NEW ISSUE – BOOK-ENTRY ONLY

RATINGS
Moody's: Aaa
S&P: AAA

$750,000,000
PRESIDENT AND FELLOWS OF HARVARD COLLEGE
Taxable Bonds, Series 2024A

Dated: Date of Delivery **Due: February 15, as shown on the inside front cover**

The President and Fellows of Harvard College Taxable Bonds, Series 2024A (the "Bonds") will be issued pursuant to the terms of an Indenture of Trust, dated as of March 1, 2024 (the "Indenture"), by and between President and Fellows of Harvard College (the "Institution") and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"). The proceeds of the Bonds will be used for general corporate purposes of the Institution and to pay certain costs of issuance of the Bonds. See "PLAN OF FINANCE" herein.

The Bonds will be issued in fully-registered form in denominations of $1,000 and any integral multiple thereof and, when issued, will be registered under a global book-entry system in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository for the Bonds. Individual purchases will be made in book-entry form only, in principal amounts of $1,000 and any integral multiple thereof. Purchasers of the Bonds will not receive physical certificates (except under certain circumstances described in the Indenture) representing their ownership interests in the Bonds purchased.

Interest on the Bonds will be payable on February 15 and August 15 of each year, commencing on August 15, 2024. So long as the Bonds are held by DTC, the principal, Redemption Price or Make-Whole Redemption Price (each as defined herein) of and interest on the Bonds will be payable by wire transfer to DTC, which in turn is required to remit such principal, Redemption Price or Make-Whole Redemption Price and interest to the Direct Participants (as defined herein) for subsequent disbursement to the Beneficial Owners of the Bonds, as more fully described in "BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" herein.

The Bonds are subject to redemption prior to their stated maturity as described herein. See "THE BONDS – Redemption" herein.

Interest on and profit, if any, on the sale of the Bonds are not excludable from gross income for federal, state or local income tax purposes. See "CERTAIN U.S. FEDERAL TAX CONSIDERATIONS" herein.

The Bonds constitute unsecured general obligations of the Institution. The Institution has other unsecured general obligations outstanding. See APPENDIX B – "HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023" attached hereto. Moreover, the Institution is not restricted by the Indenture 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 payment on the Bonds. See "SECURITY FOR THE BONDS" herein.

This cover page contains certain information for general reference only. It is not intended to be a summary of this issue. Investors must read the entire Offering Memorandum to obtain information essential to the making of an informed investment decision.

The Bonds are offered by the Underwriters, when, as and if issued by the Institution and accepted by the Underwriters, subject to the approval of legality by Ropes & Gray LLP, Boston, Massachusetts, counsel to the Institution. In addition, certain other legal matters will be passed upon for the Underwriters by their counsel, Orrick, Herrington & Sutcliffe LLP, New York, New York. It is expected that the Bonds will be available for delivery to DTC in New York, New York on or about March 12, 2024.

Goldman Sachs & Co. LLC **Barclays**

Morgan Stanley **Wells Fargo Securities**

BofA Securities **J.P. Morgan** **Loop Capital Markets** **TD Securities**

Academy Securities **RBC Capital Markets** **Siebert Williams Shank & Co., LLC**

March 5, 2024

MATURITY, PRINCIPAL AMOUNT, INTEREST RATE, YIELD AND IDENTIFICATION INFORMATION

$750,000,000

President and Fellows of Harvard College
Taxable Bonds, Series 2024A

$750,000,000 4.609% Bonds, due February 15, 2035 Price: 100.000% CUSIP No. 740816AR4†

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GENERAL INFORMATION

This Offering Memorandum does not constitute an offer to sell the Bonds in any jurisdiction in which or to any person to whom it is unlawful to make such an offer. No dealer, salesperson or other person has been authorized by Goldman Sachs & Co. LLC, as representative of itself and the other underwriters named on the cover page hereof (collectively, the "Underwriters"), or the Institution to give any information or to make any representations, other than those contained herein, in connection with the offering of the Bonds and, if given or made, such information or representations must not be relied upon.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Bonds, or determined that this Offering Memorandum is accurate or complete. Any representation to the contrary is a criminal offense. The Bonds have not been and will not be registered under the Securities Act of 1933, as amended (the "Securities Act"), and are being issued in reliance on an exemption or on exemptions contained therein. The Bonds are not exempt in every jurisdiction in the United States; some jurisdictions' securities laws (the "blue sky laws") may require a filing and a fee to secure the Bonds' exemption from registration.

The distribution of this Offering Memorandum and the offer or sale of Bonds may be restricted by law in certain jurisdictions. Neither the Institution nor the Underwriters represent that this Offering Memorandum may be lawfully distributed, or that any Bonds may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the Institution or the Underwriters which would permit a public offering of any of the Bonds or distribution of this Offering Memorandum in any jurisdiction where action for that purpose is required. Action may be required to secure exemptions from the blue sky registration requirements either for the primary distribution or any secondary sales that may occur. Accordingly, none of the Bonds may be offered or sold, directly or indirectly, and neither this Offering Memorandum nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations.

All information set forth herein has been obtained from the Institution and other sources. Estimates and opinions are included and should not be interpreted as statements of fact. Summaries of documents do not purport to be complete statements of their provisions. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Offering Memorandum nor any sale made hereunder will, under any circumstances, create any implication that there has been no change in the affairs of the Institution since the date hereof.

Certain statements included or incorporated by reference in this Offering Memorandum constitute "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995, Section 21E of the United States Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act. Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "budget," "intend," "projection" or other similar words. Such forward-looking statements include, but are not limited to, certain statements contained in the information in APPENDIX A – "CERTAIN INFORMATION CONCERNING THE INSTITUTION" and APPENDIX B – "HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023." A number of important factors, including factors affecting the Institution's financial condition and factors which are otherwise unrelated thereto, could cause actual results to differ materially from those stated in such forward-looking statements. THE INSTITUTION DOES NOT PLAN 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.

The Underwriters have provided the following sentence for inclusion in this Offering Memorandum. The Underwriters have reviewed the information in this Offering Memorandum 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.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS THAT STABILIZE OR MAINTAIN THE MARKET PRICE OF THE BONDS AT LEVELS ABOVE THOSE THAT MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

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 Offering Memorandum.

INFORMATION CONCERNING OFFERING RESTRICTIONS IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES

REFERENCES HEREIN TO THE "ISSUER" MEAN PRESIDENT AND FELLOWS OF HARVARD COLLEGE AND REFERENCES TO "BONDS" OR "SECURITIES" MEAN THE BONDS OFFERED HEREBY.

MINIMUM UNIT SALES

THE BONDS WILL TRADE AND SETTLE ON A UNIT BASIS (ONE UNIT EQUALING ONE BOND OF $1,000 PRINCIPAL AMOUNT). FOR ANY SALES MADE OUTSIDE THE UNITED STATES, THE MINIMUM PURCHASE AND TRADING AMOUNT IS 150 UNITS (BEING 150 BONDS IN AN AGGREGATE PRINCIPAL AMOUNT OF $150,000).

NOTICE TO PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA ("EEA")

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY EEA RETAIL INVESTOR IN THE EEA. FOR THESE PURPOSES, AN "*EEA RETAIL INVESTOR*" MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "*MIFID II*"); (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE (EU) 2016/97 (AS AMENDED, THE "*INSURANCE DISTRIBUTION DIRECTIVE*"), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II; OR (III) NOT A QUALIFIED INVESTOR AS DEFINED IN REGULATION (EU) 2017/1129 (AS AMENDED, THE "*EU PROSPECTUS REGULATION*"). CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO. 1286/2014 (AS AMENDED, THE "*PRIIPS REGULATION*") FOR OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY EEA RETAIL INVESTORS IN THE EEA HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY EEA RETAIL INVESTOR IN THE EEA MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

EACH SUBSCRIBER FOR OR PURCHASER OF THE BONDS LOCATED WITHIN THE EEA WILL BE DEEMED TO HAVE REPRESENTED, ACKNOWLEDGED AND AGREED THAT IT IS A "*QUALIFIED INVESTOR*" AS DEFINED IN THE EU PROSPECTUS REGULATION. THE ISSUER AND EACH UNDERWRITER AND OTHERS WILL RELY ON THE TRUTH AND ACCURACY OF THE FOREGOING REPRESENTATION, ACKNOWLEDGEMENT AND AGREEMENT.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM ("UK")

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY UK RETAIL INVESTOR IN THE UK. FOR THESE PURPOSES A "*UK RETAIL INVESTOR*" MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (8) OF ARTICLE 2 OF REGULATION (EU) 2017/565 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUROPEAN UNION (WITHDRAWAL) ACT 2018 (AS AMENDED, THE "*EUWA*"); OR (II) A CUSTOMER WITHIN THE MEANING OF PROVISIONS OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (AS AMENDED, THE "*FSMA*") AND ANY RULES OR REGULATIONS MADE UNDER THE FSMA TO IMPLEMENT DIRECTIVE (EU) 2016/97, WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT, AS DEFINED IN POINT (8) OF ARTICLE 2(1) OF REGULATION (EU) NO 600/2014 AS IT FORMS PART OF UK

DOMESTIC LAW BY VIRTUE OF THE EUWA; OR (III) NOT A "*QUALIFIED INVESTOR*" AS DEFINED IN ARTICLE 2 OF REGULATION (EU) 2017/1129 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA (THE "*UK PROSPECTUS REGULATION*"). CONSEQUENTLY NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 AS IT FORMS PART OF UK DOMESTIC LAW BY VIRTUE OF THE EUWA (AS AMENDED, THE "*UK PRIIPS REGULATION*") FOR OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO UK RETAIL INVESTORS IN THE UK HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY UK RETAIL INVESTOR IN THE UK MAY BE UNLAWFUL UNDER THE UK PRIIPS REGULATION.

EACH SUBSCRIBER FOR OR PURCHASER OF THE BONDS LOCATED WITHIN THE UK WILL BE DEEMED TO HAVE REPRESENTED, ACKNOWLEDGED AND AGREED THAT IT IS A "*QUALIFIED INVESTOR*" AS DEFINED IN THE UK PROSPECTUS REGULATION. THE ISSUER AND EACH UNDERWRITER AND OTHERS WILL RELY ON THE TRUTH AND ACCURACY OF THE FOREGOING REPRESENTATION, ACKNOWLEDGEMENT AND AGREEMENT.

UK RESTRICTIONS ON SALES - THE BONDS MUST NOT BE OFFERED OR SOLD AND THIS OFFERING MEMORANDUM AND ANY OTHER DOCUMENT IN CONNECTION WITH THE OFFERING AND ISSUANCE OF THE BONDS MUST NOT BE COMMUNICATED OR CAUSED TO BE COMMUNICATED IN THE UK EXCEPT TO PERSONS WHO HAVE PROFESSIONAL EXPERIENCE IN MATTERS RELATING TO INVESTMENTS AND QUALIFY AS INVESTMENT PROFESSIONALS UNDER ARTICLE 19 (INVESTMENT PROFESSIONALS) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005, (AS AMENDED, THE "*ORDER*") OR ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A)-(D) (HIGH NET WORTH COMPANIES, UNINCORPORATED ASSOCIATIONS, ETC.) OF THE ORDER OR WHO OTHERWISE FALL WITHIN AN EXEMPTION SET FORTH IN SUCH ORDER SUCH THAT SECTION 21(1) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (AS AMENDED, "*FSMA*") DOES NOT APPLY TO THE ISSUER OR ARE PERSONS TO WHOM THIS OFFERING MEMORANDUM OR ANY OTHER SUCH DOCUMENT MAY OTHERWISE LAWFULLY BE COMMUNICATED OR CAUSED TO BE COMMUNICATED (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "*RELEVANT PERSONS*"). ANY INVESTMENT OR INVESTMENT ACTIVITY TO WHICH THIS OFFERING MEMORANDUM RELATES IS AVAILABLE ONLY TO RELEVANT PERSONS AND WILL BE ENGAGED IN ONLY WITH RELEVANT PERSONS.

NEITHER THIS OFFERING MEMORANDUM NOR THE BONDS ARE OR WILL BE AVAILABLE TO PERSONS WHO ARE NOT RELEVANT PERSONS AND THIS OFFERING MEMORANDUM MUST NOT BE ACTED ON OR RELIED ON BY PERSONS WHO ARE NOT RELEVANT PERSONS. THE COMMUNICATION OF THIS OFFERING MEMORANDUM TO ANY PERSON IN THE UK WHO IS NOT A RELEVANT PERSON IS UNAUTHORIZED AND MAY CONTRAVENE THE FSMA.

ADDITIONAL NOTICE TO PROSPECTIVE INVESTORS

THIS OFFERING MEMORANDUM DOES NOT COMPRISE A PROSPECTUS WITH REGARD TO THE ISSUER OR THE BONDS FOR THE PURPOSES OF THE EU PROSPECTUS REGULATION IN RESPECT OF THE EAA OR UNDER THE UK PROSPECTUS REGULATION IN RESPECT OF THE UK. ACCORDINGLY, ANY PERSON MAKING OR INTENDING TO MAKE ANY OFFER IN THE EEA OR THE UK OF THE BONDS SHOULD ONLY DO SO IN CIRCUMSTANCES IN WHICH NO OBLIGATION ARISES FOR THE ISSUER OR ANY OF THE UNDERWRITERS TO PROVIDE A PROSPECTUS FOR SUCH OFFER. NEITHER THE ISSUER NOR THE UNDERWRITERS HAS AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF BONDS THROUGH ANY FINANCIAL INTERMEDIARY, OTHER THAN OFFERS

MADE BY THE UNDERWRITERS, WHICH CONSTITUTE THE FINAL PLACEMENT OF THE BONDS CONTEMPLATED IN THIS OFFERING MEMORANDUM.

NOTICE TO PROSPECTIVE INVESTORS IN HONG KONG

THE CONTENTS OF THIS OFFERING MEMORANDUM HAVE NOT BEEN APPROVED BY THE SECURITIES AND FUTURES COMMISSION IN HONG KONG PURSUANT TO THE SECURITIES AND FUTURES ORDINANCE (CAP. 571 OF THE LAWS OF HONG KONG) ("*SFO*") OR ANY REGULATORY AUTHORITY IN HONG KONG. ACCORDINGLY, YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFER OF THE BONDS. YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFERING CONTEMPLATED IN THIS OFFERING MEMORANDUM. IF YOU ARE IN ANY DOUBT ABOUT ANY OF THE CONTENTS OF THIS OFFERING MEMORANDUM, YOU SHOULD OBTAIN INDEPENDENT PROFESSIONAL ADVICE.

THE BONDS MAY NOT BE AN OFFER TO SELL, OR A SOLICITATION OF AN OFFER TO BUY IN HONG KONG BY MEANS OF ANY DOCUMENT OTHER THAN (I) IN CIRCUMSTANCES WHICH DO NOT CONSTITUTE AN OFFER TO THE PUBLIC WITHIN THE MEANING OF THE COMPANIES (WINDING UP AND MISCELLANEOUS PROVISIONS) ORDINANCE (CAP. 32 OF THE LAWS OF HONG KONG) ("*C(WUMP)O*") OR WHICH DO NOT CONSTITUTE AN INVITATION TO THE PUBLIC WITHIN THE MEANING OF THE SFO, OR (II) TO "*PROFESSIONAL INVESTORS*" AS DEFINED IN THE SFO AND ANY RULES MADE THEREUNDER, OR (III) IN OTHER CIRCUMSTANCES WHICH DO NOT RESULT IN THE DOCUMENT BEING A "*PROSPECTUS*" AS DEFINED IN THE C(WUMP)O. NO ADVERTISEMENT, INVITATION OR DOCUMENT RELATING TO THE BONDS MAY BE ISSUED OR MAY BE IN THE POSSESSION OF ANY PERSON FOR THE PURPOSE OF ISSUE (IN EACH CASE WHETHER IN HONG KONG OR ELSEWHERE), WHICH IS DIRECTED AT, OR THE CONTENTS OF WHICH ARE LIKELY TO BE ACCESSED OR READ BY, THE PUBLIC IN HONG KONG (EXCEPT IF PERMITTED TO DO SO UNDER THE LAWS OF HONG KONG) OTHER THAN WITH RESPECT TO BONDS WHICH ARE OR ARE INTENDED TO BE DISPOSED OF (A) ONLY TO PERSONS OUTSIDE HONG KONG OR (B) ONLY TO "*PROFESSIONAL INVESTORS*" IN HONG KONG AS DEFINED IN THE SFO AND ANY RULES MADE THEREUNDER.

NOTICE TO INVESTORS IN SINGAPORE

NEITHER THIS OFFERING MEMORANDUM NOR ANY OTHER DOCUMENT OR MATERIAL IN CONNECTION WITH ANY OFFER OF THE BONDS HAS BEEN OR WILL BE LODGED OR REGISTERED AS A PROSPECTUS WITH THE MONETARY AUTHORITY OF SINGAPORE ("*MAS*") UNDER THE SECURITIES AND FUTURES ACT 2001 OF SINGAPORE (AS MODIFIED OR AMENDED FROM TIME TO TIME, THE "*SFA*"). ACCORDINGLY, MAS ASSUMES NO RESPONSIBILITY FOR THE CONTENTS OF THIS OFFERING MEMORANDUM. THIS OFFERING MEMORANDUM IS NOT A PROSPECTUS AS DEFINED IN THE SFA AND STATUTORY LIABILITY UNDER THE SFA IN RELATION TO THE CONTENTS OF PROSPECTUSES WOULD NOT APPLY. PROSPECTIVE INVESTORS SHOULD CONSIDER CAREFULLY WHETHER THE INVESTMENT IS SUITABLE FOR IT.

THIS OFFERING MEMORANDUM AND ANY OTHER DOCUMENT OR MATERIAL IN CONNECTION WITH THE OFFER OR SALE, OR INVITATION FOR SUBSCRIPTION OR PURCHASE, OF THE BONDS MAY NOT BE DIRECTLY OR INDIRECTLY ISSUED, CIRCULATED OR DISTRIBUTED, NOR MAY THE BONDS BE OFFERED OR SOLD, OR BE MADE THE SUBJECT OF AN INVITATION FOR SUBSCRIPTION OR PURCHASE, WHETHER DIRECTLY OR INDIRECTLY, TO PERSONS IN SINGAPORE OTHER THAN (I) TO AN INSTITUTIONAL INVESTOR (AS DEFINED IN SECTION 4A(1)(C) OF THE SFA)

("*INSTITUTIONAL INVESTOR*") PURSUANT TO SECTION 274 OF THE SFA; (II) TO AN ACCREDITED INVESTOR (AS DEFINED IN SECTION 4A(1)(A) OF THE SFA) ("*ACCREDITED INVESTOR*") PURSUANT TO SECTION 275(1) OF THE SFA, AND IN ACCORDANCE WITH THE CONDITIONS SPECIFIED IN SECTION 275 OF THE SFA.

AS THE BONDS ARE ONLY OFFERED TO PERSONS IN SINGAPORE WHO QUALIFY AS AN ACCREDITED INVESTOR, AN EXPERT INVESTOR (AS DEFINED IN SECTION 4A(1)(B) OF THE SFA), AN INSTITUTIONAL INVESTOR AND/OR ANY OTHER PERSON THAT IS NOT AN INDIVIDUAL, THE ISSUER IS NOT REQUIRED TO DETERMINE THE CLASSIFICATION OF THE BONDS PURSUANT TO SECTION 309B OF THE SFA.

NOTHING SET OUT IN THIS NOTICE SHALL BE CONSTRUED AS LEGAL ADVICE AND EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN LEGAL COUNSEL. THIS NOTICE IS FURTHER SUBJECT TO THE PROVISIONS OF THE SFA AND ITS REGULATIONS, AS THE SAME MAY BE AMENDED OR CONSOLIDATED FROM TIME TO TIME, AND DOES NOT PURPORT TO BE EXHAUSTIVE IN ANY RESPECT.

NOTICE TO INVESTORS IN JAPAN

THE BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT OF JAPAN (ACT NO. 25 OF 1948, AS AMENDED), OR THE FIEA. THE SECURITIES MAY NOT BE OFFERED OR SOLD, DIRECTLY OR INDIRECTLY, IN JAPAN OR TO OR FOR THE BENEFIT OF ANY RESIDENT OF JAPAN (INCLUDING ANY PERSON RESIDENT IN JAPAN OR ANY CORPORATION OR OTHER ENTITY ORGANIZED UNDER THE LAWS OF JAPAN) OR TO OTHERS FOR REOFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN JAPAN OR TO OR FOR THE BENEFIT OF ANY RESIDENT OF JAPAN, EXCEPT PURSUANT TO AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE FIEA AND OTHERWISE IN COMPLIANCE WITH ANY RELEVANT LAWS AND REGULATIONS OF JAPAN.

NOTICE TO INVESTORS IN CANADA

THE BONDS MAY BE SOLD IN CANADA ONLY TO PURCHASERS PURCHASING, OR DEEMED TO BE PURCHASING, AS PRINCIPAL THAT ARE ACCREDITED INVESTORS, AS DEFINED IN NATIONAL INSTRUMENT 45-106 PROSPECTUS EXEMPTIONS OR SUBSECTION 73.3(1) OF THE SECURITIES ACT (ONTARIO), AND ARE PERMITTED CLIENTS, AS DEFINED IN NATIONAL INSTRUMENT 31-103 REGISTRATION REQUIREMENTS, EXEMPTIONS AND ONGOING REGISTRANT OBLIGATIONS. ANY RESALE OF THE BONDS MUST BE MADE IN ACCORDANCE WITH AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE PROSPECTUS REQUIREMENTS OF APPLICABLE SECURITIES LAWS.

SECURITIES LEGISLATION IN CERTAIN PROVINCES OR TERRITORIES OF CANADA MAY PROVIDE A PURCHASER WITH REMEDIES FOR RESCISSION OR DAMAGES IF THIS OFFERING MEMORANDUM (INCLUDING ANY AMENDMENT THERETO) CONTAINS A MISREPRESENTATION, PROVIDED THAT THE REMEDIES FOR RESCISSION OR DAMAGES ARE EXERCISED BY THE PURCHASER WITHIN THE TIME LIMIT PRESCRIBED BY THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY. THE PURCHASER SHOULD REFER TO ANY APPLICABLE PROVISIONS OF THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY FOR PARTICULARS OF THESE RIGHTS OR CONSULT WITH A LEGAL ADVISOR.

PURSUANT TO SECTION 3A.3 (OR, IN THE CASE OF SECURITIES ISSUED OR GUARANTEED BY THE GOVERNMENT OF A NON-CANADIAN JURISDICTION, SECTION 3A.4)

OF NATIONAL INSTRUMENT 33-105 UNDERWRITING CONFLICTS (NI 33-105), THE UNDERWRITERS ARE NOT REQUIRED TO COMPLY WITH THE DISCLOSURE REQUIREMENTS OF NI 33-105 REGARDING UNDERWRITERS' CONFLICTS OF INTEREST IN CONNECTION WITH THIS OFFERING.

