictions where applicable.

While the University has no intention of doing so, there are additional investments held by the University and the endowment that could be liquidated in the event of an unexpected disruption. While a portion of the endowment is subject to donor restrictions, there is $7.1 billion in endowment funds without donor restrictions and $3.7 billion of General Operating Account investments (GOA) that could be accessed with the approval of the Corporation and subject to the redemption provisions described in *Note 3*.

Revenue recognition

Revenue is recognized when control of promised goods or services is transferred to customers, in an amount that reflects the consideration the University expects to be entitled to in exchange for those goods or services.

Student income is derived from degree programs as well as executive and continuing education programs and includes tuition, fees, and board and lodging. Student income is recognized ratably over the academic period of the course or program offered based on time elapsed and scholarships awarded to students reduce the amount of revenue recognized. The University's individual schools have various billing and academic cycles and the majority of our programs are completed within the fiscal year. Student income received in advance of services to be rendered are recorded as deferred revenue which totaled $213.7 million and $209.5 million, respectively, for the periods ended June 30, 2019 and 2018, which are primarily recognized in the subsequent fiscal year.

Total student income of $1.2 billion and $1.1 billion was recorded during the years ended June 30, 2019 and 2018, respectively. Student tuition, fees, board and lodging at published rates is summarized as follows for the years ended June 30, 2019 and 2018 (in thousands of dollars):

	2019	2018
Undergraduate program	**$ 339,475**	$ 327,171
Graduate and professional degree programs	**605,833**	585,797
Continuing education and executive programs	**516,077**	458,047
Board and lodging	**196,822**	190,495

Scholarships applied to student charges were $457,369 and $439,445 for the years ended June 30, 2019 and 2018, respectively.

Unconditional contributions including pledges are recognized immediately and classified as either net assets with donor restrictions or net assets without donor restrictions. Conditional contributions for which cash is received are accounted for as a liability within deferred revenue.

Sponsored support of $937 million includes support from governmental and private sources. Certain sponsored arrangements are considered exchange arrangements, and revenue under these agreements is recognized based on the University's fulfillment of the contract, which is typically based on costs incurred or the achievement of milestones. Other sponsored support is considered contribution revenue, which is recognized when any donor-imposed conditions have been met, if applicable. Sponsored conditional contributions received, where the barrier to entitlement is not yet overcome are recorded as deferred revenues of $51.2 million and $52.2 million as of June 30, 2019 and 2018, respectively. As of June 30, 2019, the University also had $1.3 billion awarded but not yet expended contributions related to sponsored programs where the condition had not yet been met. This is subject to federal appropriations. Funding received in advance of recognition is recorded as deferred revenue.

Other revenue of $772.0 million includes several revenue streams considered exchange contracts with customers totalling $648.7 million for fiscal year 2019. These revenues are recognized at the point in time goods or services are provided. Deferred revenues related to other income of $109.0 million and $111.6 million were recorded as of June 30, 2019 and 2018, which are primarily recognized in the subsequent fiscal year.

Measure of operations

Revenues earned, expenses incurred, and returns made available for operations for the purpose of teaching, conducting research, and the other programs and services of the University are the components of "Net operating surplus" in the *Statement of Changes in Net Assets with General Operating Account Detail*. The University's non-operating activity within the *Statement of Changes in Net Assets with General Operating Account Detail* includes contributions to the University's building construction and renovation funds, investment returns (net of amounts made available for operations), change in pledge balances, long-term benefit plan obligation funding changes, and other infrequent transactions.

Collections

The University's vast array of museums and libraries contains priceless works of art, historical treasures, literary works, and artifacts. These collections are protected and preserved for public exhibition, education, research, and the furtherance of public service. They are neither disposed of for financial gain nor encumbered in any manner. Accordingly, such collections are not recorded for financial statement purposes.

Insurance programs

The University, together with the Harvard-affiliated teaching hospitals, has formed a captive insurance company, Controlled Risk Insurance Company (CRICO), to provide limited professional liability, general liability, and medical malpractice insurance for its shareholders. The University self-insures a portion of its professional liability and general liability programs and maintains a reserve for incurred claims, including those related to Harvard Medical School activities not occurring in the affiliated teaching hospitals. CRICO provided malpractice coverage applies with no deductible for medical professionals practicing within Harvard's University Health Services department, the School of Dental Medicine, and the T.H. Chan School of Public Health. The University also maintains reserves for the self-insured portion of claims related to automobile liability, property damage, and workers' compensation; these programs are supplemented with commercial excess insurance above the University's self-insured limit. In addition, the University is self-insured for unemployment, the primary retiree health plan, and all health and dental plans for active employees. The University's claims liabilities are recognized as incurred, including claims that have been incurred but not reported, and are included in operating expenses.

Tax

The University is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.

On December 22, 2017, the Tax Cuts and Jobs Act (the "Act") was enacted. The Act impacts the University in several ways, including the addition of excise taxes on executive compensation and net investment income, as well as new rules for calculating unrelated business taxable income. The University recorded an estimated $49.8 million of related tax expense based on reasonable estimates under the currently available regulatory guidance of the Act. Of the total tax expense, $37.7 million reflects the estimated net investment income tax related to investments and $12.1 million relates to estimated net investment income tax on operational revenues, changes to unrelated business taxable income and excise taxes on executive compensation. The University continues to evaluate the impact of the Act on current and future tax positions.

Use of estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect reported amounts and disclosures. Actual results could differ from those estimates.

New accounting pronouncements

In 2019, the University adopted ASU 2016-14, *Presentation of Financial Statements for Not-for-Profit Entities*. This guidance is intended to improve the net asset classification requirements and the information presented in the financial statements and notes. The standard requires the University to reclassify its net assets (i.e., unrestricted, temporarily restricted, and permanently restricted) into two categories: net assets without donor restrictions and net assets with donor restrictions. In addition, underwater endowment funds are to be recognized as a reduction in net assets with donor restrictions and enhanced disclosures are required for board-designated amounts *(Note 8)*, liquidity and availability of financial assets *(Note 2)*, and expenses by both their natural and functional classification *(Note 17)*.

As a result of adopting this standard, certain amounts as of June 30, 2018 were reclassified to conform to the presentation requirements as follows:

	ASU 2016-14 Classifications		
	Without donor restrictions	With donor restrictions	Total Net Assets
NET ASSETS CLASSIFICATIONS			
As previously presented:			
Unrestricted	$11,349,637		$11,349,637
Temporarily Restricted		$26,660,015	26,660,015
Permanently Restricted		8,954,532	8,954,532
Net assets	$ 11,349,637	$35,614,547	$46,964,184
Reclassifications to implement ASU 2016-14:			
Underwater endowments	2,648	(2,648)	0
Net assets, as restated	$11,352,285	$35,611,899	$46,964,184

In May 2014, the Financial Accounting Standards Board (FASB) issued ASU 2014-09, *Revenue from Contracts with Customers (ASC 606)* which outlines a single comprehensive revenue model for entities to use in accounting for revenue arising from contracts with customers. The guidance supersedes most current revenue recognition guidance, including industry-specific guidance, and 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 that revenue as performance obligations are satisfied. The University adopted ASC 606 as of July 1, 2018 using the modified retrospective transition method—i.e., by recognizing the cumulative effect of initially applying ASC 606 as an adjustment to the opening balance of net assets at July 1, 2018. The University elected to apply the standard only to contracts that are not completed as of that date therefore, the comparative information has not been adjusted and continues to be reported under the prior guidance. The guidance did not have a significant impact on the University's consolidated financial statements.

In June 2018, the FASB issued ASU 2018-08, *Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made*. The new guidance clarifies the definition of an exchange transaction and the criteria for evaluating whether contributions are unconditional or conditional. Effective July 1, 2018, the University adopted ASU 2018-08 simultaneously with adoption of the new revenue standard, using the modified prospective transition method. The guidance did not have a significant impact on the University's consolidated financial statements.

In August 2018, the FASB issued ASU 2018-13, *ASC 820 Fair Value Measurement*. The new guidance simplifies fair value measurement disclosures through the removal and modification of a number of investment related disclosure requirements. Certain disclosures are no longer required including amount of and reasons for transfers between Levels 1 and 2; policy for timing of transfers between levels and valuation processes for Level 3 investments. The ASU is effective for fiscal year 2021 for the University. The University early adopted the standard in fiscal year 2019.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, which address certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This guidance allows an entity to choose, investment-by-investment, to report an equity investment that neither has a readily determinable fair value, nor qualifies for the practical expedient for fair value estimation using net asset value (NAV), at its cost minus impairment (if any), plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issue. Impairment of such investments must be assessed qualitatively at each reporting period. Entities must disclose their financial assets and liabilities by measurement category and form of asset either on the face of the statement of financial position or in the accompanying notes. The ASU is effective for fiscal year 2020 for the University. The provision to eliminate the requirement to disclose the fair value of financial instruments measured at cost (such as the fair value of debt) was early adopted by the University in fiscal year 2016. The University is currently evaluating the impact of the remaining new guidance on the consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases,* which requires a lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in its balance sheet. The guidance also expands the required quantitative and qualitative disclosures surrounding leases. The ASU is effective for fiscal year 2020 for the University. The University is evaluating the impact of the new guidance on the consolidated financial statements.

In November 2016, the FASB issued clarifying guidance on ASU 2016-18, *Restricted Cash (Topic 230): Statement of Cash Flows*. The amendments in the update require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should 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 amendments in the update do not provide a definition of restricted cash or restricted cash equivalents. The ASU is effective for fiscal year 2020 for the University. The University is evaluating the impact of the new guidance on the consolidated financial statements.

In March 2017, the FASB issued final guidance on ASU 2017-07, *Compensation — Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.* Presently, net benefit cost is reported as an employee cost within operating income (or capitalized into assets where appropriate). The amendment requires the bifurcation of net benefit cost. The service cost component will be presented with other employee costs in operating income (or capitalized in assets). The other components will be reported separately outside of operations, and will not be eligible for capitalization. The ASU is effective for fiscal year 2020 for the University. The University is evaluating the impact of the new guidance on the consolidated financial statements.

3. INVESTMENTS

Investments are presented at fair value in accordance with GAAP and under the guidelines prescribed by the HMC investment valuation policy, which is reviewed and approved by the HMC Board of Directors on an annual basis.

The majority of the University's investments are managed by HMC in the GIA, a pooled investment account that consists primarily of endowment assets. Certain other investments such as cash, short-term investments, split interest agreements, and other assets, are managed separately from the GIA.

The University's investment holdings as reported on the *Balance Sheets* are summarized in the following table (in thousands of dollars):

	2019	2018
Investment portfolio assets		
Pooled general investment account assets	**$ 44,875,461**	$ 44,113,615
Other investments	**1,848,509**	1,533,984
Investment portfolio, at fair value	**46,723,970**	**45,647,599**
Securities pledged to counterparties, at fair value	**49,971**	162,790
TOTAL INVESTMENT ASSETS	**46,773,941**	**45,810,389**
Pooled general investment account liabilities	**847,732**	869,020
Interest rate exchange agreement	**27,409**	15,481
TOTAL OTHER LIABILITIES ASSOCIATED WITH THE INVESTMENT PORTFOLIO	**875,141**	**884,501**
TOTAL INVESTMENTS, NET	**$ 45,898,800**	**$ 44,925,888**

As of June 30, 2019 and 2018, University's net investments were comprised of the following components (in thousands of dollars):

	2019	2018
POOLED GENERAL INVESTMENT ACCOUNT		
Endowment[1]	**$ 38,843,726**	$ 37,731,389
General operating account	**3,716,277**	4,154,494
Split interest agreements	**780,737**	820,725
Other internally designated funds	**736,960**	700,777
TOTAL POOLED GENERAL INVESTMENT ACCOUNT NET ASSETS	**$ 44,077,700**	**$ 43,407,385**
OTHER INVESTMENTS OUTSIDE THE GENERAL INVESTMENT ACCOUNT		
General operating and other investments[2]	**1,168,724**	917,664
Split interest agreements	**652,376**	600,839
TOTAL OTHER INVESTMENTS OUTSIDE THE GENERAL INVESTMENT ACCOUNT	**$ 1,821,100**	**$ 1,518,503**
TOTAL INVESTMENTS, NET	**$ 45,898,800**	**$ 44,925,888**

[1] *Includes only the portion of the endowment invested in the GIA and excludes pledges, interests in trusts held by others, other non-GIA investments, and GIA interest and dividends net of all internal and external management fees and expenses.*
[2] *Consists primarily of repurchase agreements, US government securities, and money markets of $1,036,080 and $754,940 as of June 30, 2019 and 2018, respectively.*

Investment return

A summary of the University's total return on investments for fiscal years 2019 and 2018 is presented below (in thousands of dollars):

	2019	2018
Return on pooled general investment account:		
Realized and change in unrealized appreciation, net	**$ 2,612,986**	$ 3,833,460
Interest, dividends, fees, and expenses, net	**42,631**	55,199
Total return on pooled general investment account[1]	**2,655,617**	**3,888,659**
Return on other investments:		
Realized and change in unrealized (depreciation), net	**(1,430)**	(4,014)
Interest, dividends, fees, and expenses, net	**52,619**	38,585
Total return on other investments	**$ 51,189**	**$ 34,571**
Realized and change in unrealized (depreciation)/appreciation on interest rate exchange agreement, net	**(13,880)**	4,010
TOTAL RETURN ON INVESTMENTS[2]	**$ 2,692,926**	**$ 3,927,240**

[1] *Net of all internal and external management fees and expenses.*
[2] *Total return on investments is comprised of returns on the endowment, GOA, Split Interest Agreements and other.*

Fair value hierarchy

The University's investments have been categorized based upon the fair value hierarchy in accordance with ASC 820, which prioritizes the inputs to valuation techniques used to measure fair value of investment assets and liabilities into three levels:

LEVEL 1 Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

LEVEL 2 Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly;

LEVEL 3 Prices or valuations that require inputs that are significant to the fair value measurement, unobservable, and/or require the University to develop its own assumptions.

Investments in externally managed funds where the University utilizes net asset values (as reported by external managers) as a practical expedient for fair value measurements are excluded from the fair value hierarchy.

The level of an asset or liability within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The University endeavors to utilize all relevant and available information in measuring fair value.

The following is a summary of the levels within the fair value hierarchy for those investment assets and liabilities subject to fair value measurement as of June 30, 2019 and 2018 (in thousands of dollars):

	2019					2018
	Level 1	Level 2	Level 3	NAV as Practical Expedient	Total	Total
ASSETS:[1]						
Cash and short-term investments	$ 1,335,905				**$ 1,335,905**	**$ 1,407,841**
Repurchase agreements		$ 774,644			**774,644**	**1,149,363**
Domestic equity	526,046			$ 3,067,435	**3,593,481**	**4,990,487**
Foreign equity	939,428			1,353,879	**2,293,307**	**2,401,770**
Global equity				1,660,465	**1,660,465**	**2,008,253**
Domestic fixed income	1,505,039				**1,505,039**	**1,505,967**
Foreign fixed income	25,597				**25,597**	**25,141**
Emerging market equity and debt	634,107			2,593,954	**3,228,061**	**2,562,035**
High yield	2,898		$ 234,110		**237,008**	**145,132**
Hedge funds				14,592,876	**14,592,876**	**12,814,216**
Private equity			227,244	10,028,510	**10,255,754**	**8,527,921**
Natural resources	12,878		1,878,205	22,972	**1,914,055**	**2,254,809**
Real estate			48,644	3,561,775	**3,610,419**	**4,005,056**
Inflation-indexed bonds	871,832				**871,832**	**847,163**
Due from brokers	91	44,350	4,638		**49,079**	**5,824**
Other investments	6,558	3,626	7,609		**17,793**	**12,022**
INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 5,860,379**	**$ 822,620**	**$ 2,400,450**	**$ 36,881,866**	**$ 45,965,315**	**$ 44,663,000**
Other investment assets not subject to fair value[2]					**808,626**	**1,147,389**
TOTAL INVESTMENT ASSETS[6]					**$ 46,773,941**	**$ 45,810,389**
Interests in trusts held by others[3]			420,371		**420,371**	**408,968**
NON-INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING			**$ 420,371**		**$ 420,371**	**$ 408,968**
TOTAL ASSETS					**$ 47,194,312**	**$ 46,219,357**
LIABILITIES:[1]						
Due to brokers[4]		$ 33,912			**$ 33,912**	**$ 115,386**
Other liabilities subject to fair value			$ 288,372		**288,372**	**223,601**
INVESTMENT LIABILITIES SUBJECT TO FAIR VALUE LEVELING		**$ 33,912**	**$ 288,372**		**$ 322,284**	**$ 338,987**
Other investment liabilities not subject to fair value[5]					**552,857**	**545,514**
TOTAL INVESTMENT LIABILITIES[6]					**$ 875,141**	**$ 884,501**
Liabilities due under split interest agreements[3]		$ 859,744			**859,744**	**862,413**
NON-INVESTMENT LIABILITIES SUBJECT TO FAIR VALUE LEVELING		**$ 859,744**			**$ 859,744**	**$ 862,413**
TOTAL LIABILITIES					**$ 1,734,885**	**$ 1,746,914**

[1] *Certain prior year amounts have been reclassified to conform to current year presentation.*

[2] *As of June 30, 2019, other assets not subject to fair value consists primarily of receivables for transactions that settled subsequent to the balance sheet date of $599,651, before eliminating inter-company balances, and consolidated assets of $159,745. As of June 30, 2018, other assets not subject to fair value consist primarily of receivables for transactions that settled subsequent to the balance sheet date of $922,438, before eliminating inter-company balances, and consolidated assets of $162,922.*

[3] *Amounts excluded from investments and included separately on the University's* Balance Sheets.