NOTICE TO PROSPECTIVE INVESTORS IN TAIWAN (THE REPUBLIC OF CHINA)

THE OFFER OF THE BONDS HAS NOT BEEN AND WILL NOT BE REGISTERED OR FILED WITH OR APPROVED BY THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN (THE "*FSC*") PURSUANT TO APPLICABLE SECURITIES LAWS AND REGULATIONS OF THE REPUBLIC OF CHINA ("*TAIWAN*") AND THE BONDS, INCLUDING ANY COPY OF THIS OFFERING MEMORANDUM OR ANY OTHER DOCUMENTS RELATING TO THE BONDS, MAY NOT BE OFFERED, SOLD, DELIVERED OR DISTRIBUTED WITHIN TAIWAN THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES WHICH CONSTITUTE AN OFFER WITHIN THE MEANING OF THE SECURITIES AND EXCHANGE ACT OF TAIWAN THAT REQUIRES THE REGISTRATION WITH OR APPROVAL OF THE FSC. NO PERSON OR ENTITY IN TAIWAN HAS BEEN AUTHORIZED TO OFFER, SELL, DISTRIBUTE, GIVE ADVICE REGARDING OR OTHERWISE INTERMEDIATE THE OFFERING, SALE OR DISTRIBUTION OF THE BONDS UNLESS THE BONDS OFFERED OR SOLD TO INVESTORS IN TAIWAN ARE OTHERWISE THROUGH TAIWAN LICENSED FINANCIAL INSTITUTIONS TO THE EXTENT PERMITTED UNDER RELEVANT TAIWAN LAWS OR REGULATIONS. TAIWAN INVESTORS WHO SUBSCRIBE AND PURCHASE THE BONDS SHALL COMPLY WITH ALL RELEVANT SECURITIES, TAX AND FOREIGN EXCHANGE LAWS AND REGULATIONS IN EFFECT IN TAIWAN.

NOTICE TO INVESTORS IN SWITZERLAND

THE BONDS MAY NOT BE PUBLICLY OFFERED IN SWITZERLAND AND WILL NOT BE LISTED ON THE SIX SWISS EXCHANGE ("*SIX*") OR ON ANY OTHER STOCK EXCHANGE OR REGULATED TRADING FACILITY IN SWITZERLAND. THIS OFFERING MEMORANDUM DOES NOT CONSTITUTE A PROSPECTUS OR A KEY INFORMATION DOCUMENT WITHIN THE MEANING OF THE SWISS FEDERAL ACT ON FINANCIAL SERVICES ("*FINSA*") OR A LISTING PROSPECTUS WITHIN THE MEANING OF THE SIX LISTING RULES OR THE LISTING RULES OF ANY OTHER STOCK EXCHANGE OR REGULATED TRADING FACILITY IN SWITZERLAND. NEITHER THIS OFFERING MEMORANDUM NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE BONDS OR THE OFFERING MAY BE PUBLICLY OFFERED OR OTHERWISE MADE PUBLICLY AVAILABLE IN SWITZERLAND. ACCORDINGLY, THIS OFFERING MEMORANDUM MAY BE COMMUNICATED IN OR FROM SWITZERLAND TO A LIMITED NUMBER OF SELECTED INVESTORS ONLY.

NONE OF THIS OFFERING MEMORANDUM OR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE OFFERING, THE ISSUER OR THE BONDS HAVE BEEN OR WILL BE FILED WITH OR APPROVED BY ANY SWISS REGULATORY AUTHORITY. IN PARTICULAR, THIS OFFERING MEMORANDUM WILL NOT BE FILED WITH, AND THE BONDS WILL NOT BE SUPERVISED BY, THE SWISS FINANCIAL MARKET SUPERVISORY AUTHORITY ("*FINMA*").

THE BONDS DO NOT CONSTITUTE COLLECTIVE INVESTMENTS SCHEMES WITHIN THE MEANING OF THE SWISS FEDERAL ACT ON COLLECTIVE INVESTMENT SCHEMES ("*CISA*"). ACCORDINGLY, INVESTORS ARE EXPOSED TO THE DEFAULT RISK OF THE ISSUER AND DO NOT HAVE THE BENEFIT OF THE SPECIFIC INVESTOR PROTECTION PROVIDED UNDER THE CISA.

NOTICE TO PROSPECTIVE INVESTORS IN THE REPUBLIC OF KOREA

THIS OFFERING MEMORANDUM IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSIDERED AS, A PUBLIC OFFERING OF SECURITIES IN KOREA FOR THE PURPOSES OF THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKET ACT OF KOREA. THE BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED WITH THE FINANCIAL SERVICES COMMISSION OF SOUTH KOREA FOR PUBLIC OFFERING IN SOUTH KOREA UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY, THE "*FSCMA*"). THE BONDS MAY NOT BE OFFERED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, OR OFFERED OR SOLD TO ANY PERSON FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN SOUTH KOREA OR TO ANY RESIDENT OF SOUTH KOREA EXCEPT AS OTHERWISE PERMITTED UNDER THE APPLICABLE LAWS AND REGULATIONS OF SOUTH KOREA, INCLUDING THE FSCMA AND THE FOREIGN EXCHANGE TRANSACTION LAW AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY, THE "*FETL*"). WITHOUT PREJUDICE TO THE FOREGOING, THE NUMBER OF INVESTORS (AS CALCULATED PURSUANT TO THE FSCMA) TO WHICH BONDS HAVE BEEN OFFERED IN SOUTH KOREA OR THE NUMBER OF INVESTORS WHO ARE RESIDENTS IN SOUTH KOREA SHALL BE LESS THAN FIFTY AND NO UNIT OF BONDS MAY BE DIVIDED RESULTING IN MORE THAN FORTY-NINE INVESTORS (AS CALCULATED PURSUANT TO THE FSCMA). FURTHERMORE, THE BONDS MAY NOT BE RESOLD TO SOUTH KOREAN RESIDENTS UNLESS THE PURCHASER OF THE BONDS COMPLIES WITH ALL APPLICABLE REGULATORY REQUIREMENTS (INCLUDING BUT NOT LIMITED TO GOVERNMENT REPORTING REQUIREMENTS UNDER THE FETL) IN CONNECTION WITH THE PURCHASE OF THE BONDS.

SUMMARY OF THE OFFERING

Issuer	President and Fellows of Harvard College
Securities Offered	$750,000,000 4.609% Taxable Bonds, Series 2024A due February 15, 2035
Interest Accrual Dates	Interest will accrue from the Date of Issuance
Interest Payment Dates	February 15 and August 15 of each year, commencing August 15, 2024
Redemption	The Bonds are subject to optional redemption (i) prior to the Par Call Date, at the Make-Whole Redemption Price, and (ii) on or after the Par Call Date, at the Redemption Price, all as discussed more fully herein. "Par Call Date" means November 15, 2034.
Date of Issuance	March 12, 2024
Authorized Denominations	$1,000 and any integral multiple thereof
Exemption From Registration	The Bonds are being offered pursuant to an exemption from registration under Section 3(a)(4) of the Securities Act of 1933.
Form and Depository	The Bonds will be delivered solely in registered form under a global book-entry system through the facilities of DTC.
Use of Proceeds	The proceeds of the Bonds will be used for general corporate purposes of the Institution and to pay certain costs of issuance of the Bonds. See "PLAN OF FINANCE" herein.
Ratings	Moody's: Aaa S&P: AAA

OFFERING MEMORANDUM

Relating to

$750,000,000
President and Fellows of Harvard College
Taxable Bonds, Series 2024A

INTRODUCTION

The purpose of this Offering Memorandum, which includes the cover page, the table of contents and appendices, is to provide certain information concerning the sale and delivery by President and Fellows of Harvard College (the "Institution") of its $750,000,000 aggregate principal amount of President and Fellows of Harvard College Taxable Bonds, Series 2024A (the "Bonds"). This Introduction contains only a brief summary of certain of the terms of the Bonds being offered and a brief description of the Offering Memorandum. All statements contained in this Introduction are qualified in their entirety by reference to the entire Offering Memorandum.

Purpose of the Bonds and the Plan of Finance

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

Depending on market conditions, the Institution may request that the Massachusetts Development Finance Agency issue its tax-exempt Revenue Bonds, Harvard University Issue, Series 2024B (the "Tax-Exempt Bonds"), on behalf of the Institution, in order to finance and refinance certain projects, including refinancing certain long-term indebtedness and commercial paper of the Institution, as more fully described under "PLAN OF FINANCE" herein. The Institution expects to cause a separate Official Statement related to the Tax-Exempt Bonds to be distributed prior to any such offering and the Institution expects that such Tax-Exempt Bonds, if issued, would be issued in April 2024, or such other date set forth in the Official Statement related to the Tax-Exempt Bonds. Potential investors should read this entire Offering Memorandum and/or any Official Statement related to any potential Tax-Exempt Bonds, if and when distributed, as a basis for making informed investment judgments. The issuance of the Bonds is not dependent upon the issuance of the Tax-Exempt Bonds.

See "PLAN OF FINANCE" and "ESTIMATED SOURCES AND USES OF FUNDS" herein.

The Institution

The Institution is an educational corporation existing under the laws of The Commonwealth of Massachusetts. Important information on the financial condition of the Institution is set forth in APPENDIX A – "CERTAIN INFORMATION CONCERNING THE INSTITUTION" and APPENDIX B – "HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023" attached hereto, both of which should be read in their entirety.

The Bonds

The Bonds are being issued pursuant to an Indenture of Trust, dated as of March 1, 2024 (the "Indenture"), by and between the Institution and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"). Pursuant to the Indenture, on each Payment Date, until the principal of and interest on the Bonds shall have been paid or provision for such payment shall have been made as provided in the Indenture, the Institution will pay the Trustee a sum equal to the amount payable on such Payment Date as principal of or interest on the Bonds. See "THE BONDS" herein.

Security for the Bonds

The Bonds constitute unsecured general obligations of the Institution. The Institution has other unsecured general obligations outstanding. See "Outstanding Indebtedness" below. Moreover, the Institution is not restricted by the Indenture 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 payment on the Bonds. See "SECURITY FOR THE BONDS" herein.

Additional Bonds

The Institution may, from time to time, without the consent of the holders of the Bonds, issue additional bonds under the Indenture in addition to the Bonds (the "Additional Bonds"). If issued, the Additional Bonds will become part of the same series as the Bonds being offered by this Offering Memorandum and will have the same interest rate, redemption provisions, maturity date and CUSIP number as the Bonds.

Outstanding Indebtedness

The Institution has other unsecured general obligations outstanding. As of June 30, 2023, the Institution had approximately $5.913 billion principal amount of indebtedness outstanding, including long-term debt and commercial paper. Subsequent to June 30, 2023, the Institution paid down approximately $93.24 million principal amount of long-term debt and drew down an additional $92.70 million of commercial paper, leaving approximately $5.912 billion principal amount outstanding. The Institution expects that the Tax-Exempt Bonds, if issued, will be issued in an approximate aggregate principal amount of up to $900 million, for approximately $500 million of funding for certain capital projects and may also include refinancing, including through a tender and/or exchange, of a portion of the Massachusetts Development Finance Agency Revenue Bonds, Harvard University Issue, Series 2016A (the "2016A Bonds"), issued for the benefit of the Institution. Upon delivery of the Bonds and the Tax-Exempt Bonds, if issued, and the refinancing of currently outstanding indebtedness, which is expected to include a portion of the 2016A Bonds and commercial paper, the total outstanding principal amount of indebtedness is expected to be approximately $6.892 billion. See "PLAN OF FINANCE" herein.

For additional information regarding the outstanding indebtedness of the Institution, see APPENDIX B – "HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023" attached hereto.

Redemption

The Bonds are subject to optional redemption by the Institution prior to maturity at the Redemption Price or Make-Whole Redemption Price (as applicable), all as described herein. See "THE BONDS – Redemption" herein.

Book-Entry Only System and Global Clearance Procedures

When delivered, the Bonds will be registered in the name of Cede & Co., the nominee of The Depository Trust Company ("DTC"). DTC will act as the securities depository for the Bonds. Purchases of the Bonds may be made in book-entry form only, through brokers and dealers who are, or who act through, Direct Participants (as defined herein). Beneficial Owners of the Bonds will not receive physical delivery of certificated securities (except under certain circumstances described in the Indenture). Payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds are payable by the Trustee to DTC, which will in turn remit such payments to the Direct Participants, which will in turn remit such payments to the Beneficial Owners of the Bonds. In addition, so long as Cede & Co. is the registered owner of the Bonds, the right of any Beneficial Owner to receive payment for any Bond will be based only upon and subject to the procedures and limitations of the DTC book-entry system. Beneficial interests in the Bonds may be held through DTC, Clearstream Banking, S.A. ("Clearstream Banking") or Euroclear Bank S.A./N.V. as operator of the Euroclear System ("Euroclear"), directly as a participant or indirectly through organizations that are participants in such system. See "BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" herein.

Certain Information Related to this Offering Memorandum

The descriptions herein of the Indenture and other documents relating to the Bonds do not purport to be complete and are qualified in their entirety by reference to such documents, and the description herein of the Bonds is qualified in its entirety by the form thereof and the information with respect thereto included in such documents. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE" attached hereto for a brief summary of the Indenture, including descriptions of certain duties of the Trustee, rights and remedies of the Trustee and the Bondholders upon an Event of Default, and provisions relating to amendments of the Indenture and procedures for defeasance of the Bonds.

All capitalized terms used in this Offering Memorandum and not otherwise defined herein have the same meanings as in the Indenture. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE" attached hereto for definitions of certain words and terms used but not otherwise defined herein.

The information and expressions of opinion herein speak only as of their date and are subject to change without notice. Neither delivery of this Offering Memorandum nor any sale made hereunder nor any future use of this Offering Memorandum will, under any circumstances, create any implication that there has been no change in the affairs of the Institution.

ESTIMATED SOURCES AND USES OF FUNDS

The table below sets forth the estimated sources and uses of funds in connection with the issuance of the Bonds.

	Total
Sources of Funds:	
Principal Amount of Bonds	$750,000,000.00
Total Sources	$750,000,000.00
Uses of Funds:	
Corporate Purposes[(1)]	$747,556,765.81
Underwriters' Discount	2,443,234.19
Total Uses	$750,000,000.00

(1) Includes costs of issuing the Bonds.

PLAN OF FINANCE

The proceeds of the Bonds will be used for general corporate purposes of the Institution and to pay costs of issuance of the Bonds.

Depending on market conditions, the Institution may request that the Massachusetts Development Finance Agency issue the Tax-Exempt Bonds. Approximately $500 million of the proceeds of the Tax-Exempt Bonds, if issued, are expected to be applied to finance and refinance certain capital projects, including repaying a portion of the Institution's outstanding commercial paper, the proceeds of which financed the Projects (as defined below). Specifically, the capital projects currently expected to be financed or refinanced, in whole or in part, with proceeds of the Tax-Exempt Bonds (the "Projects") include renovations to undergraduate student housing at the main campus, the renovation of Gordon Hall, a Harvard Medical School administrative building at the Longwood campus, and construction of new Harvard affiliate housing at the Allston campus. The remainder of the proceeds of the Tax-Exempt Bonds is expected to be used for refinancing, including through a tender and/or exchange, of a portion of the 2016A Bonds (the "Invited Bonds"). The Institution expects to cause to be released or distributed, prior to any offering of the Tax-Exempt Bonds, an invitation inviting owners of the Invited Bonds to tender all or a portion of the Invited Bonds for cash purchase, and a separate Official Statement related to the Tax-Exempt Bonds. The Institution expects that such Tax-Exempt Bonds, if issued, would be issued in April 2024, or such other date set forth in the Official Statement related to the Tax-Exempt Bonds. The Institution also expects that Invited Bonds purchased pursuant to the tender, if purchased, would be cancelled on the date of issuance of the Tax-Exempt Bonds. Potential investors should read this entire Offering Memorandum and/or any Official Statement related to any potential Tax-Exempt Bonds and/or any invitation related to any potential Invited Bonds, if and when distributed, as a basis for making informed investment judgments. The issuance of the Bonds is not dependent upon the issuance of the Tax-Exempt Bonds or the tender and purchase of the Invited Bonds.

THE BONDS

Description of the Bonds

The Bonds will be dated as of the date of their original issuance and will bear interest and mature (subject to prior redemption) as shown on the inside cover page hereof. The Bonds will be delivered in the form of fully-registered Bonds in denominations of $1,000 and any integral multiple thereof. The Bonds will be registered initially in the name of "Cede & Co.," as nominee of the Securities Depository and will be evidenced by one Bond certificate for each portion in a principal amount not to exceed $500 million, in the total aggregate principal amount of the Bonds. Registered ownership of the Bonds, or any portion thereof, may not thereafter be transferred except as set forth in the Indenture. See APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE."

Interest on the Bonds will be payable on February 15 and August 15 of each year (each, an "Interest Payment Date"), commencing on August 15, 2024 and will be calculated on the basis of a three hundred sixty (360) day year consisting of twelve (12) thirty (30) day months.

The principal and Redemption Price or Make-Whole Redemption Price (as applicable) of the Bonds will be payable by check or by wire transfer of immediately available funds in lawful money of the United States of America at the Designated Office of the Trustee. Interest on the Bonds will be payable from the later of (i) the date of issuance and (ii) the most recent Interest Payment Date to which interest has been paid or duly provided for. Payment of the interest on each Interest Payment Date will be made to the Person whose name appears on the bond registration books of the Trustee as the Holder thereof as of the close of business on the Record Date for each Interest Payment Date, such interest to be paid by check mailed by first class mail to such Holder at its address as it appears on such registration books, or, upon the written request of any Holder of at least $1,000,000 in aggregate principal amount of Bonds, submitted to the Trustee at least one (1) Business Day prior to the Record Date, by wire transfer in immediately available funds to an account within the United States designated by such Holder. Notwithstanding the foregoing, as long as Cede & Co. is the Holder of all or part of the Bonds in Book-Entry Form, said principal, Redemption Price, Make-Whole Redemption Price and interest payments will be made to Cede & Co. by wire transfer in immediately available funds.

Redemption

Optional Redemption at Par

The Bonds will be subject to optional redemption prior to maturity on or after the Par Call Date, at the direction of the Institution, in whole or in part (and, if in part, in Authorized Denominations and on a pro rata pass-through distribution of principal basis, subject to the provisions described below under "Selection of Bonds for Redemption"), on any Business Day, as directed by the Institution, at the Redemption Price. "Redemption Price" means 100% of the principal amount of a Bond to be redeemed plus accrued and unpaid interest on such Bond to, but excluding, the redemption date. "Par Call Date" means November 15, 2034.

Optional Redemption at Make-Whole Redemption Price

Prior to the Par Call Date, the Bonds will be subject to optional redemption prior to maturity, at the direction of the Institution, in whole or in part (and, if in part, in Authorized Denominations and on a pro rata pass-through distribution basis, subject to the provisions described below under "Selection of Bonds for Redemption"), on any Business Day, in such order of maturity as directed by the Institution, at the Make-Whole Redemption Price. The Institution shall retain an independent accounting firm or an independent financial advisor to determine the Make-Whole Redemption Price and perform all actions and make all calculations required to determine the Make-Whole Redemption Price. The Trustee and the Institution may conclusively rely on such accounting firm's or financial advisor's calculations in connection with, and its determination of, the Make-Whole Redemption Price, and neither the Trustee nor the Institution will have any liability for their reliance. The determination of the Make-Whole Redemption Price by such accounting firm or financial advisor shall be conclusive and binding on the Trustee, the Institution and the Holders of the Bonds.

"Make-Whole Redemption Price" means the greater of (i) 100% of the principal amount of a Bond to be redeemed or (ii) the sum of the present value of the remaining scheduled payments of principal and interest to the Par Call Date of such Bond, not including any portion of those payments of interest accrued and unpaid as of the date on which such Bond is to be redeemed, discounted to the date on which such Bond is to be redeemed on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at the adjusted Treasury Rate plus ten (10) basis points, plus, in each case, accrued and unpaid interest on such Bond to, but excluding, the redemption date.

"Treasury Rate" means, with respect to any redemption date, the rate per annum equal to (i) the semiannual equivalent yield to maturity or (ii) if no semiannual equivalent yield to maturity is available, the interpolated yield (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date.

"Comparable Treasury Issue" means the United States Treasury security or securities selected by a Designated Investment Banker as having an actual or interpolated maturity comparable to the remaining term of the Bonds to be redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of a comparable maturity to the remaining term of such Bonds.

"Comparable Treasury Price" means, with respect to any redemption date, the average of the Primary Treasury Dealer Quotations for such redemption date or, if the Designated Investment Banker obtains only one Primary Treasury Dealer Quotation, such Primary Treasury Dealer Quotation.

"Designated Investment Banker" means a Primary Treasury Dealer appointed by the Institution.

"Primary Treasury Dealer" means one or more entities appointed by the Institution, which, in each case, is a primary U.S. Government securities dealer in The City of New York, New York, and its successors.

"Primary Treasury Dealer Quotations" means, with respect to each Primary Treasury Dealer and any redemption date, the average, as determined by the Designated Investment Banker, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Designated Investment Banker by such Primary Treasury Dealer at 3:30 p.m. New York time on the third Business Day preceding such redemption date.

"Business Day" means any day other than (A) a Saturday or Sunday or legal holiday or a day on which banking institutions in the city or cities in which the Designated Office of the Trustee is located are authorized by law or executive order to close or (B) a day on which the New York Stock Exchange is closed.

Partial Redemption of Bonds

Upon surrender of any Bond redeemed in part only, the Institution will execute (but need not prepare) and the Trustee will prepare or cause to be prepared, authenticate and deliver to the Holder thereof, at the expense of the Institution, a new Bond or Bonds of Authorized Denominations, equal in aggregate principal amount to the unredeemed portion of the Bond surrendered.

Notice of Redemption

Notice of redemption will be sent by the Trustee by first class mail or using electronic means, not less than seven (7) days (or, if longer, the minimum number of days necessary to comply with the operational requirements of the Securities Depository then in effect), nor more than sixty (60) days prior to the redemption date, to the respective Holders of any Bonds designated for redemption at their addresses appearing on the bond registration books of the Trustee. If the Bonds are no longer held by the Securities Depository or its successor or substitute, the Trustee shall also give notice of redemption by electronic means to such securities depositories and/or securities information services as shall be designated in a certificate of the Institution. Each notice of redemption shall state the date of such notice, the Bonds to be redeemed, the date of issue of the Bonds, the redemption date, the Redemption Price or the manner of determining the Make-Whole Redemption Price (as applicable), the place or places of redemption (including the name and appropriate address or addresses of the Trustee), the maturity (including CUSIP number, if any), and, in the case of Bonds to be redeemed in part only, the portion of the principal amount thereof to be redeemed. Each such notice will also state that on said date there will become due and payable on said Bonds the Redemption Price or Make-Whole Redemption Price (as applicable) thereof or of said specified portion of the principal amount thereof in the case of a Bond to be redeemed in part only, and that from and after such redemption date interest thereon shall cease to accrue, and shall require that such Bonds be then surrendered.