[4] *Includes fair value of an interest rate exchange agreement on the University's debt portfolio of $27,409 and $15,481 as of June 30, 2019 and 2018, respectively.*

[5] *As of June 30, 2019 and 2018, other liabilities not subject to fair value include consolidated liabilities of $199,693 and $200,631, respectively.*

[6] *As of June 30, 2019 and 2018, total investment assets, net equal $45,898,800 and $44,925,888, respectively.*

The following is a rollforward of Level 3 investments for the year ended June 30, 2019 and the condensed June 30, 2018 rollforward of Level 3 investments (in thousands of dollars):

	Beginning balance as of July 1, 2018	Net realized gains/(losses)	Net change in unrealized appreciation (depreciation)[1]	Purchases/ contributions	Sales/ distributions	Transfers out of Level 3	Ending balance as of June 30, 2019
INVESTMENT ASSETS:							
High yield	$ 133,027	$ 1,368	$ (642)	$ 165,240	$ (64,883)		**$ 234,110**
Private equity	158,070	2,562	(3,187)	69,799			**227,244**
Natural resources	2,183,270	(78,604)	(141,475)	83,190	(168,176)		**1,878,205**
Real estate	230,214	2,848	(989)	86	(11,481)	$ (172,034)	**48,644**
Due from brokers	4,640		(2)				**4,638**
Other investments	1,662		(53)	7,125	(1,125)		**7,609**
INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 2,710,883**	**$ (71,826)**	**$ (146,348)**	**$ 325,440**	**$ (245,665)**	**$ (172,034)**	**$ 2,400,450**
Interests in trusts held by others	408,968		11,403				**420,371**
NON-INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 408,968**		**$ 11,403**				**$ 420,371**
TOTAL ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 3,119,851**	**$ (71,826)**	**$ (134,945)**	**$ 325,440**	**$ (245,665)**	**$ (172,034)**	**$ 2,820,821**
INVESTMENT LIABILITIES:							
Other liabilities subject to fair value	$ 223,601		$ (11,190)	$ 82,854	$ (6,893)		**$ 288,372**
TOTAL LIABILITIES SUBJECT TO FAIR VALUE LEVELING	**$ 223,601**	**$ 0**	**$ (11,190)**	**$ 82,854**	**$ (6,893)**	**$ 0**	**$ 288,372**
NET ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 2,896,250**	**$ (71,826)**	**$ (123,755)**	**$ 242,586**	**$ (238,772)**	**$ (172,034)**	**$ 2,532,449**

1 *Total change in unrealized appreciation/(depreciation) relating to Level 3 investment assets and investment liabilities still held by the University at June 30, 2019 is $(221,663) and is reflected in "Realized and change in unrealized appreciation/(depreciation), net" in the* Statements of Changes in Net Assets.

	Beginning balance as of July 1, 2017	Net realized gains/(losses)	Net change in unrealized appreciation (depreciation)[1]	Purchases/ contributions	Sales/ distributions	Transfers into Level 3	Transfers out of Level 3	Ending balance as of June 30, 2018
PRIOR YEAR NET ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 8,267,471**	**$ (945,127)**	**$ 789,301**	**$ 513,420**	**$ (2,519,985)**	**$ 0**	**$ (3,208,830)**	**$ 2,896,250**

1 *Total change in unrealized appreciation/(depreciation) relating to Level 3 investment assets and investment liabilities still held by the University at June 30, 2018 is $(183,672) and is reflected in "Realized and change in unrealized appreciation/(depreciation), net" in the* Statements of Changes in Net Assets.

During fiscal year 2018, the University unwound its direct real estate investing platform and engaged an external investment manager to manage these assets in an investment vehicle, resulting in a transfer out of Level 3 of $3.2 billion of investment assets.

Investment strategy and risk

The University utilizes a number of wholly-owned subsidiary entities to support its investment activities. The consolidated financial statements include all assets, liabilities, income, and expenses associated with these entities and intercompany accounts and transactions have been eliminated during consolidation.

The University's investment strategy incorporates a diversified asset allocation approach and maintains, within defined limits, exposure to the movements of the global public and private equity, fixed income, real estate, and commodities markets. Exposure to these markets is achieved through direct investments in individual securities, investments in special purpose vehicles and/or through investments in vehicles advised by external managers.

Investments in global markets involve a multitude of risks such as price, interest rate, market, sovereign, currency, liquidity, and credit risks, amongst many others. Additionally, the University's direct investments in natural resources expose it to a unique set of risks, namely environmental, social, and geopolitical risks in some of the jurisdictions where these direct investments reside. The University manages exposure to these risks through established policies and procedures related to its ongoing investment diligence and operational due diligence programs. The University also considers manager concentration risk. As of June 30, 2019, 22% of the GIA NAV was invested across 5 diversified fund managers. The University anticipates that the value and composition of its investments may, from time to time, fluctuate substantially in response to any or all of the risks described herein.

Liquidity

Cash and short-term investments are recorded at cost, which approximates fair value, and includes cash in bank accounts, institutional money market funds, and other temporary investments held for working capital purposes with original maturities of three months or less. Cash and short-term investments do not include cash balances held as collateral by the University. Cash and short-term investment balances designated for investment purposes are included in the "Investment portfolio, at fair value" in the *Balance Sheets*.

The University has various sources of liquidity at its disposal within its investment pools, including approximately $2.1 billion in cash and cash equivalents (including money markets of $1.3 billion and repurchase agreements of $0.8 billion) at June 30, 2019. In addition, the University estimates that as of the balance sheet date, it could have liquidated additional unencumbered US government securities of $2.2 billion within one business day (assuming typical settlement terms) to meet any immediate short-term needs of the University (unaudited).

Repurchase agreements

The University *Balance Sheets* display the assets generated by repurchase transactions. The University enters into these transactions under agreements containing master netting arrangements. The University requires the fair value of the collateral exchanged under these agreements to be equal to or in excess of the total amount of the agreement, including interest where applicable. At June 30, 2019 and 2018, the University had gross asset repurchase agreements of $0.8 billion and $1.1 billion, respectively, which were fully collateralized. The University does not offset repurchase agreements that are subject to master netting arrangements or similar arrangements on the University's *Balance Sheets*.

Dividend and interest income

Dividend income is recognized net of applicable withholding taxes on the ex-dividend date. Non-cash dividends are recorded at the fair value of the securities received. Interest income and expense is recorded net of applicable withholding taxes, on an accrual basis. The University amortizes bond premiums and accretes bond discounts using the effective yield method and when cash collection is expected.

Traded securities

Instruments listed or traded on a securities exchange are valued at the last quoted price on the primary exchange where the security is traded. Where there is no readily available closing price on the valuation date, long positions are valued at the bid price and short positions are valued at the ask price. Restrictions that are attached to a security are factored into the valuation of that security, reflective of the estimated impact of those restrictions. Investments in non-exchange traded debt and equity instruments are primarily valued using inputs provided by independent pricing services or by broker/dealers who actively make markets in these securities.

Derivatives

The University uses a variety of financial instruments with off-balance sheet risk involving contractual or optional commitments for future settlement, which are exchange traded or executed over the counter (OTC). These instruments are used to (1) manage exposure to certain asset classes and/or various market risks, (2) arbitrage mispricings of related securities and (3) to manage the interest, cost and risk associated with its outstanding and/or future debt. These instruments are classified as due to/from brokers and may include option, swap, credit default, interest rate, and forward contracts. These types of instruments are primarily valued using industry standard models with independent market inputs, or by broker quotes. Inputs such as prices, spreads, curves, and/or broker quotes are evaluated for source reliability and consistency with industry standards. Counterparty marks obtained and utilized to determine daily collateral requirements are also used to corroborate input reasonability. The University considers current market conditions including interest rate and credit risks in its evaluation of inputs, pricing methodologies, and models utilized to determine fair values.

In connection with its derivative activities, the University generally maintains master netting agreements and collateral agreements with its counterparties. These agreements provide the University the right, in the event of default by the counterparty (such as bankruptcy or a failure to pay or perform), to net a counterparty's rights and obligations under the agreement and to liquidate and offset collateral against any net amount owed by the counterparty. Collateral, generally in the form of debt obligations issued by the US Treasury, is exchanged on a daily basis as required by fluctuations in the market.

Specific credit limits are established for counterparties based on their individual credit ratings. Credit limits are monitored daily by the University and are adjusted according to policy, as necessary. Some of the financial instruments entered into by the University contain credit-risk-related contingency features that allow the parties to the agreement to demand immediate payment for outstanding contracts and/or collateral.

The following table presents information about the University's derivatives by primary risk exposure for the years ended June 30, 2019 and 2018 (in thousands of dollars):

	As of June 30, 2019			For the year ended June 30, 2019	As of June 30, 2018			For the year ended June 30, 2018
Primary risk exposure	Average Quarterly Notional	Gross derivative assets	Gross derivative liabilities	Net profit/ (loss)[4]	Average Quarterly Notional	Gross derivative assets	Gross derivative liabilities	Net profit/ (loss)[4]
Equity instruments	$ 1,686,686	$ 63,618	$ 25,824	$ 10,413	$ 3,623,341	$ 37,826	$ 123,157	$ 351,485
Fixed income instruments[1]	117,000		27,409	(13,880)	117,000		15,481	4,010
Currency instruments	1,151,191	527	468	(1,408)	2,450,565	87,538	101,058	(91,194)
Credit instruments	4,726	4,723		12	4,792	4,770		(9)
SUBTOTAL		**$ 68,868**	**$ 53,701**	**$ (4,863)**		**$ 130,134**	**$ 239,696**	**$ 264,292**
TOTAL COUNTERPARTY NETTING		**(19,789)**	**(19,789)**			**(124,310)**	**(124,310)**	
NET AMOUNTS INCLUDED IN THE BALANCE SHEETS[3]		**49,079**	**33,912**			**5,824**	**115,386**	
Collateral								
Cash collateral received/posted						871		
Securities collateral received/ posted[5]		52,579	26,690			4,032	135,934	
TOTAL COLLATERAL		**52,579**	**26,690**			**4,903**	**135,934**	
NET AMOUNT		**(3,500)**	**7,222**			**921**	**(20,548)**	
NET AMOUNT IN ACCORDANCE WITH ASC 210[6]		**$ 0**	**$ 7,222**			**$ 921**	**$ 0**	

[1] *For the year ended June 30, 2019, balances include a gross derivative liability of $27,409 and a net realized and change in unrealized loss of $(13,880), related to an interest rate exchange agreement on the University's debt portfolio. For the year ended June 30, 2018, balances include a gross derivative liability of $15,481 and a net realized and change in unrealized gain of $4,010 related to an interest rate exchange agreement on the University's debt portfolio. These positions are further discussed in* Note 10.

[2] *GAAP permits the netting of derivative assets and liabilities and the related cash collateral received and paid when a legally enforceable master netting agreement exists between the University and a derivative counterparty.*

[3] *Included within the "Investment portfolio, at fair value" and "Other liabilities associated with the investment portfolio" line items of the* Balance Sheets.

[4] *Included within "Realized and change in unrealized appreciation/(depreciation), net" within the* Statements of Changes in Net Assets.

[5] *Includes securities posted to meet initial margin requirements on exchange traded futures.*

[6] *Excludes any over-collateralized amounts in accordance with ASC 210.*

External advisors

Investments managed by external advisors include investments in private equity, real estate, natural resources, hedge funds, and other externally managed funds. The majority of these investments are not readily marketable and are reported at NAV utilizing the most current information provided by the external advisor, subject to assessments that the information is representative of fair value and in consideration of any additional factors deemed pertinent to the fair value measurement. The University evaluates these external advisors through ongoing due diligence and operational oversight, which includes an analysis of an advisor's use of and adherence to fair value principles.

The University generally utilizes its capital account balance as a practical expedient to fair value measurements for funds managed by external advisors. To evaluate the adequacy of these fair value measurements, the University has assessed factors including, but not limited to, the external advisor's adherence to fair value principles in calculating the capital account balance, the existence of transactions at NAV at the measurement date and the existence or absence of certain restrictions at the measurement date.

The University, as an investor, has commitments to make periodic contributions in future periods to the investments managed by external advisors. The amounts of these expected disbursements as of June 30, 2019 and 2018 are disclosed below (in thousands of dollars):

	As of June 30, 2019			As of June 30, 2018		
	Fair value[1]	Remaining unfunded commitments	Estimated remaining life[2]	Fair value[1]	Remaining unfunded commitments	Estimated remaining life[2]
Private equity funds	$ 8,351,163	$ 6,885,617	4 – 10	$ 6,848,285	$ 6,475,884	4 – 10
Real estate funds	3,556,511	1,702,201	4 – 10	3,900,327	1,542,336	4 – 10
Other externally managed funds[3]	3,253,362	2,112,165	2 – 8	2,421,899	2,868,214	2 – 8
TOTAL	**$ 15,161,036**	**$ 10,699,983**		**$ 13,170,511**	**$ 10,886,434**	

[1] *Represents the fair value of the funded portion of investments with remaining unfunded commitments.*
[2] *The estimated remaining lives of these funds, expressed in years, are forward-looking projections based on the University's estimates and could vary significantly depending on the investment decisions of external managers, changes in the University's investment portfolio, and other circumstances.*
[3] *Investments in externally managed funds primarily include exposures to hedge funds and natural resources.*

Investments in externally managed funds generally have limited redemption options for investors and, subsequent to final closing, may or may not permit subscriptions by new or existing investors. These entities may also have the ability to impose gates, lockups, and other restrictions on an investor's ability to readily redeem out of their investment interest in the fund.

Direct investments

Direct investments in natural resources and private equity are primarily valued using a combination of independent appraisals and/or one or more industry standard valuation techniques (e.g., income approach, market approach, or cost approach). The income approach is primarily based on the investment's anticipated future income using one of two principal methods: the discounted cash flow method or the capitalization method. Inputs and estimates developed and utilized with these techniques may be subjective, unobservable, and require judgment regarding significant matters such as estimating the amount and timing of future cash flows, forward pricing assumptions, and the selection of discount and capitalization rates that appropriately reflect market and credit risks. The market approach derives investment value through comparison to recent and relevant market transactions with similar investment characteristics. The cost approach is utilized when the cost of the investment is determined to be the best representation of fair value. This method is typically used for newly purchased or undeveloped assets. When applicable, the University examines market data and collaborates closely with independent appraisers to arrive at the best estimation of fair value for each respective asset. The HMC Board of Directors discusses the valuation process and results with HMC management, and makes determinations on significant matters impacting valuation that may arise from time to time.

The following table presents the ranges of significant unobservable inputs used to value the University's Level 3 assets. While the inputs described below represent the range of inputs utilized as of the measurement date, these inputs may change over time, which may have a material effect on the valuation of these types of investments in the future.

	As of June 30, 2019			As of June 30, 2018	
Significant unobservable input by asset class[1,3,4]	Level 3 investments subject to fair value (in thousands of dollars)[2]	Range of inputs utilized in valuation model[3]	Weighted average of inputs utilized in valuation model	Level 3 investments subject to fair value (in thousands of dollars)[2]	Range of inputs utilized in valuation model[3]
Natural resources:	$ 1,878,205			$ 2,183,270	
Income approach discount rate		6.0% – 16.0%	10.2%		5.0% – 16.0%
Price per planted hectare		$1,073 – $164,937	$43,431		$1,386 – $158,900
Price per gross hectare		$168 – $57,422	$15,231		$118 – $51,559
Discount for lack of marketability		2.0% – 20.0%	9.0%		
High yield:	233,681			106,481	
Income approach discount rate					8.6%
Shadow rating discount rate		6.8% – 8.9%	8.0%		8.4% – 9.9%
Collateral coverage market risk factor		100%	100%		100%
EBITDA multiple		11.3x – 13.5x	11.9x		
Weighted average cost of capital					7.1% – 10.9%
Real estate:	32,661			40,669	
Income approach discount rate		11.5% – 13.5%	12.5%		13.0% – 13.5%
Income approach growth rate		3.0%	3.0%		3.0%
Discount for lack of marketability		15.0%	15.0%		15.0%
Private equity:	69,430			87,236	
Income approach discount rate		6.0% – 8.0%	7.0%		6.0% – 8.0%
Book value multiplier		0.6x	0.6x		0.8x
Net income multiple					5.0x
Other liabilities subject to fair value	(288,372)			(158,008)	
Loan to value		8.7% – 43.5%	22.4%		8.5% – 44.0%
Market interest rate		2.5% – 10.5%	5.1%		2.5% – 15.0%
NET AMOUNT	**$ 1,925,605**			**$ 2,259,648**	

1 *The fair value of investments may be determined using multiple valuation techniques.*
2 *Included within Level 3 investments is $606,844 and $636,602 as of June 30, 2019 and 2018, respectively, which were valued using other inputs including, but not limited to, single source broker quotations, third party pricing, and transactions.*
3 *The range of inputs encompasses a variety of investment types within each asset class.*
4 *Certain prior year amounts have been reclassified to conform to current year presentation.*

4. RECEIVABLES

The major components of receivables, net of reserves for doubtful accounts of $12.2 million and $12.9 million as of June 30, 2019 and 2018, respectively, were as follows (in thousands of dollars):

	2019	2018
Federal sponsored support	**$ 71,425**	$ 72,148
Publications	**62,872**	60,424
Executive education	**62,842**	66,837
Tuition and fees	**19,146**	20,479
Non-federal sponsored support	**10,821**	14,030
Gift receipts	**4,430**	22,510
Other	**64,785**	44,830
TOTAL RECEIVABLES, NET	**$ 296,321**	**$ 301,258**

5. NOTES RECEIVABLE

Notes receivable are recorded initially at face value plus accrued interest, which approximates fair value. Notes receivable, and related allowance for doubtful accounts, were as follows (in thousands of dollars):

	2019			2018		
	Receivable	Allowance	Net	Receivable	Allowance	Net
Student Loans:						
Government revolving	$ 49,213	$ 1,266	**$ 47,947**	$ 59,941	$ 1,433	**$ 58,508**
Institutional	86,467	2,481	**83,986**	87,206	2,372	**84,834**
Federally insured	344	159	**185**	371		**371**
Total student loans	136,024	3,906	**132,118**	147,518	3,805	**143,713**
Faculty and staff loans	234,148	179	**233,969**	230,335	179	**230,156**
Other loans	29,475	21,939	**7,536**	30,989	23,063	**7,926**
TOTAL	**$ 399,647**	**$ 26,024**	**$ 373,623**	**$ 408,842**	**$ 27,047**	**$ 381,795**

Government revolving loans are funded principally with federal advances to the University under the Perkins Loan Program and certain other programs. These advances totaled $66.7 million and $65.4 million as of June 30, 2019 and 2018, respectively, and are classified as liabilities in the *Balance Sheets*. During fiscal year 2018, the Perkins Loan Program ended and as a result the University made the first of its annual required repayments to the government. In fiscal year 2019 an annual repayment was not due while the Department of Education calculates the reimbursement owed to the University for public service cancellations since fiscal year 2010, as required by law. Interest earned on the revolving and institutional loan programs is reinvested to support additional loans. The repayment and interest rate terms of the institutional loans vary considerably.

Faculty and staff notes receivable primarily consists of mortgage and educational loans. Mortgages include shared appreciation loans, loans that bear interest at the applicable federal rate and interest-free loans. In addition, certain mortgages that bear interest at the current market rate or applicable federal rate may be subsidized for an initial period. The educational loans are primarily zero-interest loans.

The University assesses the adequacy of the allowance for doubtful accounts by evaluating the loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the economic environment in which the borrowers operate, the level of delinquent loans, the value of any collateral, and, where applicable, the existence of any guarantees or indemnifications. In addition to these factors, the University reviews the aging of the loans receivable and the default rate in comparison to prior years. The allowance is adjusted based on these reviews. The University considers the allowance at June 30, 2019 and 2018 to be reasonable and adequate to absorb potential credit losses inherent in the loan portfolio.

6. PLEDGES RECEIVABLE

Unconditional promises to donate to the University in the future are initially recorded at fair value (pledge net of discount) and subsequently amortized over the expected payment period, net of an allowance for uncollectible pledges. The University's indicative 1- to 5-year taxable unsecured borrowing rate is used to discount pledges receivable at the end of the fiscal year they are received. Discounts of $149.6 million and $91.8 million for the years ended June 30, 2019 and 2018, respectively, were calculated using rates ranging from 1.3% to 3.1%.

Pledges receivable included in the financial statements as of June 30, 2019 and 2018 are expected to be realized as follows (in thousands of dollars):

	2019	2018
Within one year	**$ 408,858**	$ 276,074
Between one and five years	**1,635,428**	1,104,294
More than five years	**992,743**	632,340
Less: discount and allowance for uncollectible pledges	**(271,202)**	(174,916)
TOTAL PLEDGES RECEIVABLE, NET	**$ 2,765,827**	**$ 1,837,792**

Pledges receivable as of June 30, 2019 and 2018 have been designated for the following purposes (in thousands of dollars):

	2019	2018
General Operating Account balances:		
Gifts for current use	**$ 744,871**	$ 552,268
Non-federal sponsored awards	**215,972**	127,140
Construction and life income	**294,180**	222,735
Total General Operating Account balances	**1,255,023**	**902,143**
Endowment	**1,510,804**	935,649
TOTAL PLEDGES RECEIVABLE, NET	**$ 2,765,827**	**$ 1,837,792**

Because of uncertainties with regard to realizability and valuation, conditional promises are only recognized if and when the specified conditions are met. Conditional pledges totaled $49.8 million and $59.5 million as of June 30, 2019 and 2018, respectively.

7. FIXED ASSETS

Fixed assets are reported at cost or, if a gift, at fair value as of the date of the gift, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets.

The major categories of fixed assets as of June 30, 2019 and 2018 are summarized as follows (in thousands of dollars):

	2019	2018	Estimated useful life (in years)
Research facilities	**$ 2,432,190**	$ 2,376,412	*
Classroom and office facilities	**2,291,410**	2,046,484	35
Housing facilities	**2,241,939**	2,010,649	35
Other facilities	**448,844**	427,397	35
Service facilities	**778,149**	751,236	35
Libraries	**479,741**	487,598	35
Museums and assembly facilities	**959,455**	788,587	35
Athletic facilities	**235,910**	223,072	35
Land	**1,023,726**	968,922	N/A
Construction in progress	**1,297,194**	1,337,279	N/A
Equipment	**1,281,259**	1,289,975	**
SUBTOTAL AT COST	**13,469,817**	**12,707,611**	
Less: accumulated depreciation	**(5,198,106)**	(4,975,439)	
FIXED ASSETS, NET	**$ 8,271,711**	**$ 7,732,172**	

* *Estimated useful lives of components range from 10 to 45 years.*
** *Estimated useful lives of equipment range from 3 to 8 years.*

Certain University facilities are subject to restrictions as to use, structural modifications, and ownership transfer. Included in the fixed asset balances are restricted facilities with a net book value of $303.0 million and $292.8 million as of June 30, 2019 and 2018, respectively.

The costs of research facilities are separated into the shell, roof, finishes, fixed equipment, and services. These components are separately depreciated.

Equipment includes general and scientific equipment, computers, software, furniture, and vehicles.

The University has asset retirement obligations of $176.8 million and $174.4 million, which are included in "Deferred revenue and other liabilities" in the *Balance Sheets* as of June 30, 2019 and 2018, respectively.

8. ENDOWMENT AND GENERAL OPERATING ACCOUNT NET ASSETS

The University's net assets consisted of the following as of June 30, 2019 and 2018 (in thousands of dollars):

	2019			2018		
	Without donor restrictions	With donor restrictions	Total	Without donor restrictions	With donor restrictions	Total
NATURE OF SPECIFIC NET ASSETS						
Perpetual endowment funds		$ 7,848,495	**$ 7,848,495**		$ 7,378,054	**$ 7,378,054**
Endowment funds and appreciation, subject to distribution policy and appropriation		24,092,097	**24,092,097**		23,783,159	**23,783,159**
Endowment funds without restriction, board designated and subject to distribution policy	$ 7,091,584		**7,091,584**	$ 6,759,901		**6,759,901**
Pledge balances		1,510,804	**1,510,804**		935,649	**935,649**
Interests in trusts held by others		386,720	**386,720**		376,973	**376,973**
TOTAL ENDOWMENT	**7,091,584**	**33,838,116**	**40,929,700**	**6,759,901**	**32,473,835**	**39,233,736**
Operating	4,890,118		**4,890,118**	4,592,384		4,592,384
Unexpended contributions and endowment distributions		2,784,170	**2,784,170**		2,480,144	2,480,144
Student loan funds		99,129	**99,129**		98,769	98,769
TOTAL GENERAL OPERATING ACCOUNT	**4,890,118**	**2,883,299**	**7,773,417**	**4,592,384**	**2,578,913**	**7,171,297**
Split interest agreements *(Note 9)*		**573,369**	**573,369**		559,151	**559,151**
TOTAL NET ASSETS	**$ 11,981,702**	**$ 37,294,784**	**$ 49,276,486**	**$ 11,352,285**	**$ 35,611,899**	**$ 46,964,184**

Endowment

The University's endowment consists of 13,891 separate funds established over many years for a wide variety of purposes. Endowment fund balances are classified and reported in accordance with donor specifications and state law. The endowment includes both donor-restricted endowment funds and funds functioning as endowment which are not subject to donor-imposed restrictions, however decisions to spend their principal require the approval of the Corporation and therefore are classified as Board-designated endowment funds. The majority of the endowment is invested in the GIA *(Note 3)*.

The University is also the beneficiary of certain irrevocable trusts held and administered by others. The estimated fair values of trust assets, which include the present values of expected future cash flows from outside trusts and the fair value of the underlying assets of perpetual trusts, are recognized as assets and increases in net assets when the required trust documentation is provided to the University.

The fair values of these trusts are provided by the external trustees and are adjusted annually by the University. These are included as Level 3 investments in the fair value hierarchy table in *Note 3*.

The University's endowment distribution policies are designed to preserve the value of the endowment in real terms (after inflation) and generate a predictable stream of available income. Each fall, the Corporation approves the endowment distribution for the following fiscal year. Distribution from an underwater endowment fund (a fund below its historic dollar value) could continue in limited and defined circumstances under the University's endowment distribution policy. To the extent that the fair value of a donor restricted endowment fund falls below its historic dollar value it would be reported as a reduction of net assets with donor restrictions.

At June 30, 2019 and 2018, funds in a deficit position were reported in net assets with donor restrictions and are comprised as follows (in thousands):

	2019	2018
Fair value of underwater endowment funds	**$ 27,240**	$ 30,703
Historic dollar value	**32,672**	33,351
TOTAL DEFICIT OF UNDERWATER ENDOWMENT FUNDS	**$ (5,432)**	**$ (2,648)**

The endowment distribution is based in part on presumptive guidance from a formula that is intended to provide budgetary stability by smoothing the impact of annual investment gains and losses. The formula's inputs reflect expectations about long-term returns and inflation rates. For fiscal year 2019, the endowment distribution approved by the Corporation (prior to decapitalizations) was equal to 5.1% of the fair value of the endowment invested in the GIA as of the beginning of the fiscal year. The total endowment distribution made available for operations was $1.9 billion and $1.8 billion in fiscal year 2019 and 2018, respectively.

Each year the Corporation also approves certain decapitalizations from the endowment to support strategic, mission-critical activities or objectives that are typically one-time or time-limited and therefore, are excluded from net operating surplus. These decapitalizations totaled $32.2 million and $46.0 million in fiscal year 2019 and 2018, respectively. These additional decapitalizations, in combination with the endowment distribution, resulted in an aggregate payout rate of 5.1% and 5.3% in fiscal year 2019 and 2018, respectively. The aggregate payout rate does not include the impact of new tax charges related to the endowment, if included, the total payout rate would be 5.2% for fiscal year 2019.

General operating account

The GOA consists of the general or current funds of the University as well as the assets and liabilities related to student and faculty loans and facilities. The GOA accepts, manages, and pays interest on deposits made by University departments; invests surplus working capital; makes loans; and arranges external financing for major capital projects. It is used to manage, control, and execute all University financial transactions, except for those related to investment activities conducted by HMC.

9. SPLIT INTEREST AGREEMENTS

Under split interest agreements, donors enter into trust or other arrangements with the University in which the University receives benefits that are shared with other beneficiaries and institutions. Split interest agreement (SIA) investment assets are invested primarily in the GIA and publicly-traded securities, a small segment is managed by an external advisor, and all are recorded in the "Investment portfolio, at fair value" in the University's *Balance Sheets*. Additional disclosures are included in *Note 3*. Associated liabilities are recorded at the present value of estimated future payments due to beneficiaries and other institutions.

These liabilities are calculated using the University's current taxable unsecured borrowing rate of 2.1% and 3.1% as of June 30, 2019 and 2018, respectively. All split interest agreement net assets and the respective activity are reported within net assets with donor restrictions. Upon termination of a split interest agreement, the net assets are transferred to the GOA or endowment accordingly.

The changes in split interest agreement net assets for fiscal years 2019 and 2018 were as follows (in thousands of dollars):

	2019	2018
Investment return:		
Investment income	**$ 13,807**	$ 11,365
Realized and change in unrealized appreciation, net	**45,694**	72,780
Total investment return	**59,501**	84,145
Gifts *(Note 14)**	**8,437**	12,166
Payments to annuitants	**(65,770)**	(65,728)
Transfers to endowment	**(15,213)**	(25,707)
Transfers between SIA and the GOA	**(13,886)**	(12,661)
Change in liabilities and other adjustments	**41,149**	33,054
NET CHANGE DURING THE YEAR	**14,218**	**25,269**
Total split interest agreement net assets, beginning of year	**559,151**	533,882
TOTAL SPLIT INTEREST AGREEMENT NET ASSETS, END OF YEAR	**$ 573,369**	**$ 559,151**

* *Shown at net present value. The undiscounted value of these gifts was $18,508 and $29,287 for the years ended June 30, 2019 and 2018, respectively.*

Split interest agreement net assets as of June 30, 2019 and 2018 consisted of the following (in thousands of dollars):

	2019	2018
Split interest agreement investments *(Note 3)*		
Charitable remainder trusts	**$ 930,742**	$ 924,576
Charitable lead trusts	**125,040**	125,341
Charitable gift annuities	**249,917**	250,473
Pooled income funds	**127,414**	121,174
Total split interest agreement investments[1]	**1,433,113**	**1,421,564**
Liabilities due under split interest agreements:		
Amounts due to beneficiaries	**(792,558)**	(801,355)
Amounts due to other institutions	**(67,186)**	(61,058)
Total liabilities due under split interest agreements	**(859,744)**	**(862,413)**
TOTAL SPLIT INTEREST AGREEMENT NET ASSETS, END OF YEAR	**$ 573,369**	**$ 559,151**

[1] *For the year ended June 30, 2019, $780,737 of SIA investments are held in the pooled general investment account and $652,376 of SIA investments are held in the other investments outside the general investment account. For the year ended June 30, 2018, $820,725 of SIA investments are held in the pooled general investment account and $600,839 of SIA investments are held in the other investments outside the general investment account. Refer to* Note 3.

10. BONDS AND NOTES PAYABLE

Bonds and notes payable as of June 30, 2019 and 2018 were as follows (in thousands of dollars):

	Fiscal year of issue	Years to final maturity[1]	One-year yield[2]	Outstanding principal 2019[3]	Outstanding principal 2018[3]
TAX-EXEMPT BONDS AND NOTES PAYABLE:					
Variable-rate demand bonds and commercial paper:					
Series R – daily	2000-2006	13	1.3%	$ 131,200	$ 131,200
Series Y – weekly	2000	16	1.5%	117,905	117,905
Commercial paper	2019	< 1	1.8%	350,000	0
Total variable-rate bonds and notes payable			1.6%	599,105	249,105
Fixed-rate bonds:					
Series N (par value, $80,000)	1992	1	6.3%	79,916	79,815
Series 2009A (par value, $0)	2009	0	4.8%	0	22,692
Series 2010A (par value, $49,590)	2010	2	4.7%	51,407	52,134
Series 2010B (par value, $110,235)	2011	5	4.8%	113,844	115,891
Series 2016A (par value, $1,539,720)	2017	21	3.9%	1,860,731	1,886,801
Total fixed-rate bonds			4.1%	2,105,898	2,157,333
TOTAL TAX-EXEMPT BONDS AND NOTES PAYABLE			**3.6%**	**2,705,003**	**2,406,438**
TAXABLE BONDS AND NOTES PAYABLE:					
Variable-rate bonds and notes payable:					
Commercial paper	2012	0	2.4%	0	262,798
Total variable-rate bonds and notes payable			2.4%	0	262,798
Fixed-rate bonds:					
Series 2008A (par value, $243,000)	2008	19	5.6%	242,881	242,875
Series 2008C (par value, $0)	2008	0	5.3%	0	125,205
Series 2008D (par value, $500,000)	2009	20	6.5%	498,812	498,751
Series 2010C (par value, $300,000)	2011	21	4.9%	298,573	298,506
Series 2013A (par value, $402,000)	2013	18	3.4%	402,000	402,000
Series 2016B (par value, $1,000,000)	2017	37	3.3%	995,765	995,643
Total fixed-rate bonds			4.4%	2,438,031	2,562,980
TOTAL TAXABLE BONDS AND NOTES PAYABLE			**4.3%**	**2,438,031**	**2,825,778**
Other notes payable	Various	Various	Various	87,405	87,057
Unamortized bond issuance costs				(17,090)	(18,352)
TOTAL BONDS AND NOTES PAYABLE			**4.0%**	**$ 5,213,349**	**$ 5,300,921**

[1] *The weighted average maturity of the portfolio on June 30, 2019 was 17.5 years.*
[2] *Exclusive of interest rate exchange agreement. Inclusive of this agreement, the overall portfolio rate was 0.05% higher (4.06% vs. 4.01%).*
[3] *Balances include original issuance premiums/discounts.*

Interest expense related to bonds and notes payable was $183.7 million and $187.5 million for fiscal 2019 and 2018, respectively. The interest expense in the *Statement of Changes in Net Assets with General Operating Account Detail* includes additional components related to capital leases. Excluding maturity of commercial paper and unamortized discounts and premiums, unamortized underwriter's discount and unamortized cost of issuance, scheduled principal payments are (in thousands of dollars):

Fiscal year	Principal payments
2020	$ 467,999
2021	88,186
2022	109,619
2023	54,891
2024	101,853
Thereafter	4,088,507
TOTAL PRINCIPAL PAYMENTS	**$ 4,911,055**

The University is rated Aaa by Moody's Investors Service and AAA by Standard & Poor's Global Ratings. The Standard & Poor's rating was re-affirmed in December 2018 and the Moody's Investors Service rating was re-affirmed in January 2019.