Failure by the Trustee to give notice as described above to any one or more of the securities information services or depositories designated by the Institution, or the insufficiency of any such notice will not affect the sufficiency of the proceedings for redemption. Failure by the Trustee to mail notice of redemption to any one or more of the respective Holders of any Bonds designated for redemption will not affect the sufficiency of the proceedings for redemption with respect to the Holders to whom such notice was sent.

The Institution may instruct the Trustee to provide conditional notice of redemption, which may be conditioned upon the receipt of moneys or any other event. Additionally, any such notice may be rescinded by written notice given to the Trustee by the Institution no later than two (2) Business Days prior to the date specified for redemption. The Trustee will give notice of such rescission, as soon thereafter as practicable, in the same manner, to the same Persons, as notice of such redemption was given.

The Trustee will not be required to transfer or exchange (i) any Bond during the fifteen (15) days next preceding the selection of Bonds for redemption or (ii) any Bond called for redemption.

Effect of Redemption

Notice of redemption having been duly given as provided in the Indenture and as described above, and moneys for payment of the Redemption Price or Make-Whole Redemption Price (as applicable) of the Bonds (or portion thereof) so called for redemption being held by the Trustee, on the date fixed for redemption designated in such notice, the Bonds (or portion thereof) so called for redemption shall become due and payable at the Redemption Price or Make-Whole Redemption Price (as applicable) specified in such notice, interest on the Bonds so called for redemption shall cease to accrue, said Bonds (or portion thereof) will cease to be entitled to any benefit or security under the Indenture, and the Holders of said Bonds will have no rights in respect thereof except to receive payment of said Redemption Price or Make-Whole Redemption Price from funds held by the Trustee for such payment.

Selection of Bonds for Redemption

If less than all of the Bonds are called for optional redemption, the Institution will select the maturity or maturities from which the Bonds are to be redeemed. If the Bonds are registered in book-entry only form and so long as DTC or a successor securities depository is the sole registered owner of the Bonds, if less than all of the Bonds of a maturity are called for prior redemption, the particular Bonds or portions thereof to be redeemed shall be selected on a pro rata pass-through distribution of principal basis in accordance with DTC procedures, provided that, so long as the Bonds are held in book-entry form, the selection for redemption of such Bonds shall be made in accordance with the operational arrangements of DTC then in effect.

It is the Institution's intent that redemption allocations made by DTC be made on a pro rata pass-through distribution of principal basis as described above. However, neither the Institution nor the Underwriters can provide any assurance that DTC, DTC's Direct and Indirect Participants (as defined herein) or any other intermediary will allocate the redemption of Bonds on such basis. If the DTC operational arrangements do not allow for the redemption of the Bonds on a pro rata pass-through distribution of principal basis as discussed above, then the Bonds will be selected for redemption, in accordance with DTC procedures.

BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES

The information set out below is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear or Clearstream Banking (DTC, Euroclear and Clearstream Banking together, the "Clearing Systems") currently in effect. The information in this section concerning the Clearing Systems has been obtained from sources that the Institution believes to be reliable, but none of the Institution, the Trustee or the Underwriters take any responsibility for the accuracy, completeness or adequacy of the information in this section. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. The Institution will not have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Bonds held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

NEITHER THE INSTITUTION NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATIONS TO DIRECT PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE PAYMENTS TO OR THE PROVIDING OF NOTICE FOR DIRECT PARTICIPANTS, INDIRECT PARTICIPANTS OR BENEFICIAL OWNERS.

SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE BONDS, AS NOMINEE OF DTC, REFERENCES HEREIN TO THE BONDHOLDERS OR REGISTERED OWNERS OF THE BONDS SHALL MEAN CEDE & CO. AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE BONDS.

Clearing Systems

DTC Book-Entry Only System

DTC will act as 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 the Bonds in its respective aggregate principal amount 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. DTC procedures currently require that redemption notices be sent to DTC no less than twenty (20) days prior to the redemption date. Subject to the provisions described above in "THE BONDS—Selection of Bonds for Redemption," if less than all of the Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such 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 Institution 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, Redemption Price and Make-Whole Redemption Price and interest payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Institution 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 or the Institution, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, Redemption Price, Make-Whole Redemption Price and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Institution 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 Institution or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Bond certificates are required to be printed and delivered. The Institution may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, 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 Institution and the Underwriters believe to be reliable, but 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 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 Bondholders or registered owners of the Bonds 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 Institution, 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 Institution determines that (i) DTC is unable to discharge its responsibilities with respect to such 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 Institution or restricted registration is no longer in effect, Bond certificates will be delivered.

NONE OF THE INSTITUTION, THE UNDERWRITERS 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 INDENTURE; (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, REDEMPTION PRICE OR MAKE-WHOLE 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.

Euroclear and Clearstream Banking

Euroclear and Clearstream Banking each hold securities for their customers and facilitate the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream Banking provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream Banking also deal with domestic securities markets in several countries through established depositary and custodial relationships. Euroclear and Clearstream Banking have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream Banking customers are worldwide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream Banking is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system, either directly or indirectly.

Clearing and Settlement Procedures

The Bonds sold in offshore transactions will be initially issued to investors through the book-entry facilities of DTC, or Clearstream Banking and Euroclear in Europe if the investors are participants in those systems, or indirectly through organizations that are participants in the systems. For any of such Bonds, the record holder will be DTC's nominee. Clearstream Banking and Euroclear will hold omnibus positions on behalf of their participants through customers' securities accounts in Clearstream Banking's and Euroclear's names on the books of their respective depositories.

The depositories, in turn, will hold positions in customers' securities accounts in the depositories' names on the books of DTC. Because of time zone differences, the securities account of a Clearstream Banking or Euroclear participant as a result of a transaction with a participant, other than a depository holding on behalf of Clearstream Banking or Euroclear, will be credited during the securities settlement processing day, which must be a business day for Clearstream Banking or Euroclear, as the case may be, immediately following the DTC settlement date. These credits or any transactions in the securities settled during the processing will be reported to the relevant Euroclear participant or Clearstream Banking participant on that business day. Cash received in Clearstream Banking or Euroclear as a result of sales of securities by or through a Clearstream Banking participant or Euroclear participant to a Direct Participant, other than the depository for Clearstream Banking or Euroclear, will be received with value on the DTC settlement date but will be available in the relevant Clearstream Banking or Euroclear cash account only as of the business day following settlement in DTC.

Transfers between participants will occur in accordance with DTC rules. Transfers between Clearstream Banking participants or Euroclear participants will occur in accordance with their respective rules and operating procedures. Cross-market transfers between persons holding directly or indirectly through DTC, on the one hand, and directly or indirectly through Clearstream Banking participants or Euroclear participants, on the other, will be effected in DTC in accordance with DTC rules on behalf of the relevant European international clearing system by the relevant depositories; however, cross-market transactions will require delivery of instructions to the relevant European international clearing system by the counterparty in the system in accordance with its rules and procedures and within its established deadlines in European time. The relevant European international clearing system will, if the transaction meets its settlement requirements, deliver instructions to its depository to take action to effect final settlement on its behalf by delivering or receiving securities in DTC, and making or receiving payment in accordance with normal procedures for same day funds settlement applicable to DTC. Clearstream Banking participants or Euroclear participants may not deliver instructions directly to the depositories.

The Institution will not impose any fees in respect of holding the Bonds; however, holders of book-entry interests in the Bonds may incur fees normally payable in respect of the maintenance and operation of accounts in the Clearing Systems.

Initial Settlement

Interests in the Bonds will be in uncertified book-entry form. Purchasers electing to hold book-entry interests in the Bonds through Euroclear and Clearstream Banking accounts will follow the settlement procedures applicable to conventional Eurobonds. Book-entry interests in the Bonds will be credited to Euroclear and Clearstream Banking participants' securities clearance accounts on the business day following the date of delivery of the Bonds against payment (value as on the date of delivery of the Bonds). Direct Participants acting on behalf of purchasers electing to hold book-entry interests in the Bonds through DTC will follow the delivery practices applicable to securities eligible for DTC's Same Day Funds Settlement system. Direct Participants' securities accounts will be credited with book-entry interests in the Bonds following confirmation of receipt of payment to the Institution on the date of delivery of the Bonds.

Secondary Market Trading

Secondary market trades in the Bonds will be settled by transfer of title to book-entry interests in the Clearing Systems. Title to such book-entry interests will pass by registration of the transfer within the records of Euroclear, Clearstream Banking or DTC, as the case may be, in accordance with their respective procedures. Book-entry interests in the Bonds may be transferred within Euroclear and within Clearstream Banking and between Euroclear and Clearstream Banking in accordance with procedures established for these purposes by Euroclear and Clearstream

Banking. Book-entry interests in the Bonds may be transferred within DTC in accordance with procedures established for this purpose by DTC. Transfer of book-entry interests in the Bonds between Euroclear or Clearstream Banking and DTC may be effected in accordance with procedures established for this purpose by Euroclear, Clearstream Banking and DTC.

General

None of Euroclear, Clearstream Banking or DTC is under any obligation to perform or continue to perform the procedures referred to above, and such procedures may be discontinued at any time.

Neither the Institution nor any of their agents will have any responsibility for the performance by Euroclear, Clearstream Banking or DTC or their respective direct or indirect participants or account holders of their respective obligations under the rules and procedures governing their operations or the arrangements referred to above.

The information herein concerning Euroclear, Clearstream Banking and DTC has been obtained from sources that the Institution and the Underwriters believe to be reliable, but the Institution and the Underwriters take no responsibility for the accuracy thereof.

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 Institution or the Trustee. In addition, the Institution 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 Indenture, 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 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, and the Trustee may also require the Bondowners requesting such exchange to pay a reasonable sum to cover any expenses incurred by the Institution in connection with such exchange. The Trustee will not be required to exchange (i) any Bond during the fifteen (15) days next preceding the selection of Bonds for redemption or (ii) any Bond called for redemption.

SECURITY FOR THE BONDS

General

The Indenture provides that, on or before each Payment Date with respect to the Bonds, the Institution will pay the Trustee a sum equal to the amount payable on such Payment Date as principal of and interest on the Bonds. In addition, the Indenture provides that each such payment made will at all times be sufficient to pay the total amount of principal (whether at maturity or upon acceleration) and interest becoming due and payable on the Bonds on such Payment Date. If on any Payment Date, the amounts held by the Trustee in the accounts within the Bond Fund (as described below) are insufficient to make any required payments of principal of (whether at maturity or upon acceleration) and interest on the Bonds as such payments become due, the Institution is required to pay such deficiency to the Trustee. Upon the receipt thereof, the Trustee will deposit all payments received from the Institution into certain funds and accounts established pursuant to the Indenture. See "Certain Funds and Accounts Established by the Indenture" below.

The Bonds constitute unsecured general obligations of the Institution. The Bonds are not secured by a reserve fund, mortgage lien or security interest on or in any funds or other assets of the Institution, except for funds held from time to time by the Trustee for the benefit of the Holders of the Bonds under the Indenture. As described above, the Institution is not required to deposit with the Trustee amounts necessary to pay the principal of and interest on the Bonds until the Payment Date on which such amounts become due and payable; therefore, the funds held from time to time by the Trustee for the benefit of the Holders of the Bonds under the Indenture are expected to be minimal.

The Institution has other unsecured general obligations outstanding. See APPENDIX B – "HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023" attached hereto. Moreover, the Institution is not restricted by the Indenture 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 payment on the Bonds. The Indenture 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 Indenture to produce revenues at any specified level or to obtain any insurance with respect to its property or operations.

Certain Funds and Accounts Established by the Indenture

Under the Indenture, the Trustee has established for the sole benefit of the Bondholders, a master fund referred to as the "Indenture Fund," containing the Bond Fund, the Redemption Fund, the Expense Fund and each of the funds and accounts contained therein (each an "Indenture Fund") and all amounts held therein to the Trustee for the benefit of the Bondholders to secure the full payment of the principal, Make-Whole Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of the Indenture. Each Indenture Fund and all amounts on deposit therein constitute collateral security to secure the full payment of the principal, Make-Whole Redemption Price of and interest on the Bonds in accordance with their terms and provisions of the Indenture. Due to the timing of payments by the Institution to the Trustee, in general there is not expected to be any money in each Indenture Fund except for a brief period of time on the Interest Payment Dates.

For information on other funds and accounts established by the Indenture, see APPENDIX C - "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE" attached hereto.

CERTAIN U.S. FEDERAL TAX CONSIDERATIONS

The following discussion summarizes certain U.S. federal income tax considerations generally applicable to holders of the Bonds that acquire their Bonds in the initial offering. The discussion below is based upon laws, regulations, rulings, and decisions in effect and available on the date hereof, all of which are subject to change, possibly with retroactive effect. Prospective investors should note that no rulings have been or are expected to be sought from the U.S. Internal Revenue Service (the "IRS") with respect to any of the U.S. federal tax consequences discussed below, and no assurance can be given that the IRS will not take contrary positions. Further, the following discussion does not deal with U.S. tax consequences applicable to any given investor, nor does it address the U.S. tax considerations applicable to all categories of investors, some of which may be subject to special taxing rules (regardless of whether or not such investors constitute U.S. Holders), such as certain U.S. expatriates, banks, REITs, RICs, insurance companies, tax-exempt organizations, dealers or traders in securities or currencies, partnerships, S corporations, estates and trusts, investors that hold their Bonds as part of a hedge, straddle or an integrated or conversion transaction, or investors whose "functional currency" is not the U.S. dollar, or certain taxpayers that are required to prepare certified financial statements or file financial statements with certain regulatory or governmental agencies. Furthermore, it does not address (i) alternative minimum tax consequences, (ii) the net investment income tax imposed under Section 1411 of the Code, or (iii) the indirect effects on persons who hold equity interests in a holder. This summary also does not consider the taxation of the Bonds under state, local or non-U.S. tax laws, or estate or gift tax consequences. In addition, this summary generally is limited to U.S. tax considerations applicable to investors that acquire their Bonds pursuant to this offering for the issue price that is applicable to such Bonds (i.e., the price at which a substantial amount of the Bonds are sold to the public) and who will hold their Bonds as "capital assets" within the meaning of Section 1221 of the Code.

In certain circumstances, the Institution may be obligated to pay amounts in excess of the stated principal on the Bonds and/or may prepay or redeem all or a portion of the Bonds. The obligation to make such payments may implicate the provisions of U.S. Treasury regulations relating to "contingent payment debt instruments," in which case the timing and amount of income inclusions and the character of income recognized may be different from the consequences discussed herein. According to the applicable U.S. Treasury regulations, certain contingencies will not cause a debt instrument to be treated as a contingent payment debt instrument if such contingencies in the aggregate, as of the date of issuance, are either "remote" or "incidental" or if certain other rules apply. Although the matter is not free from doubt, the Institution believes and intends to take the position if required that either such contingencies should be treated as remote and/or incidental or that the rules on "contingent payment debt instruments" otherwise would not be applicable. The position that the Bonds are not contingent payment debt instruments is binding on a holder unless such holder discloses its contrary position in the manner required by applicable U.S. Treasury regulations. The Institution's position is not, however, binding on the IRS, and if the IRS were to successfully challenge this position, it could affect the amount, timing and character of U.S. Holder's income with respect to the Bond. The remainder of this disclosure assumes that the Institution's determinations described above are correct. Holders should consult an independent tax advisor as to the tax considerations relating to the contingent payments and prepayment and redemption rights described above. Prospective investors should consult their own tax advisors in determining the U.S. federal, state, local or non-U.S. tax consequences to them from the purchase, ownership and disposition of the Bonds in light of their particular circumstances.

As used herein, "U.S. Holder" means a beneficial owner of a Bond that for U.S. federal income tax purposes is an individual citizen or resident of the United States, a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States or any state thereof (including the District of Columbia), an estate the income of which is subject to U.S. federal income taxation regardless of its source or a trust where a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons (as defined in the Code) have the authority to control all substantial decisions of the trust (or a trust that has made a valid election under U.S. Treasury Regulations to be treated as a domestic trust). As used herein, "Non-U.S. Holder" generally means a beneficial owner of a Bond (other than a partnership) that is not a U.S. Holder. If a partnership holds Bonds, the tax treatment of such partnership or a partner in such partnership generally will depend upon the status of the partner and upon the activities of the partnership. Partnerships holding Bonds, and partners in such partnerships, should consult their own tax advisors regarding the tax consequences of an investment in the Bonds (including their status as U.S. Holders or Non-U.S. Holders).

Prospective investors should consult their own tax advisors in determining the U.S. federal, state, local or non-U.S. tax consequences to them from the purchase, ownership and disposition of the Bonds in light of their particular circumstances.

U.S. Holders

Interest. Interest on the Bonds generally will be taxable to a U.S. Holder as ordinary interest income at the time such amounts are accrued or received, in accordance with the U.S. Holder's method of accounting for U.S. federal income tax purposes.

Sale or Other Taxable Disposition of the Bonds. Unless a nonrecognition provision of the Code applies, the sale, exchange, redemption, retirement (including pursuant to an offer by the Institution) or other disposition of a Bond will be a taxable event for U.S. federal income tax purposes. In such event, in general, a U.S. Holder of a Bond will recognize gain or loss equal to the difference between (i) the amount of cash plus the fair market value of property received (except to the extent attributable to accrued but unpaid interest on the Bond, which will be taxed in the manner described above) and (ii) the U.S. Holder's adjusted U.S. federal income tax basis in the Bond (generally, the purchase price paid by the U.S. Holder for the Bond). Any such gain or loss generally will be capital gain or loss. In the case of a non-corporate U.S. Holder of the Bonds, the maximum marginal U.S. federal income tax rate applicable to any such gain will be lower than the maximum marginal U.S. federal income tax rate applicable to ordinary income if such U.S. holder's holding period for the Bonds exceeds one year. The deductibility of capital losses is subject to limitations.

Defeasance of the Bonds. If the Institution defeases any Bond, the Bond may be deemed to be retired for U.S. federal income tax purposes as a result of the defeasance. In that event, in general, a holder will recognize taxable gain or loss equal to the difference between (i) the amount realized from the deemed sale, exchange or retirement (less any accrued qualified stated interest which will be taxable as such) and (ii) the holder's adjusted U.S. federal income tax basis in the Bond.

The Institution may be required to report certain information regarding such a defeasance that may be relevant to U.S. Holders including (1) by filing Form 8937 with the IRS and providing copies to certain of its U.S. Holders or (2) by posting the Form on its website. Ownership of a Bond after a deemed sale or exchange as a result of a defeasance may have tax consequences different from those described in this “CERTAIN U.S. FEDERAL TAX CONSIDERATIONS” section and each holder should consult its own tax advisor regarding the consequences to such holder of a defeasance of a Bond.

Information Reporting and Backup Withholding. Payments on the Bonds generally will be subject to U.S. information reporting and possibly to “backup withholding.” Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate U.S. Holder of the Bonds may be subject to backup withholding at the current rate of 24% with respect to “reportable payments,” which include interest paid on the Bonds and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the Bonds. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number (“TIN”) to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a “notified payee underreporting” described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against the U.S. Holder’s federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain U.S. holders (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. A holder’s failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

Non-U.S. Holders

Interest. Subject to the discussions below under the headings “Information Reporting and Backup Withholding” and “Foreign Account Tax Compliance Act (“FATCA”)—U.S. Holders and Non-U.S. Holders,” payments of principal of, and interest on, any Bond to a Non-U.S. Holder, other than (1) a controlled foreign corporation described in Section 881(c)(3)(C) of the Code, as such term is defined in the Code, which is related to the Institution through stock ownership and (2) a bank which acquires such Bond in consideration of an extension of credit made pursuant to a loan agreement entered into in the ordinary course of business, will not be subject to any U.S. federal withholding tax provided that the beneficial owner of the Bond provides a certification completed in compliance with applicable statutory and regulatory requirements, which requirements are discussed below under the heading “Information Reporting and Backup Withholding”.

If a Non-U.S. Holder does not claim, or does not qualify for, the benefit of the portfolio interest exemption, the Non-U.S. Holder may be subject to a 30% withholding tax on interest payments on the Bonds. However, the Non-U.S. Holder may be able to claim the benefit of a reduced withholding tax rate (generally on Form W-8BEN or Form W-8BEN-E under an applicable income tax treaty between the Non-U.S. Holder’s country of residence and the United States. Non-U.S. Holders are urged to consult their own tax advisors regarding their eligibility for treaty benefits.)

If, under the Code, interest on the Bonds is “effectively connected with the conduct of a trade or business within the United States” by a Non-U.S. Holder (and, if an applicable income tax treaty so requires, is attributable to the conduct of a trade or business through a permanent establishment or fixed base in the United States), such interest will be subject to U.S. federal income tax in a similar manner as if the Bonds were held by a U.S. Holder, as described above, and in the case of Non-U.S. Holders that are corporations may be subject to U.S. branch profits tax at a rate of up to

30%, unless an applicable income tax treaty provides otherwise. Such Non-U.S. Holder will not be subject to withholding taxes, however, if it provides a properly executed Form W-8ECI to the Institution or its paying agent, if any.

Disposition of the Bonds. Subject to the discussions below under the headings "Information Reporting and Backup Withholding" and "Foreign Account Tax Compliance Act ("FATCA,")—U.S. Holders and Non-U.S. Holders," any gain realized by a Non-U.S. Holder upon the sale, exchange, redemption, retirement (including pursuant to an offer by the Institution or a deemed retirement due to defeasance of the Bond) or other disposition of a Bond generally will not be subject to U.S. federal income tax, unless (i) such gain is effectively connected with the conduct by such Non-U.S. Holder of a trade or business within the United States (in which case the U.S. branch profits tax may also apply), unless an applicable income tax treaty provides otherwise; or (ii) in the case of any gain realized by an individual Non-U.S. Holder, such holder is present in the United States for 183 days or more in the taxable year of such sale, exchange, redemption, retirement (including pursuant to an offer by the Institution) or other disposition and certain other conditions are met.

Information Reporting and Backup Withholding. Subject to the discussion below under the heading "Foreign Account Tax Compliance Act ("FATCA,")—U.S. Holders and Non-U.S. Holders," under current U.S. Treasury Regulations, payments of principal and interest on any Bonds to a holder that is not a United States person will not be subject to any backup withholding tax requirements if the beneficial owner of the Bond or a financial institution holding the Bond on behalf of the beneficial owner in the ordinary course of its trade or business provides an appropriate certification to the payor and the payor does not have actual knowledge that the certification is false. If a beneficial owner provides the certification, the certification must give the name and address of such owner, state that such owner is not a United States person, or, in the case of an individual, that such owner is neither a citizen nor a resident of the United States, and the owner must sign the certificate under penalties of perjury.

Foreign Account Tax Compliance Act ("FATCA")—U.S. Holders and Non-U.S. Holders

Sections 1471 through 1474 of the Code impose a 30% withholding tax on certain types of payments made to foreign financial institutions, unless the foreign financial institution enters into an agreement with the U.S. Treasury to, among other things, undertake to identify accounts held by certain U.S. persons or U.S.-owned entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these and other reporting requirements, or unless the foreign financial institution is otherwise exempt from those requirements. In addition, FATCA imposes a 30% withholding tax on the same types of payments to a non-financial foreign entity unless the entity certifies that it does not have any substantial U.S. owners or the entity furnishes identifying information regarding each substantial U.S. owner. Under current guidance, failure to comply with the additional certification, information reporting and other specified requirements imposed under FATCA could result in the 30% withholding tax being imposed on payments of interest on the Bonds. In general, withholding under FATCA currently applies to payments of U.S. source interest and, under current guidance, will apply to certain "passthru" payments no earlier than the date that is two years after publication of final U.S. Treasury Regulations defining the term "foreign passthru payments." Prospective investors should consult their own tax advisors regarding FATCA and its effect on them.

The foregoing summary is included herein for general information only and does not discuss all aspects of U.S. federal taxation that may be relevant to a particular holder of Bonds in light of the holder's particular circumstances and income tax situation. Prospective investors are urged to consult their own tax advisors as to any tax consequences to them from the purchase, ownership and disposition of the Bonds, including the application and effect of state, local, non-U.S., and other tax laws.

CERTAIN ERISA CONSIDERATIONS

The Employee Retirement Income Security Act of 1974, as amended ("ERISA"), imposes certain restrictions on employee pension and welfare benefit plans subject to Title I of ERISA ("ERISA Plans") regarding prohibited transactions, and also imposes certain obligations on those persons who are fiduciaries with respect to ERISA Plans. Section 4975 of the Code imposes similar prohibited transaction restrictions on certain plans, including (i) tax-qualified retirement plans described in Section 401(a) and 403(a) of the Code, which are exempt from tax under section 501(a) of the Code and which are not governmental or church plans as defined herein ("Qualified Retirement Plans"), and (ii) individual retirement accounts ("IRAs") described in Section 408(b) of the Code (the foregoing in clauses (i) and (ii), "Tax-Favored Plans"). Certain employee benefit plans, such as governmental plans (as defined in Section 3(32) of ERISA), non-U.S. plans (as described in Section 4(b)(4) of ERISA) and, if no election has been made under Section 410(d) of the Code, church plans (as defined in Section 3(33) of ERISA), are not subject to ERISA requirements or Section 4975 of the Code~~,~~ but may be subject to requirements or prohibitions under applicable federal, state, local, non-U.S. or other laws or regulations that are, to a material extent, similar to the requirements of ERISA and Section 4975 of the Code ("Similar Law").

In addition to the imposition of general fiduciary obligations, including those of investment prudence and diversification and the requirement that a plan's investment be made in accordance with the documents governing the plan, ERISA Plans are subject to prohibited transaction restrictions imposed by Section 406 of ERISA. ERISA Plans and Tax-Favored Plans are also subject to prohibited transaction restrictions imposed by Section 4975 of the Code. These rules generally prohibit a broad range of transactions between (i) ERISA Plans, Tax-Favored Plans and entities whose underlying assets include plan assets by reason of ERISA Plans or Tax-Favored Plans investing in such entities (collectively, "Benefit Plans") and (ii) persons who have certain specified relationships to the Benefit Plans (such persons are referred to as "Parties in Interest" or "Disqualified Persons"), in each case unless a statutory, regulatory or administrative exemption is available. The definitions of "Party in Interest" and "Disqualified Person" are expansive. While other entities may be encompassed by those definitions, they include most notably: (1) a fiduciary with respect to a Benefit Plan; (2) a person providing services to a Benefit Plan; (3) an employer or employee organization any of whose employees or members are covered by a Benefit Plan; and (4) an owner of an IRA. Unless a statutory, regulatory or administrative exemption is available, certain Parties in Interest (or Disqualified Persons) that participate in a non-exempt prohibited transaction may be subject to a penalty (or an excise tax) imposed pursuant to Section 502(i) of ERISA (or Section 4975 of the Code), and the transaction may need to be rescinded. Without an exemption, a prohibited transaction involving an IRA may disqualify the IRA.

The acquisition or holding of Bonds by or on behalf of a Benefit Plan could be considered to give rise to a prohibited transaction if the Institution or the Trustee, or any of their respective affiliates, is or becomes a Party in Interest or a Disqualified Person with respect to such Benefit

Plan. The fiduciary of a Benefit Plan that proposes to purchase and hold any Bonds should consider, among other things, whether such purchase and holding may involve (i) the direct or indirect extension of credit to a Party in Interest or a Disqualified Person, (ii) the sale or exchange of any property between a Benefit Plan and a Party in Interest or a Disqualified Person, or (iii) the transfer to, or use by or for the benefit of, a Party in Interest or a Disqualified Person, of any Benefit Plan assets.

Certain status-based exemptions from the prohibited transaction rules could be applicable depending on the type and circumstances of the plan fiduciary making the decision to acquire a Bond. These are commonly referred to as prohibited transaction class exemptions or "PTCEs". Included among these exemptions are:

PTCE 75-1, which exempts certain-transactions between a Benefit Plan and certain brokers-dealers, reporting dealers and banks;

PTCE 96-23, which exempts transactions effected at the sole discretion of an "in-house asset manager";

PTCE 90-1, which exempts certain investments by an insurance company pooled separate account;

PTCE 95-60, which exempts certain investments effected on behalf of an "insurance company general account";

PTCE 91-38, which exempts certain investments by bank collective investment funds; and

PTCE 84-14, which exempts certain transactions effected at the sole discretion of a "qualified professional asset manager."

In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code generally provide for a statutory exemption from the prohibitions of Section 406(a) of ERISA and Section 4975 of the Code for certain transactions involving service providers to Benefit Plans (commonly referred to as the "Service Provider Exemption"). The Service Provider Exemption covers transactions involving "adequate consideration" between Benefit Plans and persons who are Parties in Interest or Disqualified Persons solely by reason of providing services to such Benefit Plans or who are persons affiliated with such service providers, provided that such persons are not fiduciaries with respect to "plan assets" of any Benefit Plan involved in the transaction and that certain other conditions are satisfied.

The availability of each of these PTCEs and/or the Service Provider Exemption is subject to a number of important conditions which the Benefit Plan's fiduciary must consider in determining whether such exemptions apply. There can be no assurance that all the conditions of any such exemptions will be satisfied at the time that the Bonds are acquired by a purchaser, or thereafter, if the facts relied upon for utilizing a prohibited transaction exemption change, or that the scope of relief provided by these exemptions will necessarily cover all acts that might be construed as prohibited transactions. Therefore, a Benefit Plan fiduciary considering an investment in the Bond should consult with its counsel prior to making such purchase.

By its acceptance of a Bond (or an interest therein), each purchaser and transferee (and if the purchaser or transferee is a Benefit Plan, its fiduciary) will be deemed to have represented and warranted that either (i) no "plan assets" of any Benefit Plan or a plan subject to Similar Law have been used to purchase such Bond or (ii) the purchase and holding of such Bonds is exempt from the prohibited transaction restrictions of ERISA and Section 4975 of the Code pursuant to a statutory, regulatory or-administrative exemption and will not violate Similar Law. A purchaser or transferee who acquires Bonds with assets of a Benefit Plan represents that such purchaser or transferee has considered the fiduciary requirements of ERISA, the Code or Similar Laws and has consulted with counsel with regard to the purchase or transfer.

None of the Institution, Trustee, or Underwriters is undertaking to provide impartial investment advice or to give advice in a fiduciary capacity in connection with the acquisition or transfer of the Bonds by any Benefit Plan.

The foregoing discussion is general in nature and is not intended to be all-inclusive. Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that any Benefit Plan fiduciary or other person considering whether to purchase Bonds on behalf of a Benefit Plan should consult with its counsel regarding the applicability of the fiduciary responsibility and prohibited transaction provisions of ERISA and the Code to such investment and the availability of any exemption. In addition, persons responsible for considering the purchase of Bonds by a governmental plan, non-electing church plan or non-U.S. plan should consult with its counsel regarding the applicability of any Similar Law to such an investment.

UNDERWRITING

The Institution has entered into a purchase contract with Goldman Sachs & Co. LLC, as representative of itself and the Underwriters, pursuant to which the Underwriters have agreed to purchase the Bonds from the Institution at a purchase price of $747,556,765.81 (representing the principal amount of the Bonds, less an underwriting discount of $2,443,234.19.

The purchase contract pursuant to which the Bonds are being sold provides that the Underwriters will purchase not less than all of the Bonds being issued by the Institution. The Underwriters' obligation to make such purchase is subject to certain terms and conditions set forth in the purchase contract, the approval of certain legal matters by counsel and certain other conditions.

The Underwriters may offer and sell the Bonds to certain dealers and others at a price lower than the initial offering price. The offering price of Bonds may be changed from time to time by the Underwriters. 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.

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 Institution.

BofA Securities, Inc., as 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.

Morgan Stanley & Co. LLC 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 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.

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 Securities, LLC, a U.S. broker-dealer registered with the U.S. Securities and Exchange Commission, and a member of NYSE, FINRA, National Futures Association, and SIPC.

CONTINUING DISCLOSURE

The Institution has entered into continuing disclosure undertakings (the "Continuing Disclosure Undertakings") in connection with revenue bonds issued for the benefit of the Institution. See APPENDIX B – "HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023." Holders and prospective purchasers of the Bonds may obtain copies of the information provided by the Institution under those Continuing Disclosure Undertakings on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system ("EMMA"). Each Continuing Disclosure Undertaking terminates when the related revenue bonds are paid or deemed paid in full.

APPROVAL OF LEGALITY

Legal matters incident to validity of the Bonds and certain other matters are subject to the approving opinion of Ropes & Gray LLP, counsel to the Institution. The proposed form of opinion of counsel to the Institution relating to the validity of the issuance of the Bonds and certain other matters is attached hereto as Appendix D. In addition, certain other legal matters will be passed upon for the Underwriters by their counsel, Orrick, Herrington & Sutcliffe LLP.

INDEPENDENT ACCOUNTANTS

The consolidated balance sheet as of June 30, 2023, the related consolidated statements of changes in net assets with general operating account detail and of changes in net assets of the endowment for the year ended June 30, 2023 and of cash flows for the years ended June 30, 2023 and 2022, included in Appendix B of this Offering Memorandum, have been audited by PricewaterhouseCoopers LLP, independent accountants, as stated in their report appearing in Appendix B herein.

RATINGS

Moody's Investors Service, Inc. ("Moody's") assigned a rating of "Aaa" with a stable outlook to the Bonds and S&P Global Ratings ("S&P") assigned a rating of "AAA" with a stable outlook to the Bonds. Any explanation of the significance of such ratings may only be obtained from Moody's and S&P. Generally, rating agencies base their ratings on information and materials furnished and on investigation, studies, and assumptions by the rating agencies. There is no assurance that the rating mentioned above will remain in effect for any given period of time or that a rating might not be lowered or withdrawn entirely, if in the judgment of the rating agency originally establishing the rating, circumstances so warrant. Any such downward change in or withdrawal of a rating might have an adverse effect on the market price or marketability of the Bonds.

MISCELLANEOUS

All quotations from and summaries and explanations of the Indenture and of other statutes and documents contained herein do not purport to be complete, and reference is made to said documents and statutes for full and complete statements of their provisions. Copies of the Indenture may be obtained upon request directed to the Underwriters or the Institution.

Any statements in this Offering Memorandum involving matters of opinion are intended as such and not as representations of fact. This Offering Memorandum is not to be construed as a contract or agreement between the Institution and Holders of any of the Bonds.

The execution and delivery of this Offering Memorandum has been duly authorized by the Institution.

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

By: /s/ Ritu Kalra

Vice President for Finance and
Chief Financial Officer

APPENDIX A

CERTAIN INFORMATION CONCERNING THE INSTITUTION

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HARVARD UNIVERSITY

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 advance 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. The University consists of Harvard College, eleven graduate schools and several research institutes and museums. The University's campus consists of approximately 25.8 million gross square feet spanning 631 acres across its principal sites in Cambridge, Massachusetts and the Allston and Longwood areas of Boston, Massachusetts.

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

Name	Title
Alan M. Garber[1]	Interim President, Harvard University
Timothy R. Barakett	Treasurer, Harvard University Chairman, TRB Advisors
Penny Pritzker	Senior Fellow, Harvard University Founder and Chairman, PSP Partners
Kenneth I. Chenault	Chairman and Managing Director, General Catalyst
Mariano-Florentino Cuéllar	President, Carnegie Endowment for International Peace
Paul J. Finnegan[2]	Co-CEO, Madison Dearborn Partners
Kenneth C. Frazier	Chair of Health Assurance Initiatives, General Catalyst Former Executive Chairman and CEO, Merck & Co
Biddy Martin	Past President, Amherst College; Professor of German and Sexuality, Women's and Gender Studies, Amherst College
Karen Gordon Mills	Senior Fellow, Harvard Business School President, MMP Group
Diana Nelson	Co-Chair, Carlson Holdings, Inc.
Tracy Pun Palandjian	Co-founder and CEO, Social Finance
Shirley M. Tilghman	President Emerita, Princeton University Professor of Molecular Biology and Public Affairs Emerita, Princeton University
Theodore V. Wells, Jr.	Partner, Paul, Weiss, Rifkind, Wharton & Garrison LLP

[1] Alan Garber assumed the role of Interim President, succeeding President Claudine Gay, effective January 2, 2024.
[2] Paul J. Finnegan will conclude his service on the Corporation on June 30, 2024. Joseph Y. Bae, Co-CEO of global investment firm KKR, will join the Corporation on July 1, 2024.

The Board of Overseers 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 of Overseers may serve more than one term. The consent of the Board of Overseers 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 of Overseers also reviews the academic performance of the University through more than 50 visiting committees composed of both members of the Board of Overseers 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 the Vice Presidents. Alan M. Garber has served as Provost since 2011 and was named Interim President on January 2, 2024. The Corporation anticipates commencing the search for Harvard's next President in due course.

The principal administrative officers of the University are as follows:

Name	Title
Alan M. Garber[3]	Interim President
John F. Manning[4]	Interim Provost
Timothy R. Barakett	Treasurer
Meredith Weenick	Executive Vice President
Paul Andrew	Vice President for Public Affairs and Communications
Manuel Cuevas-Trisán	Vice President for Human Resources
Eileen Finan[5]	Interim General Counsel
Marc Goodheart	Vice President and Secretary of the University
Ritu Kalra	Vice President for Finance and Chief Financial Officer
Klara Jelinkova	Vice President and Chief Information Officer
Brian K. Lee	Vice President for Alumni Affairs and Development
Martha Whitehead	Vice President for the Harvard Library
Sean Caron	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 (which includes the University's endowment) and the majority of the financial assets of the University pursuant to an Investment Advisory Agreement. Led by its Chief Executive Officer, 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.

[3] Alan Garber assumed the role of Interim President, succeeding President Claudine Gay, effective January 2, 2024.
[4] John Manning will serve as Harvard's Interim Provost beginning March 14, 2024, succeeding Interim President Alan Garber.
[5] Diane Lopez retired from the position of Vice President and General Counsel as of February 29, 2024. Eileen Finan, a longtime attorney in the University's Office of the General Counsel, is serving as Interim General Counsel as of March 1, 2024.

HMC is governed by a Board of Directors, which includes the President, the Treasurer, and the Vice President for Finance and Chief Financial Officer of the University, as well as the Chief Executive Officer of HMC. Information on other members of HMC's management and governance is available on HMC's website.

HMC's investment approach utilizes an internal generalist investment team that evaluates opportunities across asset classes, combined with external management teams that focus on specific investment areas.

For the fiscal year ended June 30, 2023 the return on the Harvard endowment was 2.9%. The value of the endowment on June 30, 2023 was $50.7 billion.

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 first-year students admitted to and enrolled in Harvard College (the University's principal undergraduate unit) for the fall terms of the academic years indicated.

Recent Application Statisitics

Academic Year	First-Year Student Applications Received	First-Year Students Admitted	First-Year Students Enrolled	Selectivity (%)	Yield (%)
2019-20	43,330	2,009	1,649	4.6%	82.1%
2020-21	40,428	2,015	1,407	5.0%	69.8%
2021-22	57,786	2,318	1,951	4.0%	84.2%
2022-23	61,221	1,984	1,646	3.2%	83.0%
2023-24	56,937	1,965	1,645	3.5%	83.7%

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
2019-20	6,739	13,523	20,262
2020-21	5,198	12,763	17,961
2021-22	7,095	13,565	20,660
2022-23	7,178	13,728	20,906
2023-24	7,063	13,450	20,513

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
2019-20	$51,925	$17,682	$69,607
2020-21	$53,968	$18,389	$72,357
2021-22	$55,587	$18,941	$74,528
2022-23	$57,261	$19,502	$76,763
2023-24	$59,076	$20,374	$79,450

Source: University Records

Student Financial Aid

The University undergraduate admissions policy provides that admissions to Harvard College are need-blind, which allows the University to bring the best students to Harvard College, regardless of their ability to pay. Undergraduate aid packages typically consist of grants and employment, with a small percentage of students electing loans. In the 2022-2023 academic year, approximately 55% of Harvard College students received need-based scholarships, and 22% of Harvard College students paid nothing to attend. In that year, the average family contribution toward the cost of attendance (including tuition, fees, room & board, and travel) was $16,100 for the students who received need-based aid. In April 2023 Harvard College announced an expansion of its financial aid program for the 2023-2024 academic year so students from families with incomes below $85,000 could attend for free.

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 Joint Committee on Appointments, a joint committee of the University's two governing boards (the Corporation and the Board of Overseers). The University had approximately 19,777 full time equivalent (FTE) employees as of fall 2023 (including faculty and staff, but 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

Approximately 6,400 of the University's 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 agreement with Service Employee International Union, Local 32BJ (Arboretum Employees) expired on November 16, 2023, and the parties are currently finalizing terms to extend the agreement to 2027. The other collective bargaining agreements have varying expiration dates through 2026.

The University also has a collective bargaining agreement with the union representing approximately 5,000 graduate student workers. This agreement expires in 2025.

Additionally, approximately 400 undergraduate student workers have organized as Harvard Undergraduate Workers Union. Collective bargaining has not yet commenced. The University is also aware of an organizing effort involving non-tenure-track academic workers, and an effort involving residential advisors such as tutors, proctors and house aides.

Campus Development

Harvard's primary campus is located in Cambridge and includes many historic buildings. Development efforts in Cambridge are primarily focused on renewal of existing structures for continued academic, research, housing, and support functions. A new building for the Economics Department behind the Littauer Center at the intersection of Cambridge Street and Massachusetts Avenue is currently in planning stages.

Like the main Cambridge campus, the University's medical campus in Longwood is not anticipated to change materially in the near term, with current development efforts focused on renewal and improvement of existing structures.

Harvard also has significant real estate holdings in Allston, across the river from its main Cambridge campus. Development in Allston is ongoing, consisting of both institutional development and commercial development efforts. Institutional development in Allston is governed by the University's ten-year Institutional Master Plan ("IMP"). Under an approved amendment to the existing IMP, two new institutional projects are under construction at 175 North Harvard Street: a research and performance center for the American Repertory Theater, and a housing complex for people affiliated with Harvard. Similarly, an institutional conference center approved under the existing IMP is under construction on Western Avenue. Harvard is currently in the process of filing a new IMP that will propose six major institutional projects totaling 138,000 square feet of renovation and 720,000 square feet of new construction. Regarding commercial development in Allston, the University has engaged several third-party real estate partners for a variety of mixed-use projects consisting of residential, office, lab, hotel and retail space to be built on land ground-leased from the University.

In 2018, expanding on earlier initiatives, Harvard announced climate goals for the University, including to be fossil-fuel neutral on its campus by 2026, and to eliminate completely the use of fossil fuels to heat, cool and power buildings and vehicles on its campus by 2050. In 2023, both the City of Cambridge and the City of Boston announced requirements for certain buildings to achieve net zero emissions by 2035 through 2050. These goals and requirements are incorporated in the University's campus development planning efforts across its Cambridge, Allston and Longwood campuses.

Litigation, Investigations, and Other Proceedings

The University is subject to various suits, audits, investigations and other legal proceedings in the course of its operations. Currently these include certain governmental investigations into allegations of bias on campus, among other topics, which have attracted considerable public attention. While the outcome and consequences, if any, are 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 Offering Memorandum to this transaction).

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APPENDIX B

HARVARD UNIVERSITY FINANCIAL REPORT - FISCAL YEAR 2023

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HARVARD UNIVERSITY

Financial Report

FISCAL YEAR 2023

Message from the President

I am pleased to present Harvard University's Annual Financial Report for fiscal year 2023.

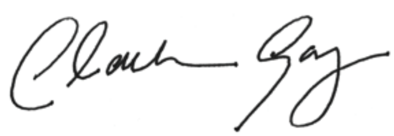
This document is far more than an accounting of our finances; it is a reflection of our commitment to expanding access to education and knowledge, to driving discovery and innovation, and to fulfilling our responsibility to a society that looks to Harvard for approaches and answers — for hope that tomorrow will be better than today.

Expanded financial aid — totaling $851 million — continues to remove barriers to academic and research pursuits for all of our students. This year, we have adjusted an important threshold for our Harvard Financial Aid Initiative (HFAI). Undergraduates from families with annual incomes below $85,000 are fully funded by the University — they pay nothing — and expected contributions for families with annual incomes between $85,000 and $150,000 max out at ten percent of annual income. More than half of the individuals studying at Harvard College today benefit from our ongoing commitment to affordability, which helps to provide our institution with the excellence it deserves and our society with the leaders it needs and expects.

Creating opportunity is not limited to supporting our own community. Axim Collaborative, a non-profit created by Harvard and MIT, announced in June a partnership with the United Negro College Fund to develop a custom platform that will expand digital learning capabilities across Historically Black Colleges and Universities (HBCUs), and Harvard Library is partnering with the HBCU Library Alliance to preserve and digitize African American history collections across the country. At the same time, we continue to share our tremendous collections with the public, opening the doors of the Harvard Art Museums to our neighbors throughout Greater Boston and visitors from around the world with free admission for all.

We do these things with an eye on the horizon and with the philanthropic support of alumni and friends, seeking out new ways our mission can meet the needs of our moment. The Kempner Institute is welcoming its first wave of faculty and fellows as artificial intelligence becomes a more central aspect of our work and lives, and the Salata Institute has just announced its first cohort of grant recipients. Fourteen climate change projects are being funded, and their diversity — from measuring the rising sea to mapping tolls on mental health to outfitting buildings with better materials — demonstrates not only the complexity of the work before us but also the possibility of making a difference across many dimensions of our research and teaching.

I arrived at Mass Hall on July 1 thinking that my experience as dean of the Faculty of Arts and Sciences had afforded me a wide perspective on the University, but every day has given me an opportunity to learn more about the ambition and courage of our community. As this handful of examples and the following pages demonstrate, there is no end to what we aspire to achieve together — no end to what we can achieve together.