The University has one unsecured, revolving credit facility totaling $1.5 billion, which expires in March 2022. There was no outstanding drawn balance on the credit facility at June 30, 2019.

The University has taxable commercial paper line available totalling $2 billion. There was no outstanding drawn balance on the taxable commercial paper line at June 30, 2019.

As of June 30, 2019, the University had $249.1 million of variable-rate demand bonds outstanding (excluding commercial paper) with either a daily or weekly interest rate reset, as noted in the bonds and notes payable table. In the event that the University receives notice of any optional tender on its variable-rate demand bonds, or if the bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, the University will have a general obligation to purchase the bonds tendered with cash on hand.

Interest rate exchange agreements

In fiscal 2019, the University had in place one interest rate exchange agreement, used to manage the interest cost and risk associated with a portion of its outstanding debt.

The fair value of the interest rate exchange agreement was $(27.4) million and $(15.5) million as of June 30, 2019 and 2018, respectively and is recorded in "Other liabilities associated with the investment portfolio" on the University's *Balance Sheets*.

11. EMPLOYEE BENEFITS

The University offers current employees a choice of health plans, a dental plan, short-term and long-term disability plans, life insurance, tuition assistance, and a variety of other benefits such as subsidized passes for public transportation and for Harvard athletic facilities. In addition, the University has retirement plans covering substantially all employees.

The University uses a measurement date of June 30 for its pension and postretirement health plans.

457(b) deferred compensation plan

The University offers a non-qualified deferred compensation plan under Internal Revenue Code 457(b) to a select group of employees. There is no University contribution related to the plan. The University has recorded both an asset and a liability related to the plan of $151.2 million as of June 30, 2019; the assets are included in "Prepayments and deferred charges" and the liabilities are included in "Deferred revenue and other liabilities" on the University's *Balance Sheets*.

Pension benefits

All eligible faculty members and staff are covered by retirement programs that include a defined benefit component, a defined contribution component, or a combination of the two.

In accordance with the Employee Retirement Income Security Act (ERISA) requirements, the University has established a trust to hold plan assets for its defined benefit pension plans. The fair value of the trust's assets was $863.5 million and $828.1 million as of June 30, 2019 and 2018, respectively. During fiscal years 2019 and 2018, the University made cash contributions to the defined benefit pension plan of $14.9 million and $15.5 million, respectively. The University recorded expenses for its defined contribution plans of $148.5 million and $141.5 million for fiscal year 2019 and 2018, respectively.

Postretirement health benefits

The University provides postretirement health coverage and life insurance to substantially all of its employees. As of June 30, 2019, the University had internally designated and invested $727.9 million in the GIA to fund the postretirement health benefit accrued liability of $854.6 million. As of June 30, 2018, the University had internally designated and invested $692.2 million to fund the postretirement health benefit accrued liability of $806.7 million.

The following table sets forth the pension and postretirement plans' funded status that is reported in the *Balance Sheets* as of June 30, 2019 and 2018 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2019	2018	2019	2018
Change in projected benefit obligation:				
Projected benefit obligation, beginning of year	**$ 1,004,962**	$ 1,075,728	**$ 806,714**	$ 853,003
Service cost	**9,675**	11,233	**30,474**	34,645
Interest cost	**42,455**	42,418	**34,719**	35,522
Plan participants contributions			**3,761**	3,377
Plan change			**71**	(193)
Gross benefits paid	**(51,817)**	(44,157)	**(28,509)**	(23,555)
Actuarial (gain)/loss	**124,122**	(80,260)	**7,409**	(96,085)
PROJECTED BENEFIT OBLIGATION, END OF YEAR[1]	**1,129,397**	**1,004,962**	**854,639**	**806,714**
Change in plan assets:				
Fair value of plan assets, beginning of year	**828,124**	836,456		
Actual return on plan assets	**72,320**	20,302		
Employer contributions	**14,865**	15,523		
Gross benefits paid	**(51,817)**	(44,157)		
FAIR VALUE OF PLAN ASSETS, END OF YEAR	**863,492**	**828,124**	**0**	**0**
ACCRUED RETIREMENT OBLIGATIONS/UNFUNDED STATUS[2]	**$ (265,905)**	**$ (176,838)**	**$ (854,639)**	**$ (806,714)**

[1] *Measurement of the University's pension benefit obligation including assumed salary increases (required by GAAP).*
[2] *These amounts totaling $1,120,544 as of June 30, 2019 and $983,552 as of June 30, 2018 are included in the "Accrued Retirement Obligations" line in the* Balance Sheets.

The accumulated pension benefit obligation (ABO) is a measurement of the University's pension benefit obligation, based on past and present compensation levels and does not include assumed salary increases. The ABO was $968.9 million and $860.8 million at June 30, 2019 and 2018, respectively. The funded status disclosed above has been prepared in accordance with pension accounting rules. When measured on an IRS funding basis, which informs the University's required cash contribution amount, the plan was overfunded at January 1, 2019.

Net periodic benefit cost

Components of net periodic benefit cost recognized in operating activity and other amounts recognized in non-operating activity in net assets without donor restrictions in the *Statements of Changes in Net Assets with General Operating Account Detail* are summarized as follows for the years ended June 30, 2019 and 2018 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2019	2018	2019	2018
Components of net periodic benefit cost:				
Service cost	**$ 9,675**	$ 11,233	**$ 30,474**	$ 34,645
Interest cost	**42,455**	42,418	**34,719**	35,522
Expected return on plan assets	**(50,469)**	(50,426)		
Amortization of:				
Actuarial loss/(gain)	**3,320**	10,088	**(13,469)**	(6,564)
Prior service cost/(credit)	**288**	288	**(7,132)**	(7,116)
Total net periodic benefit cost recognized in operating activity	**5,269**	**13,601**	**44,592**	**56,487**
Other amounts recognized in non-operating activity in net assets without donor restrictions:				
Current year net actuarial loss/(gain)	**102,271**	(50,136)	**7,409**	(96,085)
Current year net prior service cost			**71**	(193)
Amortization of:				
Prior service (cost)/credit	**(288)**	(288)	**7,132**	7,116
Actuarial (loss)/gain	**(3,320)**	(10,088)	**13,469**	6,564
Total other amounts recognized in non-operating activity[1]	**98,663**	**(60,512)**	**28,081**	**(82,598)**
TOTAL RECOGNIZED IN *STATEMENTS OF CHANGES IN NET ASSETS WITH GENERAL OPERATING ACCOUNT DETAIL*	**$ 103,932**	**$ (46,911)**	**$ 72,673**	**$ (26,111)**

[1] *These amounts totaling $126,744 in fiscal year 2019 and $(143,110) in fiscal year 2018 include gains and losses and other changes in the actuarially determined benefit obligations arising in the current period but that have not yet been reflected within net periodic benefit cost/(income) and are included in the "Change in Retirement Obligations" line in the* Statements of Changes in Net Assets with General Operating Account Detail.

Cumulative amounts recognized as non-operating changes in net assets without donor restrictions are summarized as follows for the years ended June 30, 2019 and 2018 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2019	2018	2019	2018
Net actuarial loss/(gain)	**$ 196,647**	$ 97,697	**$ (245,254)**	$ (266,133)
Prior service cost/(credit)	**1,181**	1,469	**(46,386)**	(53,589)
CUMULATIVE AMOUNTS RECOGNIZED IN NET ASSETS WITHOUT DONOR RESTRICTIONS	**$ 197,828**	**$ 99,166**	**$ (291,640)**	**$ (319,722)**

The estimated net actuarial loss and prior service cost for the defined benefit plan that will be amortized from net assets without donor restrictions into net periodic benefit (income)/ cost in fiscal year 2020 are $15.7 million and $0.3 million, respectively. The estimated net actuarial gain and estimated prior service credit for the postretirement health benefit that will be amortized from net assets without donor restrictions into net periodic benefit (income)/cost in fiscal year 2020 are ($11.2) million and ($7.1) million, respectively.

Other assumptions and health care cost trend rates used in determining the year end obligation as well as the net periodic benefit (income)/cost of the pension and postretirement health plans are summarized as follows for fiscal years 2019 and 2018:

	Pension benefits		Postretirement health benefits	
	2019	2018	2019	2018
Weighted-average assumptions used to determine benefit obligation as of June 30:				
Discount rate	**3.65%**	4.30%	**3.60%**	4.20%
Compensation increase trend:				
Initial rate	**3.50%**	3.00%	**3.50%**	3.00%
Ultimate rate	N/A	4.00%	**4.00%**	4.00%
Year of ultimate	N/A	2021	**2021**	2021
Health care cost trend rate:				
Initial rate	N/A	N/A	**5.00%**	5.00%
Ultimate rate	N/A	N/A	**4.75%**	4.75%
Year of ultimate	N/A	N/A	**2023**	2023
Weighted-average assumptions used to determine net periodic benefit (income)/cost:				
Discount rate	**4.30%**	4.00%	**4.20%**	4.05%
Expected long-term rate of return on plan assets	**6.50%**	6.50%	N/A	N/A
Compensation increase trend:				
Initial rate	**3.00%**	3.00%	**3.00%**	3.00%
Ultimate rate	**4.00%**	4.00%	**4.00%**	4.00%
Year of ultimate	**2021**	2021	**2021**	2021
Health care cost trend rate:				
Initial rate	N/A	N/A	**5.00%**	5.50%
Ultimate rate	N/A	N/A	**4.75%**	4.75%
Year of ultimate	N/A	N/A	**2023**	2023

As an indicator of sensitivity, a one percentage point change in assumed health care cost trend rate would affect 2019 as shown in the following table (in thousands of dollars):

	1% point increase	1% point decrease
Effect on 2019 postretirement health benefits service and interest cost	$ 17,277	$ (11,152)
Effect on postretirement health benefits obligation as of June 30, 2019	189,576	(133,497)

The expected return on pension plan assets is determined by utilizing an independent advisor's capital markets model, which takes into account the expected real return, before inflation, for each of the pension portfolio's asset classes, as well as the correlation of any one asset class to every other asset class. This model calculates the real returns and correlations and derives an expected real return for the entire portfolio, given the percentage weighting allocated to each asset class. After calculating the expected real return, an assessment is made to accommodate the expected inflation rate for the forthcoming period. The final expected return on assets is the aggregate of the expected real return plus the expected inflation rate.

Plan assets

The actual asset allocation of the investment portfolio for the pension plan at June 30, 2019 and 2018, along with target allocations for June 30, 2020, is as follows:

	2020 Target	June 30, 2019	June 30, 2018
Asset allocation by category for pension plan:			
Equity securities	30-55%	38.7%	38.8%
Fixed income securities	30-50	47.1	48.9
Hedge funds	10-30	12.5	10.9
Cash	0-5	1.7	1.4
TOTAL OF ASSET ALLOCATION CATEGORIES		**100.0%**	**100.0%**

The University's investment strategy for the pension portfolio is to manage the assets across a broad and diversified range of investment categories, both domestic and international. The objective is to achieve a risk-adjusted return that is in line with the long-term obligations that the University has to the pension plan beneficiaries. During fiscal year 2018, the University maintained its allocation to fixed income securities to manage the interest rate volatility associated with its pension obligations. The University expects to continue this strategy in future years. The investment program is also managed to comply with all ERISA regulations.

The following is a summary of the levels within the fair value hierarchy for the pension plan assets subject to fair value measurement as of June 30, 2019 and 2018 (in thousands of dollars):

	2019					2018
	Level 1	Level 2	Level 3	NAV as practical expedient	Total	Total
PLAN ASSETS:						
Cash and short-term investments	$ 26,135				**$ 26,135**	$ 21,951
Domestic equity				$ 163,500	**163,500**	145,989
Foreign equity	73,246			34,311	**107,557**	107,101
Domestic fixed income	88,869	$ 279,469			**368,338**	358,626
Foreign fixed income		22,555			**22,555**	21,110
Emerging market equity and debt	32,388	2,561		26,836	**61,785**	70,190
Hedge funds				108,398	**108,398**	89,505
Due from brokers	4				**4**	330
Buy-sell backs		33,343			**33,343**	25,962
Private equity				4,234	**4,234**	8,994
Real estate				27	**27**	34
PLAN ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 220,642**	**$ 337,928**	**$ 0**	**$ 337,306**	**$ 895,876**	**$ 849,792**
Other assets not subject to fair value					**1,086**	3,007
TOTAL PLAN ASSETS					**$ 896,962**	**$ 852,799**
PLAN LIABILITIES:						
Due to brokers	$ 49				**$ 49**	$ 22
Forward sale commitment		$ 19,806			**19,806**	20,022
PLAN LIABILITIES SUBJECT TO FAIR VALUE LEVELING	**$ 49**	**$ 19,806**			**$ 19,855**	**$ 20,044**
Other liabilities not subject to fair value					**13,614**	4,631
TOTAL PLAN LIABILITIES					**$ 33,469**	**$ 24,675**

The following is a rollforward of Level 3 investments for the year ended June 30, 2018 (in thousands of dollars):

	Beginning balance as of July 1, 2017	Net realized gains/ (losses)	Net change in unrealized appreciation (depreciation)	Purchases/ contributions	Sales/ distributions	Transfers into Level 3	Transfers out of Level 3	Ending balance as of June 30, 2018
PRIOR YEAR NET ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 23,709**	**$ (27,161)**	**$ 21,137**	**$ 7**	**$(17,692)**	**$ 0**	**$ 0**	**$ 0**

Expected future benefit payments

Employer contributions of $52.0 million are expected for fiscal year 2020 to fund the pension benefit plan.

The following table summarizes expected benefit payments and subsidies for pension and other postretirement benefits for the University (in thousands of dollars):

	Expected benefit payments	
Fiscal year	Pension	Postretirement health
2020	$ 57,123	$ 21,622
2021	58,351	23,601
2022	60,714	25,334
2023	63,019	27,253
2024	65,111	29,264
Thereafter	350,724	178,749

12. STUDENT FINANCIAL AID

Financial aid granted to students in fiscal 2019 and 2018 is summarized as follows (in thousands of dollars):

	2019	2018
Scholarships and other student awards:		
Scholarships applied to student income[1]	**$ 457,369**	$ 439,445
Scholarships and other student awards paid directly to students	**155,874**	152,421
Total scholarships and other student awards	**613,243**	**591,866**
Student employment	**81,287**	76,133
Student loans	**14,639**	15,943
Agency financial aid[2]	**20,326**	19,564
TOTAL STUDENT FINANCIAL AID	**$ 729,495**	**$ 703,506**

[1] *Includes $192,712 of undergraduate scholarships applied to student income.*
[2] *Represents aid from sponsors for which the University acts as an agent for the recipient.*

13. SPONSORED SUPPORT

Total expenditures funded by US government sponsors or by institutions that subcontract federally-sponsored projects to the University were $630.8 million and $625.3 million in fiscal year 2019 and 2018, respectively. The University's principal source of federally-sponsored funds is the Department of Health and Human Services. The University also has many non-federal sources of sponsored awards and grants, including corporations, foundations, state and local governments, foreign governments, and research institutes.

Sponsored grants and contracts normally provide for the recovery of direct and indirect costs. Recovery of related indirect costs is generally recorded at fixed or predetermined rates negotiated with the federal government and other sponsors. Predetermined federal indirect cost rates have been established for the University Area and the Medical School (including the School of Dental Medicine) through fiscal year 2019 and for T.H. Chan School of Public Health through fiscal year 2023. Funds received for federally-sponsored activity are subject to audit.