Claudine Gay
PRESIDENT

September 2023

Financial Overview

From the Vice President for Finance and the Treasurer

This was a fiscal year marked by significant changes, both within the University and across the broader higher education landscape. Leadership transitions marked major turning points within Harvard, with the departures last year of President Larry Bacow, Executive Vice President Katie Lapp and Vice President for Finance and Chief Financial Officer Thomas Hollister. Their farsighted leadership helped make Harvard stronger, by every financial metric, than at any point in its history. We are grateful to each of them for their indelible and enduring contributions.

Outside of Harvard, fiscal year 2023 was characterized by changes no less profound. Volatility in the capital markets and rapidly rising interest rates—intended to curb even more rampantly rising inflation—led to three bank failures, among the largest in the country's history; climate change catalyzed record heat and accelerating wildfires across the globe; the Supreme Court challenged the way in which we conduct admissions in our efforts to ensure a diverse class; and the potential of generative artificial intelligence, both propitious and perilous, erupted into the collective consciousness. The impacts from each promise to be profound.

Amidst this swirl of change, Harvard's commitment to excellence, opportunity, and impact remained steadfast. The University generated an operating surplus of $186 million or 3% of revenue, lower than last year's surplus of $406 million. This was driven by purposeful investments in the mission and the resurgence of expenses related to full campus operations, as well as inflationary pressures. This more modest operating margin is characteristic of the University's results prior to the pandemic.

Careful stewarding of resources over the past several years made it possible to advance our pursuit of academic excellence, expand our commitment to opportunity and access, and initiate new programs to address society's most vexing challenges. This year, the University welcomed its inaugural cohort of PhDs in quantum science, pioneers at the academic frontier. Harvard College raised the income threshold for cost-free attendance to $85,000, allowing an estimated 25% of undergraduate students to attend for free. And ongoing investments in initiatives, including Harvard and the Legacy of Slavery and the launch of the Axim Collaborative, call on Harvard to reckon with the past while reimagining learning for the future.

These commitments to academic excellence and opportunity would not be possible without our donors, past and present. Distributions from the endowment totaled $2.2 billion or 37% of total revenue for the year. An additional 8% of revenue came in the form of current gifts. Donors' generosity allows Harvard to advance mission-critical priorities. We are enormously grateful for their steadfast support.

While we rightly celebrate these achievements, we must acknowledge the financial challenges that lie in wait. On the heels of the most substantial interest rate tightening cycles since the 1970s, the cost of capital is anticipated to remain elevated, which may impact future investment returns. The end of the era of economic expansion, which we have written about in previous letters, may be upon us.

Indeed, while we are deeply appreciative of the capable navigation of complicated markets by CEO Narv Narvekar and his colleagues at Harvard Management Company, the 2.9% return on the endowment this year is below our long-term target return of 8%. Narv expressed caution about forward-looking returns in private portfolios last year, noting that "private managers have not yet marked their portfolios to reflect general market conditions." Accordingly, this year, the disparity between the public and private markets continued, this time as private markets lagged on the upside.

We must be judicious in the way we access the endowment to support our operations, as it is not a checking account, but rather must be managed to support both current and future generations of students and scholars. Nevertheless, the endowment distribution increased by 4.5% in fiscal year 2023 and is budgeted for the same level of growth for fiscal year 2024. As stewards of the endowment, our focus is on both supporting the University today, as well as ensuring a consistent level of support in the future, a task that will be complicated by a potential low growth economic environment.

This backdrop is exacerbated by the reality that the costs of running a world-class university—of ensuring the resilience and accessibility of our buildings, of eliminating greenhouse gas emissions from our campus footprint as we collectively address climate change, of expanding access and affordability—continue to increase. Overall expenses rose 9% this fiscal year, double the increase in revenue.

This is not sustainable. Our pace of spending cannot continue unabated without a commensurate increase in revenue. Yet as we have discussed in prior years' letters, traditional sources of higher education revenue face significant constraints. Looking forward, we must respond prudently, by prioritizing activities which most consequentially contribute to our mission, and by identifying and operationalizing ways to use our financial, physical, and technological resources more effectively.

Even with these challenges on the horizon, Harvard's finances remain strong. The University's net assets, a fundamental measure of our resources, increased year-over-year. Schools and units continued to build reserves to help mitigate the impact of future constraint and support new investments. Harvard added only modest new debt in fiscal year 2023 and invested over $500 million in renewing and improving our physical plant.

In closing, we want to thank each and every donor to the University—past and present—for making Harvard's excellence in teaching and research possible through your philanthropy. We want to thank Harvard's faculty, students and staff for revitalizing the campus following the pandemic, and for your vital contributions, on a daily basis, in making Harvard one of the world's preeminent institutions. We also want to extend a warm welcome to Harvard's 30th President, Claudine Gay, along with the University's new deans. Together, we are committed to advancing academic excellence and sustaining the farsighted stewardship that has been the gift of generations before us.

Ritu Kalra
VICE PRESIDENT FOR FINANCE

Timothy R. Barakett
TREASURER

September 2023

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 dedication to public service, and transforming how problems are understood and addressed through research. The key financial highlights for fiscal year 2023 included in this report demonstrate the University's continued commitment to advancing these priorities.

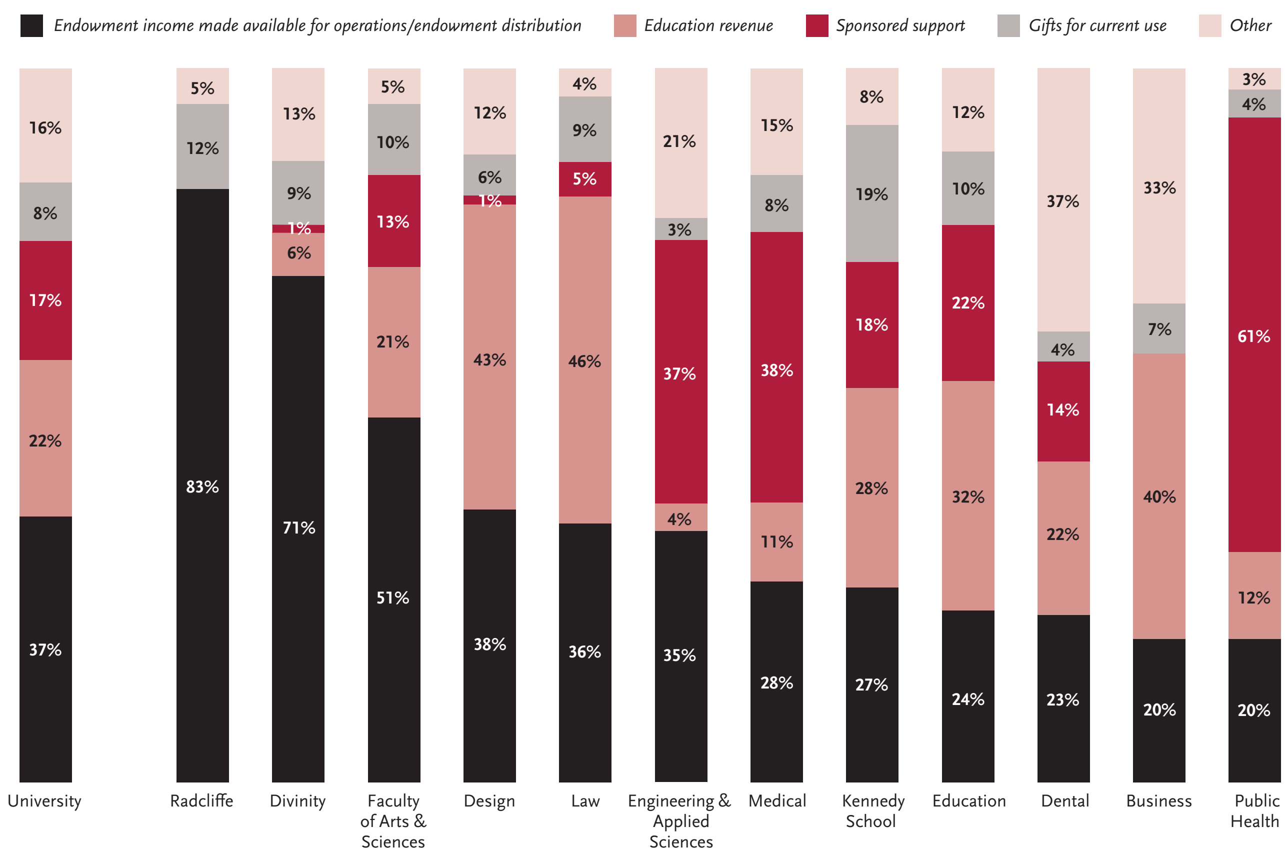
FINANCIAL OVERVIEW

The University ended fiscal year 2023 with an operating surplus of $186 million compared to $406 million in fiscal year 2022, on an operating revenue base that increased 5% or $262 million, to $6.1 billion. The reduced surplus was not unexpected and was driven primarily by expenses associated with renewed return to campus activity and strategic investments in our workforce, with increased compensation for faculty and staff, a decrease in vacancy rates, and overall growth in new workers across campus.

OPERATING REVENUES

The revenue profiles of Harvard's many schools and units vary widely, as each draws a different proportion of its budget from these primary sources as depicted in the following table:

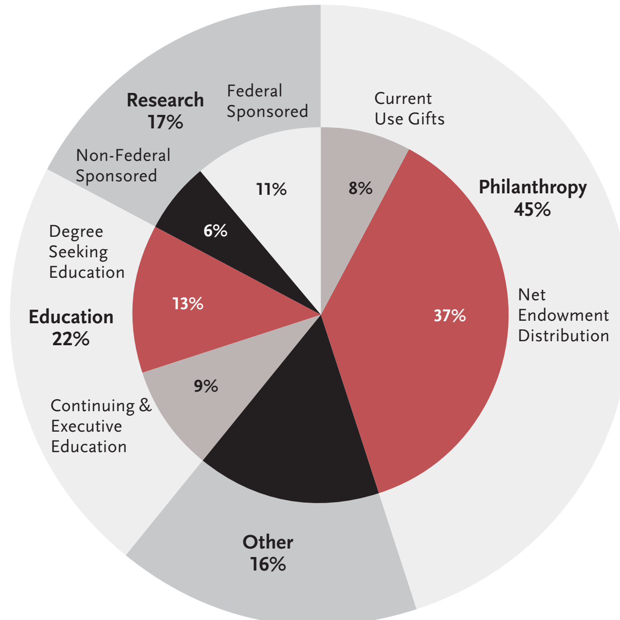
FISCAL YEAR 2023 SOURCES OF OPERATING REVENUE



Harvard's diversified activities rely on three main sources of revenue: education or tuition, sponsored research, and philanthropy, both past and present.

Total **education** revenue comprised 22% of revenue. This includes tuition and board and lodging income, net of financial aid, from both traditional degree seeking students (undergraduate, graduate, and professional), as well as executive and continuing education learners. In support of **research**, our faculty are awarded external grants by governmental and private partners to advance new academic knowledge; this sponsored funding made up 17% of revenue. Revenue generated each year from our education program and research endeavors is not sufficient to fund operations and as such, the University relies on **philanthropy** to fill in the gap. In fiscal year 2023, support from past and present donors provided 45% of revenue through current use gifts and endowment income, reflecting their generosity and belief in the broad impact of education and research at Harvard.

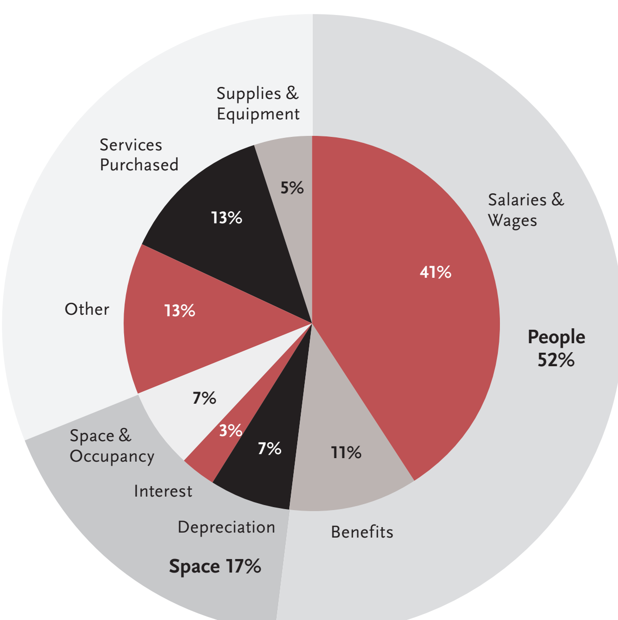
FISCAL YEAR 2023 OPERATING REVENUES



OPERATING EXPENSES

The spending associated with Harvard's diversified activities also encompass three primary categories, related to the faculty, staff and other **people** who make Harvard's work come alive; the classrooms, labs and other **spaces** in which their work is done; and the **supplies and services** they use to advance the work.

FISCAL YEAR 2023 OPERATING EXPENSES



The University's operating expenses increased by $482 million or 9% to $5.9 billion for fiscal year 2023. Spending rebounded in many areas across the University, reflecting both increased campus activity following the pandemic as well as the impact of inflation, with increases in compensation and higher discretionary spending (travel, food, supplies and equipment) leading the growth. Compensation, or **people**, expenses (i.e., salaries, wages and benefits) represented more than half of the University's total operating expenses in fiscal year 2023. Salaries and wages increased by 10% or $215 million, to $2.4 billion. This growth stemmed from wage increases, as well as an investment in new faculty and staff across campus. These new positions were the result of both filling open positions as well as targeted growth in key initiatives. Employee benefit expense grew 8% or $44 million, in line with salaries and wages.

As pandemic restrictions continued to ease, expenditures related to **space** as well as discretionary costs both rebounded in fiscal year 2023. University-wide space costs grew by 11% or $40 million, with the resumption of campus-based activity and an uptick in deferred maintenance projects. Other discretionary spending returned to pre-pandemic levels, largely driven by services purchased (+8% or $59 million) and travel (+114% or $50 million).

BALANCE SHEET

Investments and endowment

The return on the endowment in fiscal year 2023 was 2.9%. Its value (after the impact of distributions from the endowment for operations, and the addition of new gifts to the endowment during the year) stood at $50.7 billion, down from $50.9 billion at the end of fiscal year 2022. Additional information is available in the *Message from the CEO of Harvard Management Company,* found later in this report.

The University has a policy of maintaining liquidity outside of the endowment for operating purposes. These liquid, short-term investments totaled $1.4 billion at June 30, 2023 compared to $2.2 billion at June 30, 2022 (see *Note 2),* well above our minimum policy requirement.

Debt

Bonds and notes payable increased modestly from $6.1 billion in fiscal year 2022 to $6.2 billion in fiscal year 2023, driven by the issuance of $177 million in commercial paper. Issuances included $25 million tax-exempt commercial paper for capital spending and $152 million taxable commercial paper to supplement the University's working capital. The University maintained its AAA rating by S&P Global Ratings and Aaa by Moody's Investor Services.

Fixed assets

The University invested $512 million in capital for fiscal year 2023 compared to $356 million in fiscal year 2022. Despite the increase in capital expenditures, the construction market continued to experience challenges in fiscal year 2023 including supply chain disruptions, equipment and construction labor availability, and permitting delays, resulting in subdued spending relative to the projects in the pipeline.

EDUCATION

In fiscal year 2023, across its 12 schools, Harvard enrolled 25,266 students from around the globe, including 7,178 undergraduates at Harvard College.

Total education revenue

Student income increased 9% or $108 million to $1.3 billion in fiscal year 2023. Revenue from traditional student programs (undergraduate and graduate) grew by 5% or $54 million. Board and lodging revenue of $221 million grew 11% as graduate students continued to return to on-campus housing. Executive and continuing education revenue totaled $544 million, growing 12% or $57 million. Financial aid applied to student income increased 5% or $25 million to $531 million in fiscal year 2023.

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 robust financial aid program, approximately 55% of Harvard College students receive need-based scholarships and pay an average of $16,100 for tuition, food and lodging. Since launching the Harvard Financial Aid Initiative in 2004, the College has awarded nearly $3.1 billion in grant aid, and the undergraduate financial aid budget has nearly tripled from $80 million in 2005 to $247 million in 2023. The average net cost of attendance for all Harvard College students is $42,695.

Approximately 94% of dollars supporting student financial aid at Harvard come from University sources, including gifts, the endowment and unrestricted funds. The other 6% comes from the federal government aid initiatives and other outside sponsors.

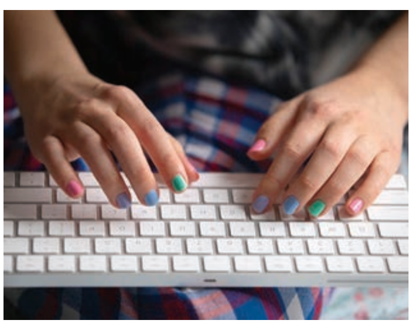
Harvard College has continued its ongoing efforts to expand financial aid by raising the family income threshold in 2023-2024 to $85,000—a $10,000 increase from last year's threshold. This change means that an estimated 25% of families do not have to contribute anything to tuition, food or housing. In addition, to ensure that students can participate fully in the Harvard experience, Harvard augments this aid by providing low-income students with funding for health insurance, emergency expenses, event fees, and other activities. First-year students from families making under $85,000 also receive a $2,000 start-up grant.

INCREASING ACCESS TO HARVARD

Harvard University's commitment to expanding access to opportunities includes not only access to world-class learning and research resources, but also ensuring that we are a community where everyone has the support to grow and succeed. Over the last year, we've advanced this commitment in many ways, including opening the doors wider to our museum collections through free admission for everyone at the Harvard Art Museums and expanding high-quality learning opportunities that go beyond the traditional classroom walls. The increased access is further supported with resources to strengthen intellectual, emotional and physical wellbeing by, for example, expanding our digital accessibility policy and adding new student mental health services and resources.

CELEBRATING 375 YEARS *of* FINANCIAL AID

Harvard College is committed to ensuring that all admitted students have the opportunity to attend Harvard, regardless of the economic obstacles they have encountered. Harvard launched the **Harvard Financial Aid Initiative** in 2004 to enhance this effort and to raise awareness of college affordability for students interested in all kinds of colleges and universities. The income threshold for cost-free attendance rose to $85,000, an increase of $10,000 from the prior year.



As part of its ongoing efforts to ensure the accessibility of its digital systems and communications, Harvard revised its **Digital Accessibility Policy** so that all new digital content designed and developed by Harvard schools, units, and departments after June 1, 2023, should aim to be accessible to people with disabilities. The University's initial Digital Accessibility Policy, which was put into place in 2019, focused on expanding access to Harvard's knowledge, information, and learning opportunities for audiences outside the University. Improving the accessibility of internally facing content and applications is an important next step toward making Harvard a more welcoming and inclusive place for everyone.

For students on tight budgets, a job interview can bring the thrill of starting a new chapter and the dread of locating work-appropriate apparel. To meet this need, Travis Johnson '24 and LyLena Estabine '24, launched the **Crimson Career Closet** (CCC), a brightly colored space on the 10th floor of the Smith Campus Center where students preparing for job interviews can borrow suits, dresses, and accessories for free. Currently, the CCC has five racks of clothes, mostly donated from faculty, and hopes to expand the donor base to alumni and classmates with support from the Office of Career Services.

axim collaborative

Axim Collaborative, previously known as the Center for Reimagining Learning, is a nonprofit started by Harvard and MIT that aims to make learning effective, accessible, and relevant to a diverse audience of learners and institutions. In June, Axim Collaborative launched its partnership with the United Negro College Fund and Harvard to support the development of HBCUv, a platform that will provide digital learning capabilities tailored to the specific needs of HBCUs and the communities they serve. HBCUv is intentionally designed to replicate the learning culture and community for which HBCUs are well known and aspires to be a shared resource open to all HBCUs and enable institutions to share knowledge, resources, and best practices.

In June, the **Harvard Art Museums announced a new free admission policy for all visitors**. This represents a significant expansion of free access to the museums' collections, exhibitions, and research for public audiences, and ensures that every campus visitor will have the opportunity to view and engage with the important collections in the Harvard Art Museums' care.

Nearly 40 Allston-Brighton students in grades 2-8 immersed in hands-on activities this summer through the Harvard Ed Portal's **Summer Explorations program**. Now in its seventh year, the program offers Allston-Brighton students free, weeklong courses designed to keep them engaged in learning during the school break. Among this year's highlights: students got a chemistry lesson by rolling out, frying, and fermenting Ukrainian flatbread ingredients in "Science of Cooking." Some learned about bones via "Ins and Outs of Skeletons," held at the Harvard Museum of Natural History. Others took to the stage in "Creative Drama: Ocean Explorations," led by staff of the American Repertory Theater.

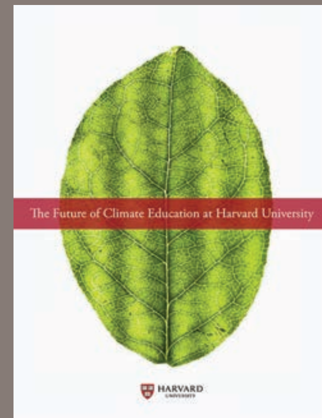
RESEARCH

Harvard scholars conduct research in almost every field, seeking to expand human knowledge through analysis, innovation, and insight. In 2023, research was supported by $1 billion of sponsored funds. In addition, the University funded $416 million of research through University funds, as submitted in the 2022 National Science Foundation Higher Education and Research Development (HERD) Survey. 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.

During fiscal year 2023, the University saw continued growth in research funding. In aggregate, revenue from federal and non-federal sponsored sources increased by 5% or $50 million. Federal funding, which accounted for approximately 66% of total sponsored revenue in fiscal year 2023, increased 5% or $34 million to $676 million. This includes a one-time grant from the Department of Homeland Security, provided through the Massachusetts Emergency Management Agency, for $25 million to reimburse the University for Covid-19 related expenses incurred in prior fiscal years.

The University's relationships with corporations, foundations and other non-federal sponsors expanded in fiscal year 2023, resulting in a 5% or $16 million increase in non-federal sponsored revenues, which totaled $350 million. Non-federal funding continues to be an area of growth, as researchers diversify their research funding support. In addition, Harvard devotes significant institutional resources to leverage these federal and non-federal investments. This funding provides crucial incubation to early-stage research ideas before they are ready to be presented to sponsors for additional funding, seeds new initiatives, subsidizes projects with insufficient external funding, and supports faculty to venture into new areas of scientific inquiry.

REDESIGNING HOW TO TEACH CLIMATE CHANGE



In September 2022, the Committee on Climate Education released "The Future of Climate Education at Harvard University," their analysis on how Harvard as an academic institution could meet the challenges of climate change. The report urges an all hands on deck approach for how Harvard teaches climate change, not only through more but also deeper instruction in disciplines that span the University at a moment of heightened concern about a changing world. The report outlines a series of concrete steps, including hiring additional faculty and establishing a climate education accelerator to foster needed changes, and envisions new courses in every discipline, increased internship and fellowship opportunities, and assistance for faculty in fields not traditionally linked to climate who want to incorporate it in classes.