14. GIFTS

Gifts are classified as net assets with or without restrictions in accordance with donor specifications.

Additionally gifts are categorized by purpose as "Current use", "Non-federal sponsored grants", "Endowment funds", "Split interest agreements", or "Loan funds and facilities".

Gifts received for the year ended June 30, 2019 are summarized as follows (in thousands of dollars):

	2019		
	Gifts received	Donor redesignations/ other changes	Total
Current use	$ 472,432	$ (319)	**$ 472,113**
Non-federal sponsored grants	197,236	(778)	**196,458**
Endowment funds[1]	614,561	(1,274)	**613,287**
Split interest agreements[2]	8,437		**8,437**
Loan funds and facilities[1]	85,744	628	**86,372**
TOTAL GIFTS	**$ 1,378,410**	**$ (1,743)**	**$ 1,376,667**

[1] *Gift receipts include non-cash gifts of $2.5 million for the year ended June 30, 2019.*
[2] *Shown at net present value. The undiscounted value of these gifts was $18,508 for the year ended June 30, 2019.*

Gifts received for the year ended June 30, 2018 are summarized as follows (in thousands of dollars):

	2018		
	Gifts received	Donor redesignations/ other changes	Total
Current use	$ 466,991	$ (445)	**$ 466,546**
Non-federal sponsored grants	183,331	(2,258)	**181,073**
Endowment funds[1]	646,340	(41)	**646,299**
Split interest agreements[2]	12,166		**12,166**
Loan funds and facilities	109,410	(183)	**109,227**
TOTAL GIFTS	**$ 1,418,238**	**$ (2,927)**	**$ 1,415,311**

[1] *Gift receipts include non-cash gifts of $10 million for the year ended June 30, 2018.*
[2] *Shown at net present value. The undiscounted value of these gifts was $29,287 for the year ended June 30, 2018.*

15. OTHER REVENUE

The major components of other revenue for the years ended June 30, 2019 and 2018 were as follows (in thousands of dollars):

	2019	2018
Publications and royalties from copyrights	**$ 238,385**	$ 226,757
Rental and parking[1]	**141,375**	135,529
Services income	**136,288**	120,309
Royalties from the commercialization of intellectual property[2]	**97,568**	54,573
Health and clinic fees	**64,780**	61,211
Sales income	**29,888**	29,665
Interest income	**10,961**	10,699
Other student income	**5,112**	5,421
Other	**47,681**	44,560
TOTAL OTHER REVENUE	**$ 772,038**	**$ 688,724**

[1] *The University is the lessor of space and facilities under operating leases, the income from which is included in rental and parking.*
[2] *Excludes distributions to external parties.*

16. OTHER EXPENSES

The major components of other expenses for the years ended June 30, 2019 and 2018 were as follows (in thousands of dollars):

	2019	2018
Subcontract expenses under sponsored projects	**$ 158,543**	$ 165,445
Travel	**103,697**	99,555
Publishing	**46,951**	46,223
Taxes and Fees	**43,199**	35,278
Advertising	**38,568**	36,113
Insurance	**18,617**	17,182
Postage	**17,398**	18,073
Telephone	**14,663**	14,398
Other	**116,165**	79,511
TOTAL OTHER EXPENSES	**$ 557,801**	**$ 511,778**

17. FUNCTIONAL AND NATURAL CLASSIFICATION OF OPERATING EXPENSES

Operating expenses are allocated functionally on a direct basis. Operations and maintenance expenses are allocated based on square footage.

Operating expenses by functional and natural classification for the years ended June 30, 2019 and 2018 were as follows (in thousands of dollars):

	2019				
	Instruction and academic support	Research[1]	Student services and scholarships	Institutional support and auxiliary services	Total
Salaries and wages	$ 1,043,852	$ 294,285	$ 141,588	$ 558,753	**$ 2,038,478**
Employee benefits	273,353	74,868	50,451	166,833	**565,505**
Services purchased	363,109	85,599	60,311	171,672	**680,691**
Space and occupancy	113,374	59,349	30,083	176,484	**379,290**
Depreciation	43,817	119,333	19,985	199,640	**382,775**
Supplies and equipment	84,587	57,428	43,222	85,386	**270,623**
Interest	15,201	33,081	11,890	121,461	**181,633**
Scholarships and other student awards			155,874		**155,874**
Other expenses	36,229	414,717	35,030	71,825	**557,801**
TOTAL EXPENSES	**$ 1,973,522**	**$ 1,138,660**	**$ 548,434**	**$ 1,552,054**	**$ 5,212,670**

[1] *The methodology used to allocate expenses for financial statement purposes is different than methodologies used for other purposes, such as governmental surveys.*

	2018				
	Instruction and academic support	Research[1]	Student services and scholarships	Institutional support and auxiliary services	Total
Salaries and wages	$ 994,293	$ 279,236	$ 136,716	$ 533,591	$ 1,943,836
Employee benefits	273,849	74,813	49,759	170,802	569,223
Services purchased	331,480	82,977	56,394	146,359	617,210
Space and occupancy	117,482	67,185	30,587	195,187	410,441
Depreciation	36,376	115,941	22,169	183,479	357,965
Supplies and equipment	91,447	55,027	42,160	79,566	268,200
Interest	15,417	36,838	11,634	123,994	187,883
Scholarships and other student awards			152,421		152,421
Other expenses	34,045	397,744	33,980	46,009	511,778
TOTAL EXPENSES	**$ 1,894,389**	**$ 1,109,761**	**$ 535,820**	**$ 1,478,987**	**$ 5,018,957**

[1] *The methodology used to allocate expenses for financial statement purposes is different than methodologies used for other purposes, such as governmental surveys.*

18. COMMITMENTS AND CONTINGENCIES

Lease commitments

The University is the lessee of equipment and space under operating (rental) and capital leases. Rent expense related to leases was $105.4 million and $86.0 million in fiscal year 2019 and 2018, respectively.

Future minimum lease payments under these operating and capital leases (in thousands of dollars):

	Operating	Capital
2020	$ 79,551	$ 11,664
2021	73,511	10,943
2022	68,031	11,215
2023	63,325	11,276
2024	52,038	11,406
Thereafter	289,570	151,240
TOTAL FUTURE MINIMUM PAYMENTS	**$ 626,026**	**$ 207,744**

Fixed asset-related commitments

The University has various commitments for capital projects involving construction and renovation of certain facilities, real estate acquisitions, and equipment purchases, for which the outstanding commitments as of June 30, 2019 totaled approximately $367.3 million.

Environmental remediation

The University is subject to laws and regulations concerning environmental remediation and has established reserves for potential obligations that management considers to be probable and for which reasonable estimates can be made. These estimates may change substantially depending on new information regarding the nature and extent of contamination, appropriate remediation technologies, and regulatory approvals. Costs of future environmental remediation have been discounted to their net present value. Management is not aware of any existing conditions that it believes are likely to have a material adverse effect on the University's financial position, changes in net assets, or cash flows.

Utilities purchase commitments

The University has entered into Power Purchase Agreements (PPAs) with a series of utilities providers to purchase natural gas and electricity for various quantities and time periods. As of June 30, 2019, future obligations under the PPAs are as follows (in thousands of dollars):

2020	$ 18,836
2021	12,439
2022	10,433
2023	9,552
2024	8,569
Thereafter	12,105
TOTAL UTILITY FUTURE PURCHASE OBLIGATIONS	**$ 71,934**

General

The University is a defendant in various legal actions arising from the normal course of its operations. While it is not possible to predict accurately or determine the eventual outcome of such actions, management believes that the outcome of these proceedings will not have a material adverse effect on the University's financial position, changes in net assets, or cash flows.

The University has evaluated subsequent events through October 24, 2019, the date the financial statements were issued. The University has concluded that no material events have occurred that are not accounted for in the accompanying financial statements or disclosed in the accompanying notes.

(unaudited)

The outbreak of COVID-19 has caused domestic and global disruption in operations for institutions of higher education. In addition, COVID-19 has negatively impacted the financial markets and may continue to materially affect the returns on and value of the University's investments and/or endowment. Other adverse consequences of COVID-19 or any other similar outbreaks in the future may include, but are not limited to, decline in enrollment, decline in demand for campus housing, decline in demand for programs that involve travel or that have international connections and decline in philanthropic donations. The full impact of COVID-19 and the scope of any adverse impact on the University's finances and operations cannot be fully determined at this time.

APPENDIX C

DEFINITIONS OF CERTAIN TERMS AND SUMMARY OF CERTAIN PROVISIONS OF THE AGREEMENT

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DEFINITIONS OF CERTAIN TERMS

In addition to terms defined elsewhere in the Official Statement, the following terms have the following meanings in the Loan and Trust Agreement dated as of April 1, 2020 (the "Agreement") among the Issuer, the Institution and the Trustee, unless the context otherwise requires:

"Bond Counsel" means any attorney at law or firm of attorneys selected by the Institution and satisfactory to the Issuer, of nationally recognized standing in matters pertaining to the federal tax exemption of interest on bonds issued by states and political subdivisions, and duly admitted to practice law before the highest court of any state of the United States.

"Bond Year" means each one year period (or shorter period from the date of issue of the Bonds) ending on June 30.

"Bondowners" or "Owners" means the registered owners of the Bonds from time to time as shown in the books kept by the Trustee as bond registrar and transfer agent.

"Bonds" means the $346,680,000 Massachusetts Development Finance Agency Revenue Bonds, Harvard University Issue, Series 2020A dated the date of original delivery and any Bond or Bonds duly issued in exchange or replacement therefor.

"Business Day" means a day on which banks in the city in which the principal corporate trust office of the Trustee at which the Agreement is principally administered is located (which on the date of the Agreement is Pittsburgh, Pennsylvania) is not required or authorized to remain closed and on which the New York Stock Exchange is not closed.

"Continuing Disclosure Agreement" means the Continuing Disclosure Agreement dated as of the date of issuance of the Bonds between the Institution and the Trustee, as dissemination agent, as originally executed and as it may be amended from time to time in accordance with its terms.

"CP Notes" means $450,000,000 of the Issuer's $1,000,000,000 Massachusetts Health and Educational Facilities Authority Revenue Notes, Harvard University Issue, Series EE.

"Government or Equivalent Obligations" means (i) obligations issued or guaranteed by the United States; (ii) obligations, debentures, notes or other evidence of indebtedness issued or guaranteed by the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Federal Home Loan Bank System, the Farm Credit System, or any other agency or instrumentality of the United States of America; (iii) certificates evidencing ownership of the right to the payment of the principal of and interest on obligations described in clause (i), provided that such obligations are held in the custody of a bank or trust company satisfactory to the Trustee or the Issuer, as the case may be, in a special account separate from the general assets of such custodian; (iv) shares of any open-end or closed-end management type investment company or trust registered under 15 U.S.C. §80(a)-1 et seq., provided that the portfolio of such investment company or trust is limited to obligations described in clause (i) and repurchase agreements fully collateralized by such obligations, and provided further that such investment company or trust shall take custody of such collateral either directly or through a custodian satisfactory to the Trustee or the Issuer; and (v) tax-exempt obligations of any state or instrumentality, agency or political subdivision thereof, which are fully secured by, or payments of principal and interest on which shall be made from, obligations described in clause (i) above.

"IRC" means the Internal Revenue Code of 1986, as it may be amended and applied to the Bonds from time to time.

"Moody's" means Moody's Investors Service, Inc., or any successor rating agency.

"Opinion of Bond Counsel" means an opinion of Bond Counsel to the effect that the matter or action in question will not have an adverse impact on the tax-exempt status of the Bonds for federal income tax purposes.

"Outstanding," when used to modify Bonds, refers to Bonds issued under the Agreement, excluding: (i) Bonds that have been exchanged or replaced, or delivered to the Trustee for credit against a principal payment or a sinking fund installment; (ii) Bonds that have been paid; (iii) Bonds that have become due and for the payment of which moneys have been duly provided; and (iv) Bonds for which there have been irrevocably set aside sufficient funds, or Government or Equivalent Obligations described in clause (i), (ii) or (iv) of the definition thereof bearing interest at such rates, and with such maturities as will provide sufficient funds, to pay or redeem them, provided, however, that if any such Bonds are to be redeemed prior to maturity, the Issuer shall have taken all action necessary to redeem such Bonds and notice of such redemption shall have been duly mailed in accordance with the Agreement or irrevocable instructions so to mail shall have been given to the Trustee.

"Project" means the refinancing of the CP Notes which financed the following:

(i) the renovation of the Sackler Building on the main campus in Cambridge, generally bounded by Beacon Street on the East, Memorial Drive on the South and West, and Wendell Street on the North, or adjacent or proximate sites;

(ii) the renovation of the Smith Campus Center on the main campus in Cambridge;

(iii) the renovation of Lowell House undergraduate housing located at Mill Street, Holyoke Street, and Plympton Street, Cambridge;

(iv) the renovation of Soldiers Field Park graduate housing located at 111 Western Avenue, Allston; and

(v) the construction of a new Science and Engineering Complex and related improvements at 150 Western Avenue, Allston, and related infrastructure and enabling improvements to the surrounding area located at 150 Western Avenue, Allston.

"Revenues" means all rates, payments, fees, charges, and other income and receipts, including proceeds of insurance, eminent domain and sale, and including proceeds derived from any security provided under the Agreement, payable to the Issuer or the Trustee under the Agreement, excluding administrative fees of the Issuer, fees of the Trustee, reimbursements to the Issuer or the Trustee for expenses incurred by the Issuer or the Trustee, and indemnification of the Issuer and the Trustee.

"S&P" means S&P Global Ratings, a division of S&P Global Inc., or any successor rating agency.

"Tax Certificate" means the Tax Certificate and Agreement between the Issuer and the Institution dated the date of original issuance of the Bonds, as amended or supplemented from time to time.

"UCC" means the Massachusetts Uniform Commercial Code, as it may be amended from time to time.

Words importing persons include firms, associations and corporations, and the singular and plural forms of words shall be deemed interchangeable wherever appropriate.

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SUMMARY OF CERTAIN PROVISIONS OF THE AGREEMENT

The following is a summary, prepared by Hinckley, Allen & Snyder LLP, Bond Counsel, of certain provisions of the Agreement. This summary does not purport to be complete and reference is made to the Agreement for full and complete statements of such and all provisions.

Establishment of Funds

The following funds have been established and shall be maintained with the Trustee for the account of the Institution, to be held in trust by the Trustee and applied subject to the provisions of the Agreement:

Debt Service Fund;
Redemption Fund; and
Expense Fund

(Sections 303, 304, 305 and 306)

Debt Service Fund

A Debt Service Fund is established with the Trustee and moneys shall be deposited therein as provided in the Agreement. The moneys in the Debt Service Fund and any investments held as part of such fund shall be held in trust and, except as otherwise provided, shall be applied solely to the payment of the principal (including sinking fund installments, if any), redemption premium, if any, and interest on the Bonds. Promptly after July 15 of each Bond Year, if the amount deposited by the Institution in the Debt Service Fund during the preceding Bond Year pursuant to the Agreement was in excess of the amount required to be so deposited, the Trustee shall transfer such excess to the Institution unless there is then an Event of Default known to the Trustee with respect to payments to the Debt Service Fund or to the Trustee or the Issuer, in which case the excess shall be applied to such payments. (Section 303)

Redemption Fund

A Redemption Fund is established with the Trustee and moneys shall be deposited therein as provided in the Agreement. The moneys in the Redemption Fund and any investments held as a part of such fund shall be held in trust and, except as otherwise provided, shall be applied by the Trustee on behalf of the Issuer solely to the redemption of the Bonds. The Trustee may, and upon written direction of the Institution for specific purchases shall, apply moneys in the Redemption Fund to the purchase of Bonds for cancellation at prices not exceeding the price at which they are then redeemable (or next redeemable if they are not then redeemable), but not within the forty-five (45) days preceding a redemption date.

If on any date the amount in the Debt Service Fund is less than the amount then required to be applied by the Trustee to pay the principal (including sinking fund installments, if any) and interest then due on the Bonds, the Trustee shall apply the amount in the Redemption Fund (other than any sum irrevocably set aside for the redemption of particular Bonds or required to purchase Bonds under outstanding purchase contracts) to the Debt Service Fund to the extent necessary to meet the deficiency. The Institution shall remain liable for any sums which it has not paid into the Debt Service Fund and any subsequent payment thereof shall be used to restore the funds so applied.