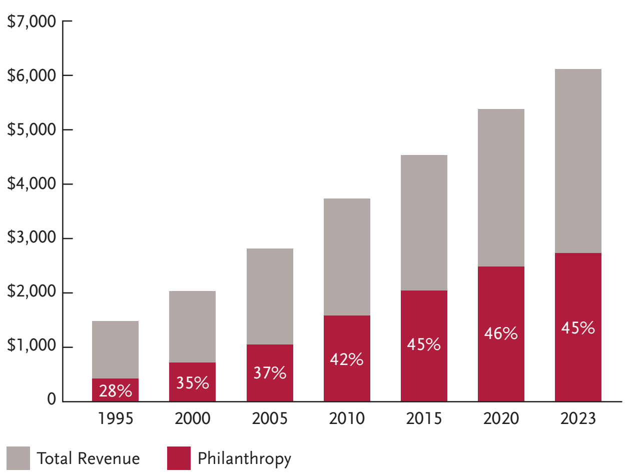
REMOVING CARBON USING NEW ENGLAND'S FORESTS

New England s Climate Imperative, a major report led by a Harvard ecologist, suggests that with a handful of strategies, New England s 32 million acres of forests, which cover about three quarters of the region, could eventually come close to absorbing 100 percent of all the carbon produced by the six states. The report lays out five steps policymakers and conservation non governmental organizations can pursue that can lead to forests absorbing almost 360 million additional tons of carbon dioxide over 30 years. That means New England s forests will be able to absorb virtually all the carbon produced in the region, provided the six states hit their existing emission reduction goals.

PHILANTHROPY

Combining gifts for current use and Harvard's endowment distribution, philanthropy accounted for 45% of fiscal year 2023 revenue. To support the rising cost of sustaining excellence in teaching and research, philanthropic support is increasingly important to colleges and universities—and to keeping college affordable. Excellence and affordability in higher education today rely on philanthropy to support nearly every aspect of university operations. Every gift helps Harvard continue to be a leader for progress in the world, enabling excellence in our teaching and research mission, recruiting and retaining our world class faculty, helping students thrive, and providing greater access through financial aid.

PHILANTHROPY AS A PERCENTAGE OF TOTAL REVENUE OVER TIME



Gifts for current use

In fiscal year 2023, Harvard received current use gifts from alumni, foundations, and others totaling $486 million, representing approximately 8% of operating revenues. Support for the University comes from donations of all sizes; more than 75% of the number of gifts in fiscal year 2023 averaged $157 per donor.

The Harvard endowment

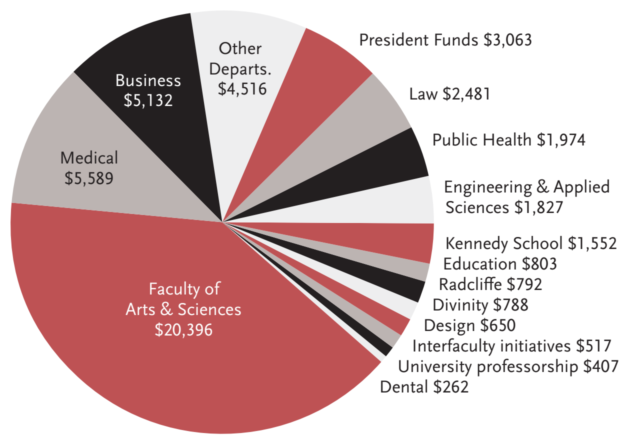
Harvard's endowment has existed for nearly four centuries and belongs to current and future generations of Harvard students, faculty, and researchers. The aggregate endowment is made up of more than 14,000 individual endowments that support nearly every aspect of the University's work, from student financial aid to neighborhood programs, from museum and library preservation to campus activities, from faculty and fellow positions to scientific advancement.

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. In any given year, the University aims to maximize what it can responsibly draw, while balancing both current and future needs. Guided by this principle of intergenerational equity, Harvard's endowment is carefully managed in order to ensure that future generations will enjoy its benefits just as much as the current one.

Cash gifts to the endowment were $561 million in fiscal year 2023 compared to $584 million in fiscal year 2022.

MARKET VALUE OF THE ENDOWMENT AS OF JUNE 30, 2023

In millions of dollars



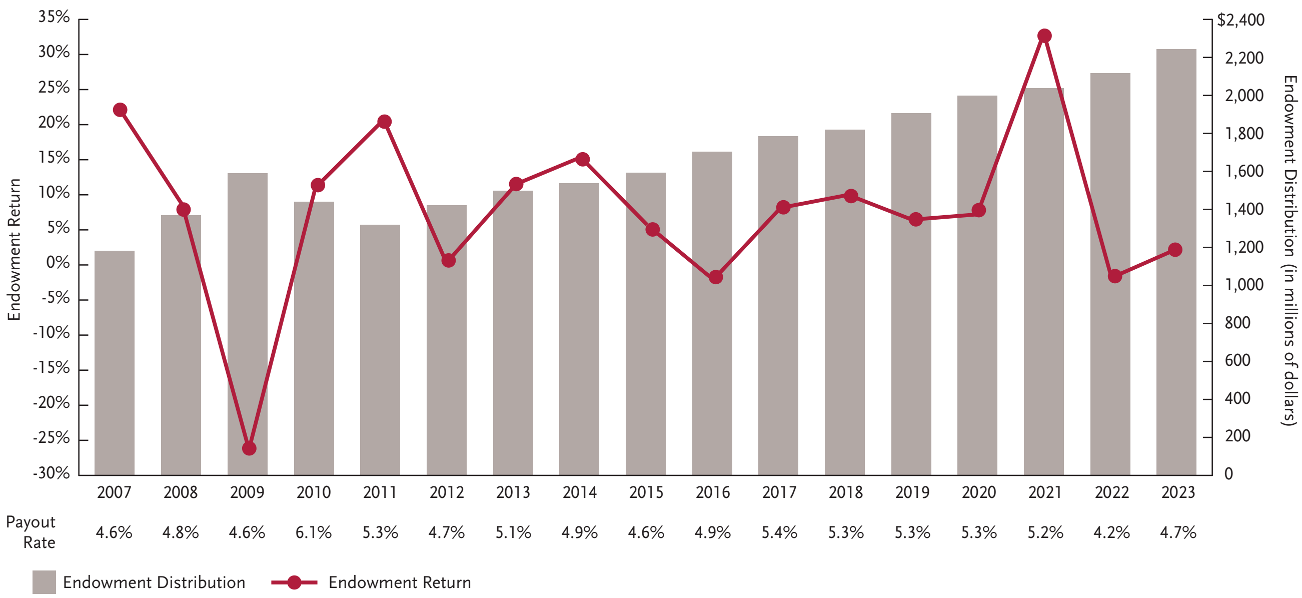
TOTAL MARKET VALUE $50,749

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 sufficient distribution, and the obligation both legally and to our donors 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 conditions established by donors and by the fact that it is designed to last forever, which is crucial for an institution intended to serve generations of students and pursue new knowledge.

Harvard is obligated to preserve the purchasing power of the endowment by spending only a sustainable portion 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. The actual payout rate varies each year based on endowment returns. This critical source of funding distributed $2.2 billion in the fiscal year ending June 30, 2023—representing 37% of Harvard's total operating revenue—and is the single largest source of revenue supporting the University.

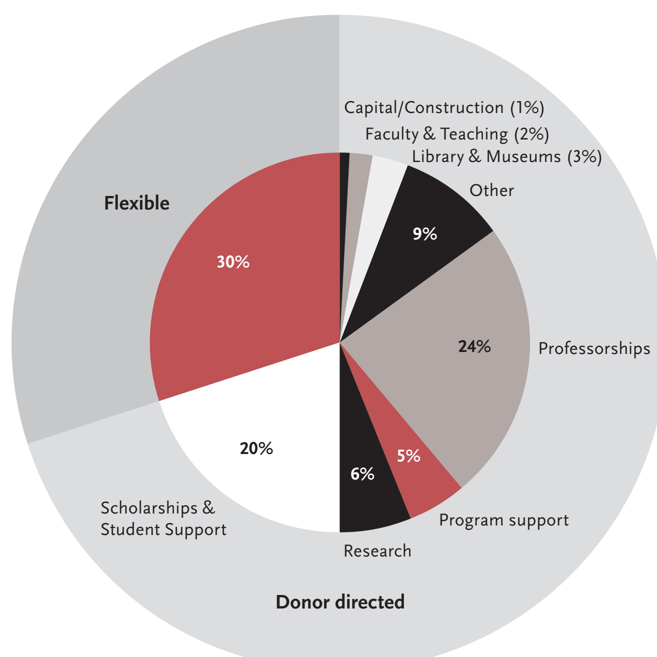
ENDOWMENT RETURNS MADE AVAILABLE FOR OPERATIONS BY YEAR



Endowment payout

While the endowment is a critical source of funding, 70% of the annual distribution from the endowment is directed 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, although are often restricted at a high level such as to one school, and are critical in supporting structural operating expenses and transformative, strategic initiatives. In this way, the endowment bridges the gap between revenue that is brought in from tuition and research grants, and the critical costs associated with the University's teaching and research activities.

ENDOWMENT SPENDING FLEXIBILITY



Harvard Management Company

Message from the Chief Executive Officer

For the most recent fiscal year, which ended on June 30, 2023, the return on the Harvard endowment was 2.9% and the value stood at $50.7 billion. The endowment also made available more than $2.2 billion for the University's operating budget, supporting financial aid, faculty, research initiatives, and more.

PERFORMANCE

Fiscal year 2023 (FY23) was a year of generally muted returns for asset classes outside of public equities. While public markets were flat or negative during the first half of FY23, the dramatic equity rally during the second half of FY23 (i.e., the first six months of calendar year 2023) changed the picture meaningfully.

Index	FY22 Total Return	2022 July to December Return	2023 January to June Return	FY23 Total Return
ACWI	-15.8%	**2.3%**	**13.9%**	16.5%
S&P 500	-10.6%	**2.3%**	**16.9%**	19.6%
NASDAQ	-23.4%	**-4.7%**	**32.3%**	26.1%

As noted in the asset allocation chart below, Harvard Management Company (HMC) has limited long-only public equity exposure (11%) and, accordingly, the endowment's FY23 return does not reflect a significant impact from public equity movements. However, this portfolio construction also helps brace against significant swings in either direction, as it did last year when the FY22 return (-1.8%) was not meaningfully impacted by an overall double-digit public equity decline.

Asset Class	Allocation
Public Equity	11%
Private Equity	39%
Hedge Funds	31%
Real Estate	5%
Natural Resources	1%
Bonds/TIPS	6%
Other Real Assets	2%
Cash and Other	5%
ENDOWMENT	**100%**

Strong public equity returns are often outpaced by private equity and venture capital. However, the returns for these asset classes proved to be only slightly positive in private equity and mildly negative in venture capital/growth. While this outcome may seem counterintuitive, we anticipated a correction in those funds' performance in last year's annual letter, noting that their dramatic outperformance over public markets was likely due to a natural lag in how their assets are valued.

Put another way, in FY22 private managers did not reduce the value of their investments in a manner consistent with declining public equity markets. Accordingly, those private asset managers did not subsequently increase the value of their investments in the context of rising public equity markets in FY23. Given the continued slowdown in exits and financing rounds over the last year, it will likely take more time for private valuations to fully reflect current market conditions.

REFLECTIONS ON SIX FISCAL YEARS AT HMC

In FY21, HMC reported on the completion of our five-year restructuring of both the organization and the endowment portfolio one year ahead of schedule. We noted at the time that the swift, broad restructuring of HMC's operations and investment model allowed us to focus substantially all our time on the portfolio turnaround, which is now largely complete. We are fortunate to have maintained a 9.2% annualized return during that span.

There are three main components to endowment performance: risk level, asset allocation, and manager selection. We are particularly gratified by the second and third components outlined immediately below.

HMC's manager selection alpha is one of our proudest achievements. Over the course of the last six fiscal years, the alpha generated by HMC's manager selection has been very strong, greater than we would have anticipated. Although we are confident that HMC will continue to do very well, it is hard to imagine that the next six years of alpha production can be as strong as the previous six years.

Our approach to overall asset allocation is based on portfolio risk level. Accordingly, and as discussed in greater detail below, Harvard engaged in a deliberate process to analyze its risk tolerance. However, even before changing risk levels, HMC worked to optimize its asset allocation within the University's existing risk constraints. We moved swiftly in a risk-neutral manner to pivot from private real estate and agriculture/timber to private equities early during this period. We also built a portfolio of liquid uncorrelated funds within our overall hedge fund allocation. These decisions proved to be successful. Within the asset classes, we also diversified into biotech (both public and private markets) and significantly added to tech venture.

Looking back over many years, a main constraint on Harvard's endowment returns has been that the portfolio was structured to take less risk than what was likely prudent. The question of the amount of risk to take is not a simple one, as it must weigh, for example, budget stability against long-term growth in the endowment. HMC built an analytical risk framework and partnered closely with the University to help determine the University's risk tolerance. After several years of rigorous conversation and analysis, the University agreed to a measured increase in the portfolio's risk level, which HMC began implementing over the last two years.

While we are very pleased to have catalyzed this critical discussion and process, we note that we continue to operate, even after the risk increase, at a somewhat lower risk level than many peer endowments. Going forward, HMC will continue to work with the University to periodically review the appropriate long-term risk level and tolerance (similar to how many endowments periodically review their asset allocations with their investment committees and university constituents).

Ultimately, we believe that the measured increase in risk—carefully calibrated to ensure long-term endowment stability—and the improved asset allocation (versus when we started, six years ago) will continue to generate strong returns even if the manager selection alpha attenuates.

I would also like to highlight that HMC has started investing in innovation related to mitigating greenhouse gas emissions. While we have been early in investing in this area over the last few years, we believe that a decade from now it will be accretive to endowment performance. Innovation to reduce carbon emissions will be rewarded, as it is one of the most obvious needs in society today.

In addition to organizational structure and portfolio shifts, there were two other specific initiatives that we are proud to have incorporated into our operations: addressing gender and racial diversity in the financial industry and expanding our sustainable investing practices to meet the University's pledge to have the endowment net zero of greenhouse gas emissions by 2050.

HMC's focus on diversity looks at our own team, the leadership of our asset managers, and the companies in which those managers choose to invest. We aim to seek talent from the broadest possible pool of candidates and managers. In addition to actively seeking out more diverse managers for investment consideration, we collect data, where available, on the diversity of the managers' leadership, staff, and portfolio investments. The financial industry has a long way to go on this front, but we hope these steps can play a small role in addressing this challenge.

Nearly a decade ago, Harvard became the first U.S. higher education endowment to sign onto the U.N.-supported Principles for Responsible Investment. Along with that commitment, HMC formalized its Sustainable Investing Policy to ensure that we considered all environmental, social, and governance factors that could impact the value of our investments. More recently, Harvard became the first U.S. university to commit to making its endowment portfolio net zero of greenhouse gases by 2050—in line with the timeline of the Paris Agreement. In addition to the groundbreaking work that entails, our own operations were net zero of carbon emissions for the second consecutive year. Doing so has not only allowed us to hold ourselves to the same standards we are asking of others, but also is in line with Harvard University's climate commitments. Our annual Climate Report will go into greater detail on the variety of efforts associated with our sustainable investing initiatives and progress toward the net zero pledge.

I am proud of our team's ability to adapt to this new structure and to proactively engage with new challenges. And we have done so while always keeping Harvard's mission front of mind, ensuring that the University has the financial resources to achieve academic excellence, expand opportunities for students and faculty, and foster diverse educational experiences. I am excited to see what we will accomplish together in the years ahead.

Best Regards,

N.P. "Narv" Narvekar
CHIEF EXECUTIVE OFFICER

September 2023

Report of Independent Auditors

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

Opinion

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, 2023, and the related consolidated statements of changes in net assets with general operating account detail and of changes in net assets of the endowment for the year ended June 30, 2023 and of cash flows for the years ended June 30, 2023 and 2022, including the related notes (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of the University as of June 30, 2023, the changes in its net assets for the year ended June 30, 2023 and its cash flows for the years ended June 30, 2023 and 2022 in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are required to be independent of the University and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Other Matter

We previously audited the consolidated balance sheet as of June 30, 2022, and the related consolidated statements of changes in net assets with general operating account detail, of changes in net assets of the endowment and of cash flows for the year then ended (the balance sheet and the statements of changes in net assets with general operating account detail and of changes in net assets of the endowment are not presented herein), and in our report dated October 18, 2023, 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, 2022 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

Responsibilities of Management 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, and for 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.

In preparing the consolidated financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern for one year after the date the consolidated financial statements are issued.

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Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the University audit 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, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the Harvard University Financial Report Fiscal Year 2023, but does not include the consolidated financial statements and our auditors' report thereon. Our opinion on the consolidated financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the consolidated financial statements or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

PricewaterhouseCoopers LLP

Boston, Massachusetts
October 18, 2023

CONSOLIDATED BALANCE SHEETS

with summarized financial information as of June 30, 2022

In thousands of dollars	June 30 2023	June 30 2022
ASSETS:		
Cash and cash equivalents	**$ 245,589**	$ 283,227
Receivables, net *(Note 4)*	**349,271**	339,792
Prepayments and deferred charges	**362,676**	317,448
Operating leases — right of use assets *(Note 18)*	**715,444**	677,147
Notes receivable, net *(Note 5)*	**400,401**	380,812
Pledges receivable, net *(Note 6)*	**2,699,634**	2,592,434
Fixed assets, net *(Note 7)*	**8,595,983**	8,442,840
Interests in trusts held by others *(Note 3)*	**438,892**	432,896
Securities pledged to counterparties, at fair value *(Note 3)*	**122,758**	179,514
Investment portfolio, at fair value *(Note 3)*	**59,078,919**	59,135,219
TOTAL ASSETS	**$ 73,009,567**	**$ 72,781,329**
LIABILITIES:		
Accounts payable	**$ 416,881**	$ 486,707
Deferred revenue and other liabilities	**1,747,823**	1,708,821
Operating lease liabilities *(Note 18)*	**754,195**	689,342
Other liabilities associated with the investment portfolio *(Notes 3 and 10)*	**629,995**	718,031
Liabilities due under split interest agreements *(Note 9)*	**886,222**	886,017
Bonds and notes payable *(Note 10)*	**6,214,734**	6,117,203
Accrued retirement obligations *(Note 11)*	**840,198**	928,514
TOTAL LIABILITIES	**11,490,048**	**11,534,635**
NET ASSETS	**61,519,519**	**61,246,694**
TOTAL LIABILITIES AND NET ASSETS	**$ 73,009,567**	**$ 72,781,329**

	Without donor restrictions	With donor restrictions	June 30 2023	June 30 2022
NET ASSETS:				
General Operating Account (GOA) *(Note 8)*	$ 6,640,552	$ 3,496,156	$ 10,136,708	$ 9,668,474
Endowment *(Note 8)*	9,229,293	41,519,301	50,748,594	50,877,680
Split interest agreements *(Note 9)*		634,217	634,217	700,540
TOTAL NET ASSETS	**$ 15,869,845**	**$ 45,649,674**	**$ 61,519,519**	**$ 61,246,694**

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

CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS WITH GENERAL OPERATING ACCOUNT DETAIL

with summarized financial information for the year ended June 30, 2022

In thousands of dollars	Without Donor Restrictions	With Donor Restrictions	For the year ended June 30 2023	2022
OPERATING REVENUE:				
Net student income *(Notes 2 and 12)*	$ 1,331,557		**$ 1,331,557**	$ 1,223,363
Sponsored support *(Note 13)*				
Federal government – direct costs	491,878		**491,878**	460,707
Federal government – indirect costs	184,257		**184,257**	181,439
Non-federal sponsors – direct costs	93,069	$ 204,777	**297,846**	288,302
Non-federal sponsors – indirect costs	27,014	24,667	**51,681**	45,309
Total sponsored support	796,218	229,444	**1,025,662**	**975,757**
Gifts for current use *(Note 14)*	149,759	336,123	**485,882**	504,736
Investment income:				
Endowment returns made available for operations *(Note 8)*	420,219	1,824,480	**2,244,699**	2,118,855
GOA returns made available for operations	173,279		**173,279**	153,110
Other investment income	38,734	4,571	**43,305**	21,647
Total investment income	632,232	1,829,051	**2,461,283**	**2,293,612**
Other revenue *(Note 15)*	792,916		**792,916**	838,323
Net assets released from restriction	2,305,695	(2,305,695)	**0**	0
TOTAL OPERATING REVENUE	**6,008,377**	**88,923**	**6,097,300**	**5,835,791**
OPERATING EXPENSES:				
Salaries and wages	2,421,076		**2,421,076**	2,206,342
Employee benefits *(Note 11)*	628,304		**628,304**	583,931
Services purchased	791,941		**791,941**	732,709
Depreciation *(Note 7)*	424,809		**424,809**	428,860
Space and occupancy	394,079		**394,079**	353,786
Supplies and equipment	283,323		**283,323**	271,084
Interest *(Note 10)*	208,590		**208,590**	187,534
Scholarships and other student awards *(Note 12)*	181,295		**181,295**	171,312
Other expenses *(Note 16)*	578,380		**578,380**	494,575
TOTAL OPERATING EXPENSES	**5,911,797**	**0**	**5,911,797**	**5,430,133**
NET OPERATING SURPLUS	**96,580**	**88,923**	**185,503**	**405,658**
NON-OPERATING ACTIVITIES:				
Income from GOA Investments	24,769		**24,769**	15,206
GOA realized and change in unrealized appreciation/(depreciation), net *(Note 3)*	146,519		**146,519**	(259,353)
GOA returns made available for operations	(173,279)		**(173,279)**	(153,110)
Change in pledge balances *(Note 6)*		286,022	**286,022**	88,930
Change in interests in trusts held by others		(2,125)	**(2,125)**	(5,803)
Gifts for facilities and loan funds *(Note 14)*		96,175	**96,175**	87,874
Change in retirement obligations *(Note 11)*	70,158		**70,158**	142,745
Other changes	7,743		**7,743**	(11,067)
Transfers between GOA and endowment *(Note 8)*	(194,430)	(7,219)	**(201,649)**	(103,810)
Transfers between GOA and split interest agreements *(Note 9)*		28,398	**28,398**	25,213
Non-operating net assets released from restrictions	142,634	(142,634)	**0**	0
TOTAL NON-OPERATING ACTIVITIES	**24,114**	**258,617**	**282,731**	**(173,175)**
GENERAL OPERATING ACCOUNT NET CHANGE DURING THE YEAR	**120,694**	**347,540**	**468,234**	**232,483**
Endowment net change during the year	171,324	(300,410)	**(129,086)**	(2,288,073)
Split interest agreements net change during the year *(Note 9)*		(66,323)	**(66,323)**	(72,790)
NET CHANGE DURING THE YEAR	**292,018**	**(19,193)**	**272,825**	**(2,128,380)**
Net assets, beginning of year	15,577,827	45,668,867	**61,246,694**	**63,375,074**
NET ASSETS, END OF YEAR	**$ 15,869,845**	**$ 45,649,674**	**$ 61,519,519**	**$ 61,246,694**