If any moneys in the Redemption Fund are invested in accordance with the Agreement and a loss results therefrom so that there are insufficient funds to pay the redemption price of Bonds called for redemption in accordance with the Agreement, then the Institution shall immediately supply the deficiency. (Section 304)

Expense Fund

An Expense Fund is established to be held by the Trustee and proceeds of the Bonds shall be deposited therein as provided in the Agreement. The moneys in the Expense Fund and any investments held as part of such fund shall be held in trust and, except as otherwise provided in the Agreement, shall be applied by the Trustee at the written direction of the Institution solely to the payment or reimbursement of the costs of issuing the Bonds. The Trustee shall pay from the Expense Fund at the direction of the Institution the costs of issuing the Bonds, the reasonable fees and expenses of financial consultants and bond counsel, the reasonable fees and expenses of the Trustee incurred prior to the completion of the Project in accordance with the Agreement, any recording or similar fees and any expenses of the Institution in connection with the issuance of the Bonds as directed by the Institution. Earnings on the Expense Fund shall not be applied to pay costs of issuance of the Bonds, but shall be transferred to the Debt Service Fund. To the extent the Expense Fund is insufficient to pay any of the above costs, the Institution shall be liable for the deficiency. (Section 306)

Rebate

No later than sixty (60) days after the close of the fifth Bond Year following the date of issue of the Bonds (or any earlier date that may be required to comply with IRC §148(f) and the regulations thereunder (the "Rebate Provision")) and the close of each fifth Bond Year thereafter, the Institution shall pay to the United States on behalf of the Issuer the full amount of rebate then required to be paid under the Rebate Provision. Within sixty (60) days after the Bonds have been paid in full, the Institution shall pay to the United States on behalf of the Issuer the full amount then required to be paid under the Rebate Provision. Each such payment shall be made to the Internal Revenue Service Center, Ogden, Utah 84201 or any successor location specified by the Internal Revenue Service, accompanied by a Form 8038-T (or other similar information reporting form) prepared by the Institution.

No later than fifteen (15) days prior to each date on which a payment could become due under the foregoing paragraph (a "Rebate Payment Date"), the Institution shall deliver to the Issuer and the Trustee a certificate either summarizing the determination that no amount is required to be paid or specifying the amount then required to be paid pursuant to the foregoing paragraph. If the certificate specifies an amount to be paid, (A) such certificate shall be accompanied by (i) a rebate report in form acceptable to the Issuer prepared by a rebate consultant acceptable to the Issuer, (ii) a completed Form 8038-T, in a form acceptable to the Issuer, which is to be signed by an officer of the Issuer, and (iii) a certification of the Institution stating that the Form 8038-T is accurate and complete, and (B) no later than ten (10) days after the Rebate Payment Date the Institution shall furnish to the Issuer and the Trustee a certificate stating that such amount has been timely paid. (Section 305)

Application of Moneys

If available moneys in the Debt Service Fund after any required transfers from the Redemption Fund are not sufficient on any day to pay all principal (including sinking fund installments, if any), redemption price and interest on the Outstanding Bonds then due or overdue, such moneys (other than any sum in the Redemption Fund irrevocably set aside for the redemption of particular Bonds or required to purchase Bonds under outstanding purchase contracts) shall, after payment of all charges and disbursements of the Trustee in accordance with the Agreement, be applied (in the order such funds are named in this paragraph) first to the payment of interest, including interest on overdue principal, in the order in which the same became due (pro rata with respect to interest which became due at the same time) and second to the payment of principal (including sinking fund installments, if any) and redemption premiums, if any, without regard to the order in which the same became due (in proportion to the amounts due). For this purpose interest on overdue principal shall be treated as coming due on the first day of each month. Whenever moneys are to be applied pursuant to the provisions described in this paragraph, such moneys shall be applied at such times, and from time to time, as the Trustee in its discretion shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall exercise such discretion it shall fix the date (which shall be the first of a month unless the Trustee shall deem another date more suitable) upon which such application is to be made, and upon such date interest on the amounts of principal paid on such date shall cease to accrue. The Trustee shall give such notice as it may deem appropriate of the fixing of any such date. When interest or a portion of the principal is to be paid on an overdue Bond, the Trustee may require presentation of the Bond for endorsement of the payment. (Section 307)

Payments by the Institution

Not later than the opening of business on the Business Day next preceding the date on which a payment of principal (including sinking fund installments, if any) or interest is due on the Bonds, the Institution shall pay to the Trustee for deposit in the Debt Service Fund an amount equal to such payment less the amount, if any, in the Debt Service Fund and available therefor.

At any time when any principal (including sinking fund installments, if any) of the Bonds is overdue, the Institution shall also have a continuing obligation to pay to the Trustee for deposit in the Debt Service Fund an amount equal to interest on the overdue principal. Redemption premiums, if any, shall not bear interest.

Payments by the Institution to the Trustee for deposit in the Debt Service Fund under the Agreement shall discharge the obligation of the Institution to the extent of such payments; provided, that if any moneys are invested in accordance with the Agreement and a loss results therefrom so that there are insufficient funds to pay principal (including sinking fund installments, if any) and interest on the Bonds when due, the Institution shall supply the deficiency. (Section 308)

Unconditional Obligation

To the extent permitted by law, the obligation of the Institution to make payments to the Issuer and the Trustee under the Agreement shall be absolute and unconditional, shall be binding and enforceable in all circumstances whatsoever, shall not be subject to setoff, recoupment or counterclaim and shall be a general obligation of the Institution to which the full faith and credit of the Institution are pledged. (Section 309)

Investments

Pending their use under the Agreement, moneys in the funds and accounts established pursuant to the Agreement may be invested by the Trustee in Permitted Investments (as defined below) maturing or redeemable at the option of the holder at or before the time when such moneys are expected to be needed and shall be so invested pursuant to written direction of the Institution if there is not then an Event of Default known to the Trustee, provided that the Institution shall not request, authorize or permit any investment that would cause any Bonds to be classified as “arbitrage bonds” as defined in IRC Section 148. Any investments shall be held by the Trustee as a part of the applicable fund and shall be sold or redeemed to the extent necessary to make payments or transfers or anticipated payments or transfers from such fund, subject to the notice provisions of the UCC to the extent applicable. In the absence of such investment direction by the Institution, the Trustee shall not be under any obligation to invest (or otherwise pay interest on) any funds held under the Agreement. The Trustee shall not be responsible for any loss on any Permitted Investment, to the extent the Trustee has acted at the written direction of the Institution with respect to such investment.

Except as set forth below, any interest realized on investments in any fund and any profit realized upon the sale or other disposition thereof shall be credited to the fund with respect to which they were earned and any loss shall be charged thereto. Earnings (which for this purpose include net profit and are after deduction of net loss) on proceeds from the sale of Bonds deposited in the Expense Fund shall be transferred to the Debt Service Fund not less often than quarterly. Earnings on the Redemption Fund shall be transferred to the Debt Service Fund and credited against payments otherwise required to be made thereto not less often than quarterly.

The term “Permitted Investments” means (A) Government or Equivalent Obligations; (B) “tax exempt bonds” as defined in IRC Section 150(a)(6), other than “specified private activity bonds” as defined in IRC Section 57(a)(5)(C), rated at least “AA” or “Aa2” by S&P and Moody’s, respectively, or the equivalent by any other nationally recognized rating agency, at the time of acquisition thereof, or shares of a so-called money market or mutual fund that do not constitute "investment property" within the meaning of IRC Section 148(b)(2), provided either that the fund has all of its assets invested in such "tax exempt bonds" of such rating quality or, if such obligations are not so rated, that the fund has comparable creditworthiness through insurance or otherwise and which fund is rated "Aam" or "AAm-G" if rated by S&P, at the time of acquisition thereof; (C) Obligations of any state or political subdivision thereof rated at least "AA-" and "Aa3" by S&P and Moody's, respectively, at the time of acquisition thereof; (D) negotiable certificates of deposit maturing not more than two years after the date of purchase, and interest-bearing deposit accounts and other bank deposit products of a national association or state-chartered bank or a state or federal savings and loan association or by a state-licensed branch of a foreign bank, which (i) has assets of not less than $1,000,000,000, provided that the senior debt obligations of the issuing institution are rated in the highest category by Moody's or S&P at the time of acquisition thereof, or (ii) funds are guaranteed by the Federal Deposit Insurance Corporation, or (iii) funds are fully collateralized by Government or Equivalent Obligations; (E) bills of exchange or time drafts drawn on and accepted by a commercial bank (otherwise known as bankers acceptances), provided that such bankers acceptances may not exceed 180 days maturity, and provided further that the accepting bank has the highest short-term letter and numerical rating as provided by Moody's or S&P at the time of acquisition thereof; (F) Repurchase Agreements; (G) (i) the Massachusetts Development Finance Agency Short Term Asset Reserve (STAR) Fund or any other similar fund established by, or on behalf of, the Issuer, which is rated "AAAm-G," "AAAm" or "AAm" by S&P at the time of acquisition thereof, and (ii) money market funds which have a rating of "AAAm-G," "AAAm" or "AAm" by S&P at the time of acquisition thereof, provided that the fund is registered under the Federal Investment Company Act of 1940 and whose shares are registered under the Federal Securities Act of 1933; (H) investment agreements with providers rated not lower than the second highest category (without regard to gradations within such category), at the time of acquisition thereof, by at least one nationally recognized rating agency, provided that if the investment agreement is guaranteed by a third party, then such rating requirement shall apply to the guarantor only, and provided further that if the provider is downgraded by one or more nationally recognized rating agency to below the second highest category, the agreement shall (i) be fully collateralized at 104% by Government or Equivalent Obligations or 105% by securities outlined in clause (J) of this definition of permitted investments, or (ii) terminate; (I) collateralized investment agreements with providers rated not lower than the third highest category (without regard to gradations within such category), at the time of acquisition thereof, by at least one nationally recognized rating agency, provided that if the investment agreement is guaranteed by a third party, then such rating requirement shall apply to the guarantor only, and provided further that in all cases such rating requirements shall apply only at the time the investment agreement is executed; (J) forward purchase and sale agreements with providers rated not lower than the third highest category (without regard to gradations within such category), at the time of acquisition thereof, by at least one nationally recognized rating agency, provided that if the investment agreement is guaranteed by a third party, then such rating requirement shall apply to the guarantor only, and provided further that in all cases such rating requirements shall apply only at the time the investment agreement is executed; (K) senior debt obligations and participation certificates issued by an agency or instrumentality established by an act of Congress, including but not limited to the Federal National Mortgage Association, Federal Home Loan Bank, Federal Home Loan Mortgage Corporation, Federal Farm Credit Bank System, Student Loan Marketing Association, World Bank or Federal Agricultural Mortgage Corporation ("Federal Agency Securities"), in each case rated not lower than the second highest category (without regard to gradations within such category), at the time of acquisition thereof, by at least one nationally recognized rating agency; (L) commercial paper that is rated at the time of purchase at least "A-1+" by S&P or "P-1" by Moody's at the time of acquisition thereof and that matures not more than 270 days after the date of purchase; and (M) notes issued by corporate entities rated at least "AA-" and "Aa3" by S&P and Moody's, respectively, at the time of acquisition thereof. The term "Repurchase Agreement" shall mean a written agreement under which a bank or trust company which has a capital and surplus of not less than $50,000,000 or a government bond dealer reporting to, trading with, and recognized as a primary dealer by the Federal Reserve Bank of New York sells to, and agrees to repurchase from the Trustee obligations issued or guaranteed by the United States; provided that the market value of such obligations is at the time of entering into the agreement at least one hundred and three percent (103%) of the repurchase price specified in the agreement and that such obligations are segregated from the unencumbered assets of such bank or trust company or government bond dealer; and provided further that unless the agreement is with a bank or trust company, such agreement shall require the repurchase to occur on demand or on a date certain which is not later than one (1) year after such agreement is entered into and shall expressly authorize the Trustee to liquidate the purchased obligations in the event of the insolvency of the party required to repurchase such obligations or the commencement against such party of a case under the federal Bankruptcy Code or the appointment of or taking possession by a trustee or custodian in a case against such party under the Bankruptcy Code. Any such investments may be purchased from or through the Trustee. (Section 311)

The Project

Use of Project.

Compliance with Law. In the acquisition, construction, maintenance, improvement and operation of the Project, the Institution covenants that it has complied and will comply in all material respects with all applicable building, zoning, land use, environmental protection, historical preservation, sanitary, safety and educational laws, rules and regulations, and all applicable grant, reimbursement and insurance requirements, and will not permit a nuisance thereon; but it shall not be a breach of this subsection if the Institution fails to comply with such laws, rules, regulations and requirements (other than Chapter 21E of the Massachusetts General Laws, as amended) during any period in which the Institution is diligently and in good faith contesting the validity thereof.

Payment of Lawful Charges. The Institution shall make timely payment of all taxes and assessments and other municipal or governmental charges and all claims and demands for work, labor, services, materials or other objects which, if unpaid, might by law become a lien on the Project or any part thereof; but it shall not be a breach of this subsection if the Institution fails to pay any such item during any period in which the Institution is diligently and in good faith contesting the validity thereof, provided that the laws applicable to contesting its validity do not require payment thereof and proceedings for a refund.

Permitted Purposes. The Institution agrees that the Project shall be used only for the purposes described in the Act. The Institution acknowledges that it is fully familiar with the physical condition of the Project and that it is not relying on any representation of any kind by the Issuer or the Trustee concerning the nature or condition thereof. Neither the Issuer nor the Trustee shall be liable to the Institution or any other person for any latent or patent defect in the Project. The Institution further agrees that no part of the Project shall be used for any purpose which would cause the Issuer's financing and refinancing of the Project to constitute a violation of the First Amendment of the United States Constitution. In particular, the Institution agrees that no part of the Project, so long as it is owned or controlled by the Institution, shall be used for any sectarian instruction or as a place of religious worship or in connection with any part of a program of a school or department of divinity for any religious denomination; and any proceeds of any sale, lease, taking by eminent domain of the Project or other disposition thereof shall not be used for, or to provide a place for, such instruction, worship or program. (Section 401)

Repair and Current Expenses

The Institution agrees that it will maintain and repair the Project and keep the same in good and serviceable condition and in at least as good condition and repair (reasonable wear and tear and casualty loss excepted) as it was on the date the same was placed in service. The Institution shall pay all costs of maintaining and operating the Project. (Section 402)

Insurance

The Institution shall maintain insurance with insurance companies authorized to transact business in The Commonwealth of Massachusetts on such of its properties, in such amounts and against such risks as is customarily maintained by similar institutions of higher education operating in the area and promptly file with the Trustee upon request from time to time certificates of all such insurance. (Section 403)

Default and Remedies

Default by the Institution.

Events of Default; Default. "Event of Default" in the Agreement means any one of the events set forth below and "default" means any Event of Default without regard to any lapse of time or notice.

Debt Service. Any principal of, interest or redemption premium on the Bonds shall not be paid when due (whether at maturity, by acceleration, upon redemption or otherwise) or the Institution shall fail to make payment of principal or interest or payment of interest on overdue principal required of it under the Agreement when the same becomes due and payable.

Other Obligations. The Institution shall fail to make any other required payment to the Trustee, and such failure is not remedied within seven (7) days after written notice thereof is given by the Trustee or the Issuer to the Institution, or the Institution shall fail to perform its obligations under the Agreement to maintain insurance, and such failure is not remedied within seven (7) days after written notice thereof is given by the Trustee or the Issuer to the Institution; or the Institution shall fail to observe or perform any of its other agreements, covenants or obligations under the Agreement and such failure is not remedied within sixty (60) days after written notice thereof is given by the Trustee or the Issuer to the Institution.

Warranties. There shall be a material breach of warranty made in the Agreement by the Institution as of the date it was intended to be effective and the breach is not cured within sixty (60) days after written notice thereof is given by the Trustee or the Issuer to the Institution.

Voluntary Bankruptcy. The Institution shall commence a voluntary case under the federal bankruptcy laws, or shall become insolvent or unable to pay its debts as they become due, or shall make an assignment for the benefit of creditors, or shall apply for, consent to or acquiesce in the appointment of, or taking possession by, a trustee, receiver, custodian or similar official or agent for itself or any substantial part of its property.

Appointment of Receiver. A trustee, receiver, custodian or similar official or agent shall be appointed for the Institution or for any substantial part of its property and such trustee or receiver shall not be discharged within sixty (60) days.

Involuntary Bankruptcy. The Institution shall have an order or decree for relief in an involuntary case under the federal bankruptcy laws entered against it, or a petition seeking reorganization, readjustment, arrangement, composition, or other similar relief as to it under the federal bankruptcy laws or any similar law for the relief of debtors shall be brought against it and shall be consented to by it or shall remain undismissed for sixty (60) days.

Breach of Other Agreements. A breach shall occur (and continue beyond any applicable grace period) with respect to the payment of other indebtedness of the Institution for borrowed money with respect to loans exceeding $50,000,000, or with respect to the performance of any agreement securing such other indebtedness or pursuant to which the same was issued or incurred, or an event shall occur with respect to provisions of any such agreement relating to matters of the character referred to in this paragraph, so that a holder or holders of such indebtedness or a trustee or trustees under any such agreement accelerates any such indebtedness; but an Event of Default shall not be deemed to be in existence or to be continuing under this clause (vii) if (A) the Institution is in good faith contesting the existence of such breach or event and if such acceleration is being stayed by judicial proceedings or (B) such breach or event is remedied and the acceleration is wholly annulled. The Institution shall notify the Issuer and the Trustee of any such breach or event immediately upon the Institution's becoming aware of its occurrence and shall from time to time furnish such information as the Issuer or the Trustee may reasonably request for the purpose of determining whether a breach or event described in this clause (vii) has occurred and whether acceleration continues to be in effect.

Waiver. If the Trustee determines that a default has been cured before the entry of any final judgment or decree with respect to it, the Trustee may waive the default and its consequences, including any acceleration, by written notice to the Institution and shall do so, with the written consent of the Issuer, upon written instruction of the Owners of at least twenty-five percent (25%) in principal amount of the Outstanding Bonds. (Section 501)

Remedies for Events of Default. If an Event of Default occurs and is continuing:

Acceleration. The Trustee may by written notice to the Institution and the Issuer declare immediately due and payable the principal amount of the Outstanding Bonds and the payments to be made by the Institution therefor, and accrued interest on the foregoing, whereupon the same shall become immediately due and payable without any further action or notice.

If, at any time after such declaration and before the entry of a judgment or decree for payment of the money due, all amounts payable under the Agreement except principal and interest on the Bonds that are due solely by reason of such declaration and acceleration shall have been paid or provided for by deposit with the Trustee and all existing Events of Default shall have been cured, then, unless otherwise directed in writing by the registered owners of Bonds representing a majority of the principal amount of the Outstanding Bonds, the Trustee shall rescind and annul such declaration and acceleration, but no such rescission shall affect any subsequent Event of Default or the consequences thereof.

Rights as a Secured Party. The Trustee may exercise all of the rights and remedies of a secured party under the UCC with respect to the securities in the funds held by it under the Agreement, including the right to sell or redeem such securities and the right to retain the securities in satisfaction of the obligations of the Institution under the Agreement. Notice sent by registered or certified mail, postage prepaid, or delivered during business hours, to the Institution at least seven (7) days before an event under the UCC, or any successor provision of law shall constitute reasonable notification of such event. (Section 502)

Court Proceedings

The Trustee may enforce the obligations under the Agreement by legal proceedings for the specific performance of any covenant, obligation or agreement contained in the Agreement, whether or not an Event of Default exists, or for the enforcement of any other appropriate legal or equitable remedy, and may recover damages caused by any breach of the provisions of the Agreement, including (to the extent the Agreement may lawfully provide) court costs, reasonable attorneys' fees and other costs and expenses incurred in enforcing the obligations under the Agreement. (Section 503)

Revenues after Default

The proceeds from the exercise of the rights and remedies under the Agreement shall be remitted to the Trustee upon receipt and in the form received. After payment or reimbursement of the reasonable expenses of the Trustee and the Issuer in connection therewith, the same shall be allocated to the Bonds. The portion allocable to the Bonds shall be applied, first to the remaining obligations of the Institution under the Agreement (other than obligations to make payments to the Issuer for its own use) in such order as may be determined by the Trustee, and second, to any unpaid sums due the Issuer for its own use. Any surplus thereof shall be paid to the Institution. (Section 504)

Remedies Cumulative

The rights and remedies under the Agreement shall be cumulative and shall not exclude any other rights and remedies allowed by law, provided there is no duplication of recovery. The failure to insist upon a strict performance of any of the obligations of the Institution or to exercise any remedy for any violation thereof shall not be taken as a waiver for the future of the right to insist upon strict performance by the Institution or of the right to exercise any remedy for the violation. (Section 505)

Resignation or Removal of the Trustee

The Trustee may resign on not less than thirty (30) days' notice given in writing to the Issuer, the Bondowners and the Institution, but such resignation shall not take effect until a successor has been appointed. The Trustee will promptly certify to the Issuer that it has mailed such notice to all Bondowners and such certificate will be conclusive evidence that such notice was given in the manner required by the Agreement. The Trustee may be removed upon thirty (30) days written notice (i) by written notice from the Owners of a majority in principal amount of the Outstanding Bonds to the Trustee, the Issuer and the Institution; (ii) with or without cause by the Institution with the approval of the Issuer if the Institution is not in default or (iii) with cause by the Issuer. (Section 604)

The Bondowners

Action by Bondowners. Any request, authorization, direction, notice, consent, waiver or other action provided by the Agreement to be given or taken by Bondowners may be contained in and evidenced by one or more writings of substantially the same tenor signed by the requisite number of Bondowners or their attorneys duly appointed in writing.

Any request, consent or vote of the Owner of any Bond shall bind all future Owners of such Bond. Bonds owned or held by or for the account of the Issuer or the Institution shall not be deemed Outstanding Bonds for the purpose of any consent or other action by Bondowners. (Section 801)

Proceedings by Bondowners. No Bondowner shall have any right to institute any legal proceedings for the enforcement of the Agreement or any applicable remedy under the Agreement, unless the Bondowners have directed the Trustee to act and furnished the Trustee indemnity as provided in the Agreement and have afforded the Trustee reasonable opportunity to proceed, and the Trustee shall thereafter fail or refuse to take such action.

Subject to the foregoing, any Bondowner may by any available legal proceedings enforce and protect its rights under the Agreement and under the laws of The Commonwealth of Massachusetts. (Section 802)

The Institution

Corporate Organization, Authorization and Powers. The Institution represents and warrants that it is a corporation duly organized on May 30, 1650 by act of the Colony of Massachusetts Bay confirmed, as amended, in the Constitution of 1780 of The Commonwealth of Massachusetts, with the power to enter into and perform the Agreement; that it is a nonprofit educational institution within the Commonwealth authorized by law to provide a program of education beyond the high school level and that by proper corporate action it has duly authorized the execution and delivery of the Agreement. The Institution further represents and warrants that the execution and delivery of the Agreement and the consummation of the transactions contemplated in the Agreement will not conflict with or constitute a breach of or default under any bond, indenture, note or other evidence of indebtedness of the Institution, the charter or by-laws of the Institution, any gifts, bequests or devises pledged to or received by the Institution, or any contract, lease or other instrument to which the Institution is a party or by which it is bound or cause the Institution to be in violation of any applicable statute or rule or regulation of any governmental authority. (Section 901)

Tax Matters. The Institution represents and warrants that (i) it is an organization described in Section 501(c)(3) of the IRC and it is not a "private foundation" as defined in Section 509 of the IRC; (ii) it has received letters from the Internal Revenue Service to that effect; (iii) such letters have not been modified, limited or revoked; (iv) it is in compliance with all terms, conditions and limitations, if any, contained in such letters; and (v) it is exempt from federal income taxes under Section 501(a) of the IRC. (b) The Institution shall not take or omit to take any action if such action or omission would (i) cause the Bonds to be "arbitrage bonds" under Section 148 of the IRC, including, without limitation, as a result of computing the yield on any investment acquired with Bond proceeds other than on the basis of the "fair market value" (within the meaning of Treas. Reg. §1.148-5(d)(6)) of such investment at the time of acquisition, (ii) cause the Bonds to not meet any of the requirements of Section 149 of the IRC, or (iii) cause the Bonds to cease to be "qualified 501(c)(3) bonds" under Section 145 of the IRC. Without limiting the foregoing, the Institution shall not permit the $150,000,000 nonhospital bond limitation of IRC §145(b) to be exceeded. To the extent consistent with its status as a nonprofit educational institution, the Institution agrees that it will not take any action or omit to take any action if such action or omission would cause any revocation or adverse modification of such federal income tax status of the Institution. Partly in furtherance of the foregoing, the Issuer and the Institution are entering into the Tax Certificate with respect to matters of federal tax law pertaining to the Bonds issued under the Agreement. (Section 902)

Securities Law Status. The Institution represents and warrants that it is an organization organized and operated exclusively for charitable purposes and not for pecuniary profit; and that no part of its net earnings inures to the benefit of any person, private stockholder or individual, all within the meaning of the Securities Act of 1933, as amended. The Institution shall not take any action or omit to take any action if such action or omission would change its status as set forth in this paragraph. (Section 903)

Annual Reports and Other Current Information. The Institution shall from time to time render such other reports concerning the condition of the Project or compliance with the Agreement as the Issuer or the Trustee may reasonably request. Not later than March 1 of each year, the Institution shall furnish to the Trustee and the Issuer, and to Bondowners requesting the same, copies of its audited financial statements unless such audited financial statements are available for public access on the Electronic Municipal Market Access ("EMMA") website or the Institution's website. If such statements are not so available, then copies of the reports and statements required to be filed with the Trustee pursuant to this paragraph shall be filed with the Trustee in sufficient quantity to permit the Trustee to retain at least one copy for inspection by Bondowners and to permit the Trustee to mail a copy to each Bondowner who requests it. The Trustee shall maintain a list of Bondowners who have made such a request. The Institution shall furnish to the agencies rating the Bonds such information as they may reasonably require for current reports to their subscribers. The Trustee shall have no obligation or duty to review any financial statements (audited or otherwise) filed with it and shall not be deemed to have notice of the content of such statements or a default based on such content and shall have no obligation or duty to verify the accuracy of such statements. (Section 904)

Maintenance of Corporate Existence. The Institution shall maintain its existence as a nonprofit corporation qualified to do business in Massachusetts and shall not dissolve, dispose of or spin off all or substantially all of its assets, or consolidate with or merge into another entity or entities, or permit one or more other entities to consolidate with or merge into it, except that it may consolidate with or merge into one or more other entities or permit one or more other entities to consolidate with or merge into it, or transfer all or substantially all of its assets to one or more other entities (and thereafter dissolve or not dissolve as it may elect), if (a) the surviving, resulting or transferee entity or entities each is a corporation having the status and powers set forth in the Agreement, (b) the transaction does not result in a conflict, breach or default referred to in the Agreement, (c) the surviving, resulting or transferee entity or entities each (i) assumes by written agreement with the Issuer and the Trustee all the obligations of the Institution under the Agreement, (ii) notifies the Issuer and the Trustee of any change in the name of the Institution, and (iii) executes, delivers, registers, records and files such other instruments as the Issuer or the Trustee may reasonably require to confirm, perfect or maintain any security granted under the Agreement. (Section 905)

Amendment

The Agreement may be amended by the parties without Bondowner consent for any of the following purposes: (a) to subject additional property to the lien of the Agreement, (b) to provide for the establishment or amendment of a book entry system of registration for the Bonds through a securities depository (which may or may not be DTC), (c) to add to the covenants and agreements of the Institution or to surrender or limit any right or power of the Institution, or (d) to cure any ambiguity or defect, or to add provisions which are not inconsistent with the Agreement and which do not impair the security for the Bonds.

Except as provided in the foregoing paragraph, the Agreement may be amended only with the written consent of the Owners of at least a majority in principal amount of the Outstanding Bonds; provided, however, that no amendment of the Agreement may be made without the unanimous written consent of the affected Bondowners for any of the following purposes: (i) to extend the maturity of any Bond, (ii) to reduce the principal amount or interest rate of any Bond, (iii) to make any Bond redeemable other than in accordance with its terms, (iv) to create a preference or priority of any Bond or Bonds over any other Bond or Bonds, or (v) to reduce the percentage of the Bonds required to be represented by the Bondowners giving their consent to any amendment.

Any amendment of the Agreement shall be accompanied by an opinion of Bond Counsel (which shall include the Trustee as an addressee or shall expressly permit reliance by the Trustee) to the effect that the amendment (i) is permitted by the Agreement and (ii) will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes.

When the Trustee determines that the requisite number of consents have been obtained for an amendment that requires Bondowner consent, it shall, within ninety (90) days, file a certificate to that effect in its records and mail notice to the Bondowners. No action or proceeding to invalidate the amendment shall be instituted or maintained unless it is commenced within sixty (60) days after such mailing. The Trustee will promptly certify to the Issuer that it has mailed such notice to all Bondowners and such certificate will be conclusive evidence that such notice was given in the manner required by the Agreement. A consent to an amendment may be revoked by a notice given by the Bondowner and received by the Trustee prior to the Trustee's certification that the requisite consents have been obtained. (Section 1001)

<u>Defeasance</u>

When there are in the Debt Service Fund and the Redemption Fund sufficient funds, or Government or Equivalent Obligations described in clause (i), (ii), (iii) or (v) of the definition thereof in such principal amounts, bearing interest at such rates and with such maturities as will provide sufficient funds to pay or redeem the Bonds in full, and when all the rights under the Agreement of the Issuer and the Trustee have been provided for, upon written notice from the Institution to the Issuer and the Trustee, the Bondowners shall cease to be entitled to any benefit or security under the Agreement except the right to receive payment of the funds deposited and held for payment and other rights which by their nature cannot be satisfied prior to or simultaneously with termination of the lien of the Agreement, the security interests created by the Agreement (except in such funds and investments) shall terminate, and the Issuer and the Trustee shall execute and deliver such instruments as may be necessary to discharge the lien and security interests created under the Agreement; provided, however, that if any such Bonds are to be redeemed prior to the maturity thereof, the Trustee and the Institution, as applicable, shall have taken all action necessary to redeem such Bonds and notice of such redemption shall have been duly mailed in accordance with the Agreement or irrevocable instructions so to mail shall have been given to the Trustee. Upon such defeasance, the funds and investments required to pay or redeem the Bonds in full shall be irrevocably set aside for that purpose, subject, however, to the provisions of the Agreement regarding unclaimed moneys, and moneys held for defeasance shall be invested only as provided above in this section. To the extent allowed by applicable law, any funds or property held by the Trustee and not required for payment or redemption of the Bonds in full shall, after satisfaction of all the rights of the Issuer and the Trustee and after allowance for payment to the United States under IRC Section 148(b), be distributed to the Institution upon such indemnification, if any, as the Issuer or the Trustee may reasonably require. In connection with any advance refunding, the Issuer, the Institution and the Trustee may request a verification report or other evidence of sufficiency. (Section 202)

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APPENDIX D

PROPOSED FORM OF BOND COUNSEL OPINION

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HINCKLEY ALLEN

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Boston, MA 02109-1775
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APPENDIX D

[PROPOSED FORM OF BOND COUNSEL OPINION]

April 29, 2020

Massachusetts Development Finance Agency
99 High Street, 11th Floor
Boston, MA 02110

$346,680,000
Massachusetts Development Finance Agency
Revenue Bonds
Harvard University Issue, Series 2020A
Dated their Date of Delivery

We have acted as bond counsel to the Massachusetts Development Finance Agency (the "Agency") in connection with the issuance by the Agency of the above-referenced bonds (the "Bonds"). In such capacity, we have examined the law and such certified proceedings and other papers as we have deemed necessary to render this opinion, including the Loan and Trust Agreement dated as of April 1, 2020 (the "Agreement") among the Agency, President and Fellows of Harvard College (the "Institution") and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee").

As to questions of fact material to our opinion we have relied upon representations and covenants of the Agency and the Institution contained in the Agreement and in the certified proceedings and other certifications of public officials furnished to us, and certifications of officials of the Institution and others, without undertaking to verify the same by independent investigation.

The Bonds are issued pursuant to the Agreement. The Bonds are payable solely from funds to be provided therefor by the Institution pursuant to the Agreement. Under the Agreement, the Institution has agreed to make payments sufficient to pay when due the principal (including sinking fund installments) and purchase or redemption price of and interest on the Bonds. Such payments and other moneys payable to the Agency or the Trustee under the Agreement, including proceeds derived from any security provided thereunder (collectively the "Revenues"), and the rights of the Agency under the Agreement to receive the same (excluding, however, certain administrative fees, indemnification and reimbursements), are pledged and assigned by the Agency as security for the Bonds. The Bonds are payable solely from the Revenues.

We express no opinion with respect to compliance by the Institution with applicable legal requirements with respect to the Agreement or in connection with the operation of the Project (as defined in the Agreement) being refinanced by the Bonds.

Reference is made to an opinion of even date of Ropes & Gray LLP, counsel to the Institution, with respect to, among other matters, the corporate existence of the Institution, the power of the Institution to carry out the Project, the power of the Institution to enter into and perform its obligations under the Agreement and the authorization, execution and delivery of the Agreement by the Institution. We have relied on such opinion with regard to such matters and to the other matters addressed therein, including, without limitation, the current qualification of the Institution as an organization described in Section 501(c)(3) of the Internal Revenue Code of 1986 (the "Code"). We note that such opinion is subject to the limitations and conditions described therein. Failure of the Institution to maintain its status as an organization described in Section 501(c)(3) of the Code or to use the Project in activities of the Institution that do not constitute unrelated trades or businesses of the Institution within the meaning of Section 513 of the Code may result in interest on the Bonds being included in gross income for federal income tax purposes, possibly from the date of issuance of the Bonds.

Based on our examination, we are of the opinion, under existing law, as follows:

1. The Agency is a duly created and validly existing body corporate and politic and a public instrumentality of The Commonwealth of Massachusetts with the power to enter into and perform the Agreement and to issue the Bonds.

2. The Agreement has been duly authorized, executed and delivered by the Agency and is a valid and binding obligation of the Agency enforceable against the Agency. As provided in Chapter 23G of the General Laws of The Commonwealth of Massachusetts, the Agreement creates a valid lien on the Revenues and on the rights of the Agency or the Trustee on behalf of the Agency to receive Revenues under the Agreement (except certain rights to indemnification, reimbursements and fees).