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

CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS OF THE ENDOWMENT

with summarized financial information for the year ended June 30, 2022

In thousands of dollars	Without Donor Restrictions	With Donor Restrictions	For the year ended June 30 2023	For the year ended June 30 2022
Investment return *(Note 3)*:				
Income from general investments	$ 34,240	$ 149,482	**$ 183,722**	$ 132,924
Realized and change in unrealized appreciation/(depreciation), net	214,972	938,954	**1,153,926**	(1,074,881)
Total investment return	249,212	1,088,436	**1,337,648**	**(941,957)**
Endowment returns made available for operations	(420,219)	(1,824,480)	**(2,244,699)**	(2,118,855)
Net investment return	(171,007)	(736,044)	**(907,051)**	**(3,060,812)**
Gifts for endowment *(Note 14)*	102,839	457,768	**560,607**	583,650
Transfers between endowment and the GOA *(Note 8)*	194,430	7,219	**201,649**	103,810
Capitalization of split interest agreements *(Note 9)*		50,747	**50,747**	18,603
Change in pledge balances *(Note 6)*		(179,700)	**(179,700)**	168,095
Change in interests in trusts held by others *(Note 8)*		8,121	**8,121**	(77,058)
Other changes	(5,173)	141,714	**136,541**	(24,361)
Net assets released from restrictions	50,235	(50,235)	**0**	0
NET CHANGE DURING THE YEAR	**171,324**	**(300,410)**	**(129,086)**	**(2,288,073)**
Net assets of the endowment, beginning of year	9,057,969	41,819,711	**50,877,680**	53,165,753
NET ASSETS OF THE ENDOWMENT, END OF YEAR	**$ 9,229,293**	**$ 41,519,301**	**$ 50,748,594**	**$ 50,877,680**

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

CONSOLIDATED STATEMENTS OF CASH FLOWS

In thousands of dollars	For the year ended June 30 2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES:		
Change in net assets	**$ 272,825**	$ (2,128,380)
Adjustments to reconcile change in net assets to net cash (used in) operating activities:		
Depreciation	**424,809**	428,860
Amortization of premium and discount related to bonds and notes payable	**(37,179)**	(35,865)
Realized and change in unrealized (appreciation)/depreciation, net	**(1,336,740)**	1,511,867
Change in fair value of interest rate exchange agreements	**(4,985)**	(22,704)
Change in interests in trusts held by others	**(5,996)**	82,861
Change in liabilities due under split interest agreements	**42,175**	(101,062)
Gifts of donated securities	**(64,469)**	(81,017)
Proceeds from the sales of gifts of unrestricted securities	**16,437**	15,069
Gifts for restricted purposes	**(504,714)**	(556,994)
Cost of issuance of debt	**409**	343
Loss on disposal of assets	**8,923**	23,439
Change in accrued retirement obligations	**(88,316)**	(150,133)
Non-cash operating lease costs	**(38,297)**	12,815
Changes in operating assets and liabilities:		
Receivables, net	**(9,479)**	(17,310)
Prepayments and deferred charges	**(45,228)**	(2,276)
Pledges receivable, net	**(107,200)**	(256,476)
Accounts payable	**(82,631)**	(6,807)
Deferred revenue and other liabilities	**43,770**	(36,662)
Operating lease liability	**64,853**	(13,530)
NET CASH (USED IN) OPERATING ACTIVITIES	**(1,451,033)**	**(1,333,962)**
CASH FLOWS FROM INVESTING ACTIVITIES:		
Loans made to students, faculty, and staff	**(62,985)**	(64,584)
Payments received on student, faculty, and staff loans	**42,902**	48,654
Change in other notes receivable	**494**	12,714
Proceeds from the sales and maturities of investments	**8,689,761**	15,503,537
Purchase of investments	**(7,988,945)**	(14,028,307)
Change associated with repurchase agreements	**599,085**	(699,810)
Additions to fixed assets	**(578,365)**	(426,773)
NET CASH PROVIDED BY INVESTING ACTIVITIES	**701,947**	**345,431**
CASH FLOWS FROM FINANCING ACTIVITIES:		
Change in overdrafts included in accounts payable	**4,295**	(740)
Change in split interest agreements from new contributions, income and payments to annuitants	**(41,970)**	(32,278)
Proceeds from issuance of debt	**177,296**	746,530
Debt repayments	**(42,995)**	(97,004)
Proceeds from the sales of gifts of restricted securities	**48,032**	65,948
Gifts for restricted purposes	**504,714**	556,994
Change in government loan advances	**(4,768)**	(6,350)
NET CASH PROVIDED BY FINANCING ACTIVITIES	**644,604**	**1,233,100**
NET CHANGE IN CASH	**(104,482)**	**244,569**
Cash, beginning of year	**1,808,872**	**1,564,303**
CASH, END OF YEAR	**$ 1,704,390**	**$ 1,808,872**
Cash and cash equivalents (per *Consolidated Balance Sheets)*	**$ 245,589**	**$ 283,227**
Cash and cash equivalents held in investments *(Note 3)*	**1,458,801**	**1,525,645**
TOTAL CASH AND CASH EQUIVALENTS	**$ 1,704,390**	**$ 1,808,872**
Supplemental disclosure of cash flow information:		
Accounts payable related to fixed asset additions	$ 54,092	$ 45,583
Cash paid for interest	$ 235,881	$ 222,932
New operating leases – right of use assets	$ 150,680	$ 66,537

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 7,200 undergraduate and 14,200 graduate students in fiscal year 2023, as compared to 7,100 undergraduate and 14,100 graduate students in fiscal year 2022. 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 *Consolidated Balance Sheets* and are not included in the *Consolidated Statements of Changes in Net Assets with General Operating Account Detail*.

The consolidated 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, 2022, 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 consolidated 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 82% of the University's net assets without donor-imposed restrictions as of June 30, 2023. 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 *Consolidated 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, 2023	June 30, 2022
FINANCIAL ASSETS		
Cash and cash equivalents	$ 245,589	$ 283,227
Receivables, net	349,271	339,792
Pledge receivables due in one year	459,286	376,097
Cash and short-term investments held separately by General Operating Account (GOA)[1]	1,418,472	2,236,157
Endowment returns made available for operations in the following year	2,649,533	2,460,142
TOTAL FINANCIAL ASSETS AVAILABLE WITHIN ONE YEAR	**$ 5,122,151**	**$ 5,695,415**
LIQUIDITY RESOURCES		
Credit facility, undrawn balance	1,500,000	1,500,000
Tax-exempt commercial paper, undrawn balance	975,000	1,000,000
Taxable commercial paper, undrawn balance	1,847,704	2,000,000
TOTAL FINANCIAL ASSETS AND LIQUIDITY RESOURCES AVAILABLE WITHIN ONE YEAR	**$ 9,444,855**	**$ 10,195,415**

[1] *The University has a policy of maintaining liquidity outside of the General Investment Accounting (GIA) through a combination of cash equivalents and short-term investments, as referenced on page 7 in the Financial Overview.*

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 was $9.2 billion and $9.1 billion in endowment funds without donor restrictions at June 30, 2023 and 2022, respectively, and $5.6 billion and $4.7 billion of General Operating Account investments (GOA) at June 30, 2023 and 2022, respectively, 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 is recorded as deferred revenue which totaled $208.3 million and $209.1 million at June 30, 2023 and 2022, respectively, which are primarily recognized in the subsequent fiscal year.

Total student income of $1.3 billion and $1.2 billion was recorded during the years ended June 30, 2023 and 2022, respectively. Student tuition, fees, board and lodging at published rates is summarized as follows for the years ended June 30, 2023 and 2022 (in thousands of dollars):

	2023	2022
Undergraduate program	**$ 409,890**	$ 390,809
Graduate and professional degree programs	**687,136**	652,005
Continuing education and executive programs	**544,039**	486,682
Board and lodging	**221,235**	199,771

Scholarships applied to student charges were $530,743 and $505,904 for the years ended June 20, 2023 and 2022, 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 $1.0 billion 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 $84.7 million and $64.3 million as of June 30, 2023 and 2022, respectively. As of June 30, 2023, the University also had $1.6 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 $792.9 million in fiscal 2023 and $838.3 million in fiscal 2022 includes several revenue streams considered exchange contracts with customers totaling $651.5 million for fiscal year 2023 and $726.9 million in fiscal year 2022. These revenues are recognized at the point in time goods or services are provided. Deferred revenues related to other revenue of $96.5 million and $104.7 million were recorded as of June 30, 2023 and 2022, 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 *Consolidated Statements of Changes in Net Assets with General Operating Account Detail*. The University's non-operating activity within the *Consolidated Statements 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. Proceeds on deaccessioned collections are used to fund new collections or the direct care of existing collections. Direct care is defined as general care for the preservation of a collection.

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 provides malpractice coverage 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 retention. In addition, the University maintains an insured dental plan, and 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 records an estimate for related tax expense based on currently available regulatory guidance of the Act and 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

Effective July 1, 2022, the University adopted ASU 2021-05, *Leases (Topic 842): Lessors—Certain Leases with Variable Lease Payments,* which amends the lease classification requirements for lessors with certain leases containing variable payments. A lessor is to classify and account for a lease with variable lease payments that do not depend on an index or a rate as an operating lease if the lease would have been classified as a sales-type lease or a direct financing lease and the lessor would have otherwise recognized a day-one loss. The University adopted ASU 2021-05 prospectively. This guidance did not have a significant impact on the University's consolidated financial statements.

Effective July 1, 2021, the University adopted ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract*. This guidance aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software or software licenses. The University adopted ASU 2018-15 prospectively. This guidance did not have a significant impact on the University's consolidated financial statements.

Effective July 1, 2021, the University adopted ASU 2020-07, *Presentation and Disclosures by Not-for-Profit Entities for Contributed Nonfinancial Assets*. This guidance is intended to increase transparency on how contributed nonfinancial assets are to be used and valued. The University adopted ASU 2020-07 prospectively. This guidance did not have a significant impact on the University's consolidated financial statements.

Effective July 1, 2021, the University adopted ASU 2018-14, *Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans,* which amends ASC 715, Compensation—Retirement Benefits. This accounting pronouncement modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. The University adopted ASU 2018-14 on a retrospective basis. The effects of adopting this amendment are addressed in *Note 11*.

In September 2022, the FASB issued ASU 2022-04, *Disclosure of Supplier Finance Program Obligations*. Under ASU 2022-04, the buyer in a supplier finance program is required to disclose information about the key terms of the program, outstanding confirmed amounts as of the end of the period, a rollforward of such amounts during each annual period, and a description of where in the financial statements outstanding amounts are presented. With the exception of the disclosure of rollforward information, the ASU is effective for fiscal year 2024 for the University. The rollforward requirement is effective for fiscal year 2025 for the University. The University is currently evaluating the impact of the new guidance on the consolidated financial statements, but does not believe the adoption will impact the consolidated financial statements going forward.

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting,* and in January 2021 issued ASU 2021-01, *Reference Rate Reform (Topic 848): Scope*. These ASUs provide temporary optional expedients and exceptions to existing guidance on contract modifications and hedge accounting to facilitate the market transition from existing reference rates, such as London Interbank Offered Rate ("LIBOR") which has been phased out, to alternate reference rates, such as Secured Overnight Financing Rate ("SOFR"). These standards are effective upon issuance through December 31, 2022. The adoption of this standard has not had a material impact on the University's consolidated financial statements and disclosures. In December 2022, the FASB issued ASU 2022-06, *Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848,* which defers the sunset date of reference rate reform relief to December 31, 2024.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. ASU 2016-13 replaced the incurred loss methodology with an expected loss methodology that is referred to as the current expected credit loss ("CECL") methodology. CECL requires an estimate of credit losses for the remaining estimated life of the financial asset using historical experience, current conditions, and reasonable and supportable forecasts and generally applies to financial assets measured at amortized cost, including loan receivables and held-to-maturity debt securities, and some off-balance sheet credit exposures such as unfunded commitments to extend credit. Financial assets measured at amortized cost must be presented at the net amount expected to be collected by using an allowance for credit losses. This guidance is effective for fiscal year 2024 for the University. The University is currently 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 of June 30, 2023 and 2022 are summarized in the following table (in thousands of dollars):

	2023	2022
Investment portfolio assets		
Pooled general investment account assets	**$ 56,633,201**	$ 55,938,831
Other investments	**2,445,718**	3,196,388
Investment portfolio, at fair value	**59,078,919**	**59,135,219**
Securities pledged to counterparties, at fair value	**122,758**	179,514
TOTAL INVESTMENT ASSETS	**59,201,677**	**59,314,733**
Pooled general investment account liabilities	**626,371**	709,422
Interest rate exchange agreement	**3,624**	8,609
TOTAL OTHER LIABILITIES ASSOCIATED WITH THE INVESTMENT PORTFOLIO	**629,995**	**718,031**
TOTAL INVESTMENTS, NET	**$ 58,571,682**	**$ 58,596,702**

As of June 30, 2023 and 2022, University net investments were comprised of the following components (in thousands of dollars):

	2023	2022
POOLED GENERAL INVESTMENT ACCOUNT		
Endowment[1]	**$ 48,679,919**	$ 48,798,038
General operating account	**5,577,019**	4,658,269
Split interest agreements	**863,185**	934,971
Other internally designated funds	**1,009,465**	1,017,645
TOTAL POOLED GENERAL INVESTMENT ACCOUNT NET ASSETS	**$ 56,129,588**	**$ 55,408,923**
OTHER INVESTMENTS OUTSIDE THE GENERAL INVESTMENT ACCOUNT		
General operating and other investments[2]	**1,784,840**	2,536,192
Split interest agreements	**657,254**	651,587
TOTAL OTHER INVESTMENTS OUTSIDE THE GENERAL INVESTMENT ACCOUNT	**$ 2,442,094**	**$ 3,187,779**
TOTAL INVESTMENTS, NET	**$ 58,571,682**	**$ 58,596,702**

1 *As of June 30, 2023, the total net assets of the endowment of $50,748,594 is comprised of investments in the GIA of $48,679,919, pledges of $1,253,486, interests in trusts held by others of $411,747, and $403,442 of other non-GIA investments and GIA interest and dividends net of all internal and external management fees and expenses. See* Note 8 *for further composition of the net assets of the endowment.*

2 *Consists primarily of repurchase agreements, US government securities, money markets, and fixed income funds totaling $1,427,153 and $2,238,277 as of June 30, 2023 and 2022, respectively.*

Investment return

A summary of the University's total return on investments for fiscal years 2023 and 2022 is presented below (in thousands of dollars):

	2023	2022
Return on pooled general investment account:		
Realized and change in unrealized appreciation/(depreciation), net	**$ 1,320,925**	$ (1,223,200)
Interest, dividend, fees, and expenses, net	**211,887**	150,734
Total return on pooled general investment account[1]	**1,532,812**	**(1,072,466)**
Return on other investments:		
Realized and change in unrealized appreciation/(depreciation), net	**15,815**	(288,667)
Interest, dividend, fees, and expenses, net	**59,722**	36,225
Total return on other investments	**$ 75,537**	**$ (252,442)**
Realized and change in unrealized appreciation on interest rate exchange agreement, net	**3,929**	19,169
TOTAL RETURN ON INVESTMENTS[2]	**$ 1,612,278**	**$ (1,305,739)**

[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, 2023 and summarized as of June 30, 2022 (in thousands of dollars):

	2023					2022
	Level 1	Level 2	Level 3[6]	NAV as Practical Expedient	Total	Total
ASSETS:						
Cash and cash equivalents[1]	$ 1,458,801				**$ 1,458,801**	**$ 1,525,645**
Repurchase agreements		$ 150,789			**150,789**	**749,873**
Domestic equity	1,532,888			$ 1,856,474	**3,389,362**	**3,085,276**
Foreign equity	290,381			786,461	**1,076,842**	**2,071,270**
Global equity				1,211,417	**1,211,417**	**1,262,693**
Domestic fixed income	1,984,636	10,065		1,057,153	**3,051,854**	**2,787,349**
Foreign fixed income	15,839				**15,839**	**17,479**
Emerging market equity and debt	29,932			3,093,108	**3,123,040**	**3,352,726**
High yield	13,863		$ 290,011		**303,874**	**301,106**
Hedge funds				17,267,674	**17,267,674**	**16,774,488**
Private equity			1,157,032	21,966,842	**23,123,874**	**21,940,923**
Natural resources	979			428,260	**429,239**	**431,129**
Real estate			7,170	2,996,167	**3,003,337**	**3,277,320**
Inflation-indexed bonds	1,077,269				**1,077,269**	**1,097,023**
Due from brokers		89,209	4,645		**93,854**	**22,186**
Other investments		82,826			**82,826**	**65,208**
INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 6,404,588**	**$ 332,889**	**$ 1,458,858**	**$ 50,663,556**	**$ 58,859,891**	**$ 58,761,694**
Other investment assets not subject to fair value[2]					**341,786**	**553,039**
TOTAL INVESTMENT ASSETS[3]					**$ 59,201,677**	**$ 59,314,733**
Interests in trusts held by others[4]			438,892		**438,892**	**432,896**
NON-INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING			**$ 438,892**		**$ 438,892**	**$ 432,896**
TOTAL ASSETS					**$ 59,640,569**	**$ 59,747,629**
LIABILITIES:						
Due to brokers[5]	$ 4,142	$ 14,073			**$ 18,215**	**$ 77,081**
Other liabilities subject to fair value			$ 138,733		**138,733**	**154,949**
INVESTMENT LIABILITIES SUBJECT TO FAIR VALUE LEVELING	**$ 4,142**	**$ 14,073**	**$ 138,733**		**$ 156,948**	**$ 232,030**
Other investment liabilities not subject to fair value					**473,047**	**486,001**
TOTAL INVESTMENT LIABILITIES[3]					**$ 629,995**	**$ 718,031**
Liabilities due under split interest agreements[4]		$ 886,222			**886,222**	**886,017**
NON-INVESTMENT LIABILITIES SUBJECT TO FAIR VALUE LEVELING		**$ 886,222**			**$ 886,222**	**$ 886,017**
TOTAL LIABILITIES					**$ 1,516,217**	**$ 1,604,048**

1 *This excludes money markets held in "Cash and cash equivalents" on the* Consolidated Balance Sheets *of $55.0 million and $65.0 million as of June 30, 2023 and 2022, respectively, which are Level 1 investments.*
2 *As of June 30, 2023 and 2022 other assets not subject to fair value consists primarily of receivables for transactions that settled subsequent to the balance sheet date of $239,815 and $480,949, respectively.*
3 *As of June 30, 2023 and 2022, total investment assets, net equal $58,571,682 and $58,596,702, respectively.*
4 *Amounts excluded from investments and included separately on the University's* Consolidated Balance Sheets.
5 *Includes fair value of an interest rate exchange agreement on the University's debt portfolio of $3,624 and $8,609 as of June 30, 2023 and 2022, respectively.*
6 *As of June 30, 2023 $549,555 of Level 3 assets were valued using significant unobservable inputs.*

The following is a rollforward of Level 3 investments for the year ended June 30, 2023 and the condensed June 30, 2022 rollforward of Level 3 investments (in thousands of dollars).

	Beginning balance as of July 1, 2022	Net realized gains/ (losses)	Net change in unrealized (depreciation)/ appreciation[1]	Purchases/ contributions	Sales/ distributions	Transfers out of Level 3[2]	Ending balance as of June 30, 2023
INVESTMENT ASSETS:							
High yield	$ 298,319	$ 1,428	$ (9,346)	$ 423,970	$ (424,360)		**$ 290,011**
Private equity	1,174,625	51,473	(58,833)	94,293	(104,426)	$ (100)	**1,157,032**
Real estate	25,074	(28,822)	11,622		(704)		**7,170**
Due from brokers	4,640		5				**4,645**
INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 1,502,658**	**$ 24,079**	**$ (56,552)**	**$ 518,263**	**$ (529,490)**	**$ (100)**	**$ 1,458,858**
Interests in trusts held by others	$ 432,896		8,008		(2,012)		**$ 438,892**
NON-INVESTMENT ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 432,896**		**$ 8,008**		**$ (2,012)**		**$ 438,892**
TOTAL ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 1,935,554**	**$ 24,079**	**$ (48,544)**	**$ 518,263**	**$ (531,502)**	**$ (100)**	**$ 1,897,750**
INVESTMENT LIABILITIES:							
Other liabilities subject to fair value	$ 154,949		$ 364	$ (98,916)	$ 82,336		**$ 138,733**
TOTAL LIABILITIES SUBJECT TO FAIR VALUE LEVELING	**$ 154,949**	**$ 0**	**$ 364**	**$ (98,916)**	**$ 82,336**		**$ 138,733**
NET ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 1,780,605**	**$ 24,079**	**$ (48,908)**	**$ 617,179**	**$ (613,838)**	**$ (100)**	**$ 1,759,017**

[1] *Total change in unrealized (depreciation)/appreciation relating to Level 3 investment assets and investment liabilities still held by the University at June 30, 2023 is $35,939 and is reflected in "Realized and change in unrealized (depreciation)/appreciation, net" in the* Consolidated Statements of Changes in Net Assets.
[2] *The transfers out of Level 3 represent interests in private companies that underwent an initial public offering during the fiscal year.*

	Beginning balance as of July 1, 2021	Net realized gains/ (losses)	Net change in unrealized (depreciation)/ appreciation[1]	Purchases/ contributions	Sales/ distributions	Transfers out of Level 3[2]	Ending balance as of June 30, 2022
PRIOR YEAR NET ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 2,560,200**	**$ 18,622**	**$ (1,086)**	**$ 631,136**	**$ (1,284,805)**	**$ (143,462)**	**$ 1,780,605**

[1] *Total change in unrealized (depreciation)/appreciation relating to Level 3 investment assets and investment liabilities still held by the University at June 30, 2022 is $95,568 and is reflected in "Realized and change in unrealized (depreciation)/appreciation, net" in the* Consolidated Statements of Changes in Net Assets.
[2] *The transfers out of Level 3 represent interests in private companies that underwent an initial public offering during the fiscal year.*

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. 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, 2023, 15% 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.

Cash and cash equivalents

Cash and cash equivalents 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 cash equivalents do not include cash balances held as collateral by the University. Cash and cash equivalents designated for investment purposes are included in the "Investment portfolio, at fair value" in the *Consolidated Balance Sheets*.