3. The Bonds have been duly authorized, executed and delivered by the Agency and are valid and binding special obligations of the Agency, payable solely from the Revenues.

4. Interest on the Bonds is excluded from the gross income of the owners of the Bonds for federal income tax purposes. In addition, interest on the Bonds is not a specific preference item for purposes of the federal individual alternative minimum tax. In rendering the opinions set forth in this paragraph, we have assumed compliance by the Agency and the Institution with all requirements of the Code that must be satisfied subsequent to the issuance of the Bonds in order that interest thereon be, and continue to be, excluded from gross income for federal income tax purposes. The Institution and, to the extent necessary, the Agency have covenanted in the Agreement to comply with all such requirements. Failure by the Agency or the Institution to comply with certain of such requirements may cause interest on the Bonds to become included in gross income for federal income tax purposes

retroactive to the date of issuance of the Bonds. We express no opinion regarding any other federal tax consequences arising with respect to the Bonds.

5. Interest on the Bonds and any profit on the sale of the Bonds are exempt from Massachusetts personal income taxes and the Bonds are exempt from Massachusetts personal property taxes. We express no opinion regarding any other Massachusetts tax consequences arising with respect to the Bonds or any tax consequences arising with respect to the Bonds under the laws of any state other than Massachusetts.

This opinion is expressed as of the date hereof, and we neither assume nor undertake any obligation to update, revise, supplement or restate this opinion to reflect any action taken or omitted, or any facts or circumstances or changes in law or in the interpretation thereof, that may hereafter arise or occur, or for any other reason.

The rights of the holders of the Bonds and the enforceability of the Bonds and the Agreement may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted to the extent constitutionally applicable, and their enforcement may also be subject to the exercise of judicial discretion in appropriate cases.

HINCKLEY, ALLEN & SNYDER LLP

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APPENDIX E

FORM OF CONTINUING DISCLOSURE AGREEMENT

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CONTINUING DISCLOSURE AGREEMENT

This Continuing Disclosure Agreement (the "Disclosure Agreement") is executed and delivered by President and Fellows of Harvard College (the "Institution") and The Bank of New York Mellon Trust Company, N.A. (the "Trustee") in connection with the issuance of $346,680,000 Massachusetts Development Finance Agency Revenue Bonds, Harvard University Issue, Series 2020A (the "Bonds"). The Bonds are being issued pursuant to a Loan and Trust Agreement dated as of April 1, 2020 among the Massachusetts Development Finance Agency (the "Issuer"), the Trustee and the Institution (the "Agreement"), and the proceeds of the Bonds are being loaned by the Issuer to the Institution pursuant to the Agreement. The Institution and the Trustee covenant and agree as follows.

SECTION 1. Purpose of the Disclosure Agreement. This Disclosure Agreement is being executed and delivered by the Institution and the Trustee for the benefit of the Bondowners and in order to assist the Participating Underwriters (defined below) in complying with the Rule (defined below). The Institution and the Trustee acknowledge that the Issuer has undertaken no responsibility with respect to any reports, notices or disclosures provided or required under this Disclosure Agreement, and has no liability to any person, including any Bondowner, with respect to any such reports, notices or disclosures. The Trustee, except as provided in Section 3(c), has undertaken no responsibility with respect to any reports, notices or disclosures provided or required under this Disclosure Agreement, and has no liability to any person, including any Bondowner, with respect to any such reports, notices or disclosures except for its negligent failure to comply with its obligations under Section 3(c).

SECTION 2. Definitions. In addition to the definitions set forth in the Agreement, which apply to any capitalized term used in this Disclosure Agreement unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

"Annual Report" shall mean any Annual Report provided by the Institution pursuant to, and as described in, Sections 3 and 4 of this Disclosure Agreement.

"Bondowner" shall mean the registered owner of a Bond and any beneficial owner thereof, as established to the reasonable satisfaction of the Trustee or Institution.

"Dissemination Agent" shall mean any Dissemination Agent or successor Dissemination Agent designated in writing by the Institution and which has filed with the Institution, the Trustee and the Issuer a written acceptance of such designation. The same entity may serve as both Trustee and Dissemination Agent. The initial Dissemination Agent shall be the Trustee. In the absence of a third-party Dissemination Agent, the Institution shall serve as the Dissemination Agent.

"Financial Obligation" shall mean, for purposes of the Listed Events numbers 15 and 16 set out in Section 5(a) of this Disclosure Agreement, a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "Financial Obligation" shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

"Listed Events" shall mean any of the events listed in Section 5(a) of this Disclosure Agreement.

"MSRB" means the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934, or any successor thereto or to the functions of the MSRB contemplated by this Disclosure Agreement. Filing information relating to the MSRB is set forth in Exhibit B hereto.

"Official Statement" shall mean the final official statement dated April 14, 2020 relating to the Bonds.

"Participating Underwriter" shall mean any of the original underwriters of the Bonds required to comply with the Rule in connection with offering of the Bonds.

"Rule" shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

SECTION 3. Provision of Annual Reports.

(a) The Dissemination Agent, not later than March 1 of each year, commencing in 2021 (the "Filing Deadline"), shall provide to the MSRB an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Agreement. Not later than five (5) Business Days prior to said date, the Institution (if it is not the Dissemination Agent) shall provide the Annual Report to the Dissemination Agent. In each case, the Annual Report 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 of this Disclosure Agreement; provided that the audited financial statements of the Institution may be submitted separately from, and at a later date than, the balance of the Annual Report if such audited financial statements are not available as of the date set forth above. If the Dissemination Agent submits the audited financial statements of the Institution at a later date, it shall provide unaudited financial statements by the above-specified deadline and shall provide the audited financial statements as soon as practicable after the audited financial statements become available. The Institution shall submit the audited financial statements to the Dissemination Agent and the Trustee as soon as practicable after they become available and the Dissemination Agent shall submit the audited financial statements to the MSRB as soon as practicable thereafter. The Institution shall provide a copy of the Annual Report to the Issuer and the Trustee.

(b) The Dissemination Agent shall file a report with the Institution, the Issuer and the Trustee certifying that the Annual Report has been provided pursuant to this Disclosure Agreement and stating the date it was provided (the "Compliance Certificate"); such report shall include a certification from the Institution that the Annual Report complies with the requirements of this Disclosure Agreement.

(c) If the Trustee has not received a Compliance Certificate by the Filing Deadline, the Trustee shall send, and the Institution hereby authorizes and directs the Trustee to submit on its behalf, a notice to the MSRB in substantially the form attached as Exhibit A.

(d) If the Dissemination Agent has not provided the Annual Report to the MSRB by the Filing Deadline, the Institution shall send, or cause the Dissemination Agent to send, a notice substantially in the form of Exhibit A irrespective of whether the Trustee submits such notice.

SECTION 4. Content of Annual Reports. The Institution's Annual Report shall contain or incorporate by reference the following:

(a) Quantitative information for the preceding fiscal year of the type presented under the heading captioned "Student Applications and Enrollment" in Appendix A to the Official Statement.

(b) General information with respect to endowment assets, and income and expenses as found in Appendix B to the Official Statement.

In the event the Borrower's audited financial statements provided pursuant to Section 3 of this Disclosure Agreement contain any of the information described in clauses (a) and (b) above, the requirement of this Section 4 shall be deemed to be satisfied with respect to including such information in the Borrower's Annual Report.

The financial statements provided pursuant to Sections 3 and 4 of this Disclosure Agreement shall be prepared in conformity with generally accepted accounting principles, as in effect from time to time. Any or all of the items listed above may be incorporated by reference from other documents, including official statements of debt issues with respect to which the Institution is an "obligated person" (as defined by the Rule), which (i) are available to the public on the MSRB Internet Web site, or (ii) have been filed with the Securities and Exchange Commission. The Institution shall clearly identify each such other document so incorporated by reference.

SECTION 5. Reporting of Significant Events.

(a) This Section 5 shall govern the giving of notices of the occurrence of any of the following events:

1. Principal and interest payment delinquencies;

2. Non-payment related defaults, if material;

3. Unscheduled draws on debt service reserves reflecting financial difficulties;

4. Unscheduled draws on credit enhancements reflecting financial difficulties;

5. Substitution of credit or liquidity providers, or their failure to perform;

6. Adverse tax opinions, 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 of 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 Bondowners, if material;

8. Bond calls, if material, and tender offers;

9. Defeasances;

10. Release, substitution, or sale of property securing repayment of the Bonds, if material;

11. Rating changes;

12. Bankruptcy, insolvency, receivership or similar event of the Institution;[1]

13. The consummation of a merger, consolidation, or acquisition involving the Institution or the sale of all or substantially all of the assets of the Institution, 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 the Trustee, if material;

15. Incurrence of a Financial Obligation of the Institution, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Institution, 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 Institution, any of which reflect financial difficulties.

(b) Upon the occurrence of a Listed Event, the Institution shall, in a timely manner not in excess of ten (10) business days after the occurrence of the event, file or cause to be filed a notice of such occurrence with the MSRB. The Institution shall provide a copy of each such notice to the Issuer and the Trustee. The Dissemination Agent, if other than the Institution, shall have no duty to file a notice of an event described hereunder unless it is directed in writing to do so by the Institution, and shall have no responsibility for verifying any of the information in any such notice or determining the materiality of the event described in such notice.

SECTION 6. Transmission of Information and Notices. Unless otherwise required by law, all notices, documents and information provided to the MSRB shall be provided in electronic format as prescribed by the MSRB and shall be accompanied by identifying information as prescribed by the MSRB.

[1] For the purposes of this Listed Event, the Listed Event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Institution 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 Institution, or if such jurisdiction has been assumed by leaving the existing governing 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 Institution.

SECTION 7. Termination of Reporting Obligation. The Institution's obligations under this Disclosure Agreement shall terminate upon the defeasance, prior redemption or payment in full of all of the Bonds or upon delivery to the Trustee of an opinion of counsel expert in federal securities laws selected by the Institution to the effect that compliance with this Disclosure Agreement no longer is required by the Rule. If the Institution's obligations under the Agreement are assumed in full by some other entity, such person shall be responsible for compliance with this Disclosure Agreement in the same manner as if it were the Institution and the original Institution shall have no further responsibility hereunder.

SECTION 8. Dissemination Agent. The Institution may, from time to time with written notice to the Trustee and the Issuer appoint or engage a third-party Dissemination Agent to assist it in carrying out its obligations under this Disclosure Agreement, and may, with written notice to the Trustee and the Issuer, discharge any such third-party Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent (if other than the Institution) may resign upon 30 days' written notice to the Institution, the Trustee and the Issuer.

SECTION 9. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Agreement, the Institution and the Trustee may amend this Disclosure Agreement (and, subject to the last sentence of this Section 9, the Trustee shall agree to any amendment so requested by the Institution) and any provision of this Disclosure Agreement may be waived, if such amendment or waiver is supported by an opinion of counsel expert in federal securities laws acceptable to the Institution to the effect that such amendment or waiver would not, in and of itself, violate the Rule. Without limiting the foregoing, the Institution and the Trustee may amend this Disclosure Agreement if (a) such amendment is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of the Institution or of the type of business conducted by the Institution, (b) this Disclosure Agreement, as so amended, would have complied with the requirements of the Rule at the time the Bonds were issued, taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and (c) (i) the Trustee receives an opinion of counsel expert in federal securities laws to the effect that, the amendment does not materially impair the interests of the Bondowners or (ii) the amendment is consented to by the Bondowners as though it were an amendment to the Agreement pursuant to Section 1001 of the Agreement. The annual financial information containing the amended operating data or financial information will explain, in narrative form, the reasons for the amendment and the impact of the change in the type of operating data or financial information being provided. Neither the Trustee nor the Dissemination Agent shall be required to accept or acknowledge any amendment of this Disclosure Agreement if the amendment adversely affects its respective rights or immunities or increases its respective duties hereunder.

SECTION 10. Additional Information. Nothing in this Disclosure Agreement shall be deemed to prevent the Institution from disseminating any other information, using the means of dissemination set forth in this Disclosure Agreement or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Agreement. If the Institution chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Agreement, the Institution shall have no obligation under this Disclosure Agreement to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 11. Default. In the event of a failure of the Institution or the Dissemination Agent to comply with any provision of this Disclosure Agreement, the Trustee may (and, at the request of Bondowners representing at least 25% in aggregate principal amount of Outstanding Bonds, shall), take such actions as may be necessary and appropriate, including seeking specific performance by court order, to cause the Institution or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. Without regard to the foregoing, any Bondowner may take such actions as may be necessary and appropriate, including seeking specific performance by court order, to cause the Institution or the Dissemination Agent, as the case may be, to comply with its obligations under this Disclosure Agreement. A default under this Disclosure Agreement shall not be deemed an Event of Default under the Agreement, and the sole remedy under this Disclosure Agreement in the event of any failure of the Institution or the Dissemination Agent to comply with this Disclosure Agreement shall be an action to compel performance.

SECTION 12. Duties, Immunities and Liabilities of Trustee and Dissemination Agent. As to the Trustee, Article VI of the Agreement is hereby made applicable to this Disclosure Agreement as if this Disclosure Agreement were (solely for this purpose) contained in the Agreement. In the event that the Trustee serves as

Dissemination Agent, the same privileges and protections afforded to the Trustee under Article VI of the Agreement shall be equally applicable to the Trustee in the performance of its duties as Dissemination Agent hereunder. The Dissemination Agent (if other than the Institution) shall have only such duties as are specifically set forth in this Disclosure Agreement, and the Institution agrees to indemnify and save the Dissemination Agent (if other than the Institution), its officers, director, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The obligations of the Institution under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds. The Institution covenants that whenever it is serving as Dissemination Agent, it shall take any action required of the Dissemination Agent under this Disclosure Agreement. Neither the Trustee nor the Dissemination Agent (if other than the Institution) shall have a duty to review the Annual Report, nor shall they be deemed to have notice of the contents of such Annual Report or a default based on such content, nor shall they have a duty to verify the accuracy of such Annual Report.

The Trustee shall have no obligation under this Disclosure Agreement to report any information to the MSRB or any Bondowner. If an officer of the Trustee obtains actual knowledge of the occurrence of an event described in Section 5 hereunder, whether or not such event is material, the Trustee shall timely notify the Institution of such occurrence, provided, however, that any failure by the Trustee to give such notice to the Institution shall not affect the Institution's obligations under this Disclosure Agreement or give rise to any liability by the Trustee for such failure.

SECTION 13. Beneficiaries. This Disclosure Agreement shall inure solely to the benefit of the Institution, the Trustee, the Dissemination Agent, the Participating Underwriters and the Bondowners, and shall create no rights in any other person or entity.

SECTION 14. Disclaimer. No Annual Report or notice of a Listed Event filed by or on behalf of the Institution under this Disclosure Agreement shall obligate the Institution to file any information regarding matters other than those specifically described in Section 4 and Section 5 hereof, nor shall any such filing constitute a representation by the Institution or raise any inference that no other material events have occurred with respect to the Institution or the Bonds or that all material information regarding the Institution or the Bonds has been disclosed. The Institution shall have no obligation under this Disclosure Agreement to update information provided pursuant to this Disclosure Agreement except as specifically stated herein.

SECTION 15. Notices. Unless otherwise expressly provided, all notices to the Issuer, the Institution, the Trustee and the Dissemination Agent shall be in writing and shall be deemed sufficiently given if sent by registered or certified mail, postage prepaid, or delivered or sent by facsimile during business hours to such parties at the address specified in Section 1003 of the Agreement or, as to all of the foregoing, to such other address as the addressee shall have indicated by prior written notice to the party giving notice.

SECTION 16. Counterparts. This Disclosure Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

[Remainder of page intentionally left blank]

SECTION 17. Governing Law. This instrument shall be governed by the laws of the Commonwealth of Massachusetts

Date: _____________ __, 2020

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

By: ___________________________________
Name:
Title:

THE BANK OF NEW YORK MELLON
TRUST COMPANY, N.A.,
as Trustee

By: ___________________________________
Name:
Title:

EXHIBIT A

NOTICE TO MSRB OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer: Massachusetts Development Finance Agency

Name of Bond Issue: Revenue Bonds, Harvard University Issue, Series 2020A

Name of Obligated Person: President and Fellows of Harvard College

Date of Issuance: April __, 2020

NOTICE IS HEREBY GIVEN that President and Fellows of Harvard College (the "Institution") has not provided an Annual Report with respect to the above-named Bonds as required by the Continuing Disclosure Agreement dated April __, 2020 between the Institution and The Bank of New York Mellon Trust Company, N.A.

Dated: ____________________

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A. on behalf of PRESIDENT AND FELLOWS OF HARVARD COLLEGE

cc: Institution

EXHIBIT B

Filing information relating to the Municipal Securities Rulemaking Board is as follows:

Municipal Securities Rulemaking Board
http://emma.msrb.org

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