Repurchase agreements

The University *Consolidated 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, 2023 and 2022 the University had gross asset repurchase agreements of $0.2 billion and $0.8 billion 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 *Consolidated 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 investments in derivatives, the University 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, 2023 and 2022 (in thousands of dollars):

	As of June 30, 2023			For the year ended June 30, 2023	As of June 30, 2022			For the year ended June 30, 2022
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	$ 2,328,894	$ 115,648	$ 41,180	$ 131,794	$ 5,009,087	$ 79,784	$ 130,849	$ 484,118
Fixed income instruments[1]	117,000		3,624	3,929	117,000		8,609	19,169
Currency instruments	18,875	1,121	1,123	(1,792)	6,867	1,628	1,626	2,290
Credit instruments	4,800	4,797		132	4,752	4,777		(24)
SUBTOTAL		**$ 121,566**	**$ 45,927**	**$ 134,063**		**$ 86,189**	**$ 141,084**	**$ 505,553**
TOTAL COUNTERPARTY NETTING[2]		**(27,712)**	**(27,712)**			**(68,643)**	**(68,643)**	
NET AMOUNTS INCLUDED IN THE *CONSOLIDATED BALANCE SHEETS*[3]		**93,854**	**18,215**			**17,546**	**72,441**	
Collateral								
Cash collateral received/posted		120				115		
Securities collateral received/ posted[5]		89,351	98,305			9,606	156,121	
TOTAL SECURITIES COLLATERAL RECEIVED/POSTED		**89,471**	**98,305**			**9,721**	**156,121**	
NET AMOUNT		**4,383**	**(80,090)**			**7,825**	**(83,680)**	
NET AMOUNT IN ACCORDANCE WITH ASC 210[6]		**$ 4,383**	**$ 0**			**$ 7,825**	**$ 0**	

1 *For the year ended June 30, 2023 and 2022 the balance represents an interest rate exchange swap on the University's debt portfolio.*
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* Consolidated Balance Sheets.
4 *Included within "Realized and change in unrealized (depreciation)/appreciation, net" within the* Consolidated 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 University generally utilizes the capital account balance provided by the external advisor as a practical expedient to fair value. 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. In addition, 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, 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, 2023 and 2022 are disclosed below (in thousands of dollars):

	As of June 30, 2023			As of June 30, 2022		
	Fair value[1]	Remaining unfunded commitments	Estimated remaining life[2]	Fair value[1]	Remaining unfunded commitments	Estimated remaining life[2]
Private equity funds	$ 18,505,877	$ 8,958,071	4 – 10	$ 17,394,411	$ 8,858,770	4 – 10
Real estate funds	2,790,305	2,048,930	4 – 10	3,052,042	2,068,329	4 – 10
Other externally managed funds[3]	3,517,860	2,317,366	2 – 8	3,259,851	2,902,708	2 – 8
TOTAL	**$ 24,814,042**	**$ 13,324,367**		**$ 23,706,304**	**$ 13,829,807**	

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 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.

4. RECEIVABLES

The major components of receivables, net of reserves for doubtful accounts of $16.4 million and $16.5 million as of June 30, 2023 and 2022, respectively, were as follows (in thousands of dollars):

	2023	2022
Federal Sponsored Support	**$ 74,844**	$ 67,130
Publications	**69,487**	61,545
Continuing Education and Executive Programs	**57,330**	63,629
Leases	**32,820**	32,525
Tuition and Fees	**22,579**	19,584
Non-federal Sponsored Support	**17,791**	13,159
Gift Receipts	**7,067**	17,344
Other	**67,353**	64,876
TOTAL RECEIVABLES, NET	**$ 349,271**	**$ 339,792**

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):

	2023			2022		
	Receivable	Allowance	Net	Receivable	Allowance	Net
Student loans:						
Government revolving	$ 22,240	$ 519	**$ 21,721**	$ 26,754	$ 643	**$ 26,111**
Institutional	73,473	1,631	**71,842**	72,489	1,644	**70,845**
Total student loans	95,713	2,150	**93,563**	99,243	2,287	**96,956**
Faculty and staff loans	300,710	179	**300,531**	277,234	179	**277,055**
Other loans	42,527	36,220	**6,307**	49,448	42,647	**6,801**
TOTAL	**$ 438,950**	**$ 38,549**	**$ 400,401**	**$ 425,925**	**$ 45,113**	**$ 380,812**

Government revolving loans are funded principally with federal advances to the University under the Perkins Loan, the Health Professions Student Loan (HPSL) and Loans for Disadvantaged Students in Health Professions (LDS) Programs. These advances totaled $24.7 million and $29.5 million as of June 30, 2023 and 2022, respectively, and are included in "Deferred revenue and other liabilities" in the *Consolidated Balance Sheets*. During fiscal year 2018, the Perkins Loan Program ended and as a result the University began making required repayments to the government. In fiscal year 2023, the University made the requested $4.6 million repayment. 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, 2023 and 2022 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 15-year taxable unsecured borrowing rate is used to discount pledges receivable at the end of the fiscal year they are received. Discounts of $351.2 million and $246.6 million for the years ended June 30, 2023 and 2022, respectively, were calculated using rates ranging from 0.7% to 5.0%.

Pledges receivable included in the financial statements as of June 30, 2023 and 2022 are expected to be realized as follows (in thousands of dollars):

	2023	2022
Within one year	**$ 866,208**	$ 816,775
Between one and five years	**1,711,457**	1,637,886
More than five years	**603,713**	541,641
Less: discount and allowance for uncollectible pledges	**(481,744)**	(403,868)
TOTAL PLEDGES RECEIVABLE, NET	**$ 2,699,634**	**$ 2,592,434**

Pledges receivable as of June 30, 2023 and 2022 have been designated for the following purposes (in thousands of dollars):

	2023	2022
General Operating Account balances:		
Gifts for current use	**$ 952,604**	$ 665,632
Non-federal sponsored awards	**199,014**	186,725
Construction and life income	**294,530**	306,891
Total General Operating Account balances	**1,446,148**	**1,159,248**
Endowment	**1,253,486**	1,433,186
TOTAL PLEDGES RECEIVABLE, NET	**$ 2,699,634**	**$ 2,592,434**

Because of uncertainties with regard to realizability and valuation, bequest intentions and other conditional promises are only recognized as assets if and when the specified conditions are met. Non-bequest conditional pledges totaled $122.4 million and $110.0 million as of June 30, 2023 and 2022, 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, 2023 and 2022 are summarized as follows (in thousands of dollars):

	2023	2022	Estimated useful life (in years)
Research facilities	**$ 3,446,121**	$ 3,418,161	*
Classroom and office facilities	**2,596,184**	2,543,625	35
Housing facilities	**2,638,555**	2,525,545	35
Other facilities	**435,738**	425,737	35
Service facilities	**1,148,704**	1,114,162	35
Libraries	**549,503**	541,080	35
Museums and assembly facilities	**1,001,370**	990,568	35
Athletic facilities	**280,432**	263,825	35
Land	**1,024,986**	1,024,986	N/A
Construction in progress	**554,978**	357,434	N/A
Equipment	**1,488,311**	1,468,066	**
SUBTOTAL AT COST	**15,164,882**	**14,673,189**	
Less: accumulated depreciation	**(6,568,899)**	(6,230,349)	
FIXED ASSETS, NET	**$ 8,595,983**	**$ 8,442,840**	

** Estimated useful lives of components range from 10 to 45 years.*
*** Estimated useful lives of equipment range from 4 to 10 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 $276.6 million and $267.4 million as of June 30, 2023 and 2022, 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 related to future estimated environmental remediation costs of $186.2 million and $189.2 million, which are included in "Deferred revenue and other liabilities" in the *Consolidated Balance Sheets* as of June 30, 2023 and 2022, respectively.

Right-of-use assets from finance leases of $45.5 million and $52.3 million are included in "Fixed assets, net" in the *Consolidated Balance Sheets* as of June 30, 2023 and 2022, respectively. Lease liabilities from finance leases of $79.2 million and $88.2 million are included in "Deferred revenue and other liabilities" in the *Consolidated Balance Sheets* as of June 30, 2023 and 2022, respectively.

8. ENDOWMENT AND GENERAL OPERATING ACCOUNT NET ASSETS

The University's net assets consisted of the following as of June 30, 2023 and 2022 (in thousands of dollars):

	2023			2022		
	Without donor restrictions	With donor restrictions	Total	Without donor restrictions	With donor restrictions	Total
NATURE OF SPECIFIC NET ASSETS						
Perpetual endowment funds		$ 9,652,906	**$ 9,652,906**		$ 9,057,578	**$ 9,057,578**
Endowment funds and appreciation subject to distribution policy and appropriation		30,201,162	**30,201,162**		30,925,321	**30,925,321**
Endowment funds without restriction, board designated and subject to distribution policy	$ 9,229,293		**9,229,293**	$ 9,057,969		**9,057,969**
Pledge balances		1,253,486	**1,253,486**		1,433,186	**1,433,186**
Interests in trusts held by others		411,747	**411,747**		403,626	**403,626**
TOTAL ENDOWMENT	**9,229,293**	**41,519,301**	**50,748,594**	**9,057,969**	**41,819,711**	**50,877,680**
Operating	6,640,552		**6,640,552**	6,519,858		**6,519,858**
Unexpended contributions and endowment distributions		3,395,978	**3,395,978**		3,048,468	**3,048,468**
Student loan funds		100,178	**100,178**		100,148	**100,148**
TOTAL GENERAL OPERATING ACCOUNT	**6,640,552**	**3,496,156**	**10,136,708**	**6,519,858**	**3,148,616**	**9,668,474**
Split interest agreements *(Note 9)*		**634,217**	**634,217**		**700,540**	**700,540**
TOTAL NET ASSETS	**$ 15,869,845**	**$ 45,649,674**	**$ 61,519,519**	**$ 15,577,827**	**$ 45,668,867**	**$ 61,246,694**

Endowment

The University's endowment consists of approximately 14,500 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 (see *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, 2023 and 2022, funds in a deficit position were reported in net assets with donor restrictions and are comprised as follows (in thousands):

	2023	2022
Fair value of underwater endowment funds	**$ 241,967**	$ 369,782
Historic dollar value	**246,804**	378,931
TOTAL DEFICIT OF UNDERWATER ENDOWMENT FUNDS	**$ (4,837)**	**$ (9,149)**

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 2023, the endowment distribution approved by the Corporation (prior to decapitalizations) was equal to 4.7% 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 $2.2 billion and $2.1 billion in fiscal year 2023 and 2022, 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 $43.4 million and $36.7 million in fiscal year 2023 and 2022, respectively. These additional decapitalizations, in combination with the endowment distribution, resulted in an aggregate payout rate of 4.7% and 4.2% in fiscal year 2023 and 2022, respectively.

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 *Consolidated 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 4.9% and 3.5% as of June 30, 2023 and 2022, 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 2023 and 2022 were as follows (in thousands of dollars):

	2023	2022
Investment return:		
Investment income	**$ 19,760**	$ 17,152
Realized and change in unrealized appreciation/(depreciation), net	**39,925**	(158,186)
Total investment return	**59,685**	**(141,034)**
Gifts *(Note 14)*[1]	**6,279**	12,290
Payments to annuitants	**(74,072)**	(76,057)
Transfers to endowment	**(50,747)**	(18,603)
Transfers between SIA and the GOA	**(28,398)**	(25,213)
Change in liabilities and other adjustments	**20,930**	175,827
NET CHANGE DURING THE YEAR	**(66,323)**	**(72,790)**
Total split interest agreement net assets, beginning of year	**700,540**	773,330
TOTAL SPLIT INTEREST AGREEMENT NET ASSETS, END OF YEAR	**$ 634,217**	**$ 700,540**

[1] *Shown at net present value. The undiscounted value of these gifts was $12,342 and $26,626 for the years ended June 30, 2023 and 2022, respectively*

Split interest agreement net assets as of June 30, 2023 and 2022 consisted of the following (in thousands of dollars):

	2023	2022
Split interest agreement investments *(Note 3)*		
Charitable remainder trusts	**$ 1,006,615**	$ 1,039,122
Charitable lead trusts	**99,011**	101,899
Charitable gift annuities	**265,662**	305,536
Pooled income funds	**149,151**	140,000
Total split interest agreement investments[1]	**1,520,439**	**1,586,557**
Liabilities due under split interest agreements:		
Amounts due to beneficiaries	**(815,056)**	(819,802)
Amounts due to other institutions	**(71,166)**	(66,215)
Total liabilities due under split interest agreements	**(886,222)**	**(886,017)**
TOTAL SPLIT INTEREST AGREEMENT NET ASSETS, END OF YEAR	**$ 634,217**	**$ 700,540**

[1] *For the year ended June 30, 2023, $863,185 of SIA investments are held in the pooled general investment account and $657,254 of SIA investments are held in the other investments outside the general investment account. For the year ended June 30, 2022, $934,970 of SIA investments are held in the pooled general investment account and $651,587 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, 2023 and 2022 were as follows (in thousands of dollars):

	Fiscal year of issue	Fiscal year of final maturity[1]	Effective rate[2]	Outstanding principal 2023[3]	2022[3]
TAX-EXEMPT BONDS AND COMMERCIAL PAPER:					
Variable-rate demand bonds and commercial paper:					
Series R – daily	2000-2006	2032	1.7%	$ 98,300	$ 114,750
Series Y – weekly	2000	2036	2.4%	117,905	117,905
Commercial paper	2023	2024	3.0%	25,000	
Total variable-rate bonds and commercial paper			2.2%	241,205	232,655
Fixed-rate bonds:					
Series 2016A	2017	2041	4.1%	1,434,825	1,461,370
Series 2020A	2020	2031	4.3%	346,680	346,680
Series 2022B	2022	2033	4.3%	207,830	207,830
Total fixed-rate bonds			4.1%	1,989,335	2,015,880
TOTAL TAX-EXEMPT BONDS AND COMMERCIAL PAPER			**3.9%**	**2,230,540**	**2,248,535**
TAXABLE BONDS AND COMMERCIAL PAPER:					
Variable-rate bonds and commercial paper:					
Commercial paper	2023	2024	5.2%	152,296	
Total variable-rate bonds and commercial paper			5.2%	152,296	0
Fixed-rate bonds:					
Series 2008A	2008	2039	5.6%	243,000	243,000
Series 2008D	2009	2039	6.5%	500,000	500,000
Series 2010C	2011	2041	4.9%	300,000	300,000
Series 2013A	2013	2038	3.4%	402,000	402,000
Series 2016B	2017	2057	3.3%	1,000,000	1,000,000
Series 2020B	2020	2051	2.5%	500,000	500,000
Series 2022A	2022	2053	3.8%	500,000	500,000
Total fixed-rate bonds			4.1%	3,445,000	3,445,000
TOTAL TAXABLE BONDS AND COMMERCIAL PAPER			**4.1%**	**3,597,296**	**3,445,000**
Notes payable	Various	Various	Various	84,730	83,796
Unamortized original issuance premium/discount, net				321,570	360,763
Unamortized bond issuance costs				(19,402)	(20,891)
TOTAL BONDS AND NOTES PAYABLE			**4.0%**	**$ 6,214,734**	**$ 6,117,203**

[1] *The weighted average maturity of the portfolio on June 30, 2023 was 17.1 years.*
[2] *For fixed-rate bonds the effective rate is calculated as: coupon rate x (par value / book value*). For variable rate bonds the effective rate is the one-year average rate. Effective rates are exclusive of the Series Y interest rate exchange agreement, which would increase the overall portfolio rate by 0.01% (4.03% vs 4.04%).*
**Book value = par value + unamortized original issuance premium - unamortized original issuance discount, underwriter's discount, and cost of issuance.*
[3] *Par only—balances exclude original issuance premiums/discounts.*

Interest expense related to bonds and notes payable, net of amortization and accretion, was $207.4 million and $183.0 million for fiscal 2023 and 2022, respectively. The interest expense in the *Consolidated Statement of Changes in Net Assets with General Operating Account Detail* includes additional components related to finance leases. Excluding maturity of commercial paper, 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
2024	$ 92,253
2025	41,441
2026	100,967
2027	102,795
2028	104,656
Thereafter	5,293,158
TOTAL PRINCIPAL PAYMENTS	**$ 5,735,270**

Bonds and notes payable increased from $6.1 billion to $6.2 billion in fiscal year 2023, primarily due to issuance of $25.0 million in tax-exempt commercial paper and $152.3 million in taxable commercial paper. The proceeds of the tax-exempt commercial paper were used to fund capital spending and the proceeds of the taxable commercial paper were used to fund institutional liquidity. Offsetting the commercial paper issuances were $43.0 million of principal maturities, along with $36.8 million of amortizing bond premium (net of amortizing fees and issuance discounts).

The University is rated Aaa by Moody's Investors Service and AAA by Standard & Poor's Global Ratings. The Moody's rating was re-affirmed in February 2023 and the Standard & Poor's was re-affirmed in March 2023.

The University has one unsecured, revolving credit facility with a syndicate of banks totaling $1.5 billion, which expires in December 2025. The facility was renewed in December 2022. There was no outstanding drawn balance on the credit facility at June 30, 2023.

The University has taxable commercial paper available totaling $2 billion. There was a $152.3 million drawn balance on the taxable commercial paper line at June 30, 2023.

The University has tax-exempt commercial paper available totaling $1 billion. There was a $25.0 million drawn balance on the tax-exempt commercial paper line at June 30, 2023.

At June 30, 2023, the University had $216.2 million of variable rate demand bonds outstanding (excluding commercial paper) with either a daily or weekly interest rate reset. 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 2023, 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 variable rate debt.

The fair value of the interest rate exchange agreement was ($3.6) million and ($8.6) million as of June 30, 2023 and 2022, respectively, and is recorded in "Other liabilities associated with the investment portfolio" on the University's *Consolidated 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 $220.1 million as of June 30, 2023 and $191.5 million as of June 30, 2022; the assets are included in "Prepayments and deferred charges" and the liabilities are included in "Deferred revenue and other liabilities" on the University's *Consolidated 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 $793.1 million and $851.2 million as of June 30, 2023 and 2022, respectively. During fiscal years 2023 and 2022, the University made cash contributions to the defined benefit pension plan of $12.7 million and $20.0 million, respectively. The University recorded expenses for its defined contribution plans of $175.7 million for fiscal year 2023 and $155.1 million for fiscal year 2022.

Postretirement health benefits

The University provides postretirement health coverage and life insurance to substantially all of its employees. As of June 30, 2023, the University had internally designated and invested $996.9 million in the GIA to fund the postretirement health benefit accrued liability of $799.0 million. As of June 30, 2022, the University had internally designated and invested $1.0 billion to fund the postretirement health benefit accrued liability of $835.2 million.

The following table sets forth the pension and postretirement plans' funded status that is reported in the *Consolidated Balance Sheets* as of June 30, 2023 and 2022 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2023	2022	2023	2022
Change in benefit obligation:				
Benefit obligation, beginning of year	**$ 944,511**	$ 1,139,945	**$ 835,208**	$ 1,000,395
Service cost	**6,629**	11,208	**22,052**	32,542
Interest cost	**46,401**	34,980	**41,361**	32,643
Plan participants' contributions			**10,377**	9,527
Gross benefits paid	**(87,732)**	(52,631)	**(44,496)**	(40,664)
Actuarial gain	**(75,442)**	(188,991)	**(65,592)**	(199,211)
Plan amendments			**54**	(24)
BENEFIT OBLIGATION, END OF YEAR[1]	**834,367**	**944,511**	**798,964**	**835,208**
Change in plan assets:				
Fair value of plan assets, beginning of year	**851,205**	1,061,693		
Actual return on plan assets	**16,939**	(177,857)		
Employer contributions	**12,721**	20,000	**34,119**	31,137
Plan participants' contributions			**10,377**	9,527
Gross benefits paid	**(87,732)**	(52,631)	**(44,496)**	(40,664)
FAIR VALUE OF PLAN ASSETS, END OF YEAR	**793,133**	**851,205**	**0**	**0**
UNFUNDED STATUS[2]	**$ (41,234)**	**$ (93,306)**	**$ (798,964)**	**$ (835,208)**

[1] *Measurement of the University's pension obligation including assumed salary increases (required by GAAP).*
[2] *These amounts totaling $840,198 as of June 30, 2023 and $928,514 as of June 30, 2022 are included in the "Accrued Retirement Obligations" line in the* Consolidated 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 $760.6 million at June 30, 2023 and $846.8 million at June 30, 2022. 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, 2023.

Net periodic benefit cost

Components of net periodic benefit cost and other amounts recognized in the *Consolidated Statements of Changes in Net Assets with General Operating Account Detail* are summarized as follows for the years ended June 30, 2023 and 2022 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2023	2022	2023	2022
Components of net periodic benefit cost:				
Operating				
Service cost	**$ 6,629**	$ 11,208	**$ 22,052**	$ 32,542
Total operating activity	**6,629**	11,208	**22,052**	32,542
Non-operating				
Interest cost	**46,401**	34,980	**41,361**	32,643
Expected return on plan assets	**(42,209)**	(40,026)		
Amortization of:				
Actuarial loss/(gain)		7,242	**(19,055)**	(4,650)
Prior service cost/(credit)	**287**	287	**(7,931)**	(7,929)
Total non-operating activity[1]	**4,479**	2,483	**14,375**	20,064
Total net periodic benefit cost	**11,108**	**13,691**	**36,427**	**52,606**
Other amounts recognized in non-operating activity in unrestricted net assets:				
Current year net actuarial (gain)/loss	**(50,173)**	28,893	**(65,592)**	(199,211)
Plan amendments			**54**	(24)
Amortization of:				
Prior service (cost)/credit	**(287)**	(287)	**7,931**	7,929
Actuarial (loss)/gain		(7,242)	**19,055**	4,650
Total other amounts recognized in non-operating activity[1]	**(50,460)**	**21,364**	**(38,552)**	**(186,656)**
TOTAL RECOGNIZED IN THE *CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS WITH GENERAL OPERATING ACCOUNT DETAIL*	**$ (39,352)**	**$ 35,055**	**$ (2,125)**	**$ (134,050)**

[1] *These amounts totaling ($70,158) in fiscal year 2023 and ($142,745) in fiscal year 2022 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* Consolidated 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, 2023 and 2022 (in thousands of dollars):

	Pension benefits		Postretirement health benefits	
	2023	2022	2023	2022
Net actuarial loss/(gain)	**$ 12,075**	$ 62,248	**$ (409,029)**	$ (362,492)
Prior service cost/(credit)	**33**	320	**(25,779)**	(33,765)
CUMULATIVE AMOUNTS RECOGNIZED IN UNRESTRICTED NET ASSETS	**$ 12,108**	**$ 62,568**	**$ (434,808)**	**$ (396,257)**

Other assumptions and health care cost trend rates used in determining the year end obligation as well as the net periodic benefit cost of the pension and postretirement health plans are summarized as follows for fiscal years 2023 and 2022:

	Pension benefits		Postretirement health benefits	
	2023	2022	2023	2022
Weighted-average assumptions used to determine benefit obligation as of June 30:				
Discount rate	**5.70%**	5.05%	**5.60%**	4.90%
Compensation increase trend:				
Initial rate	**5.00%**	5.00%	**5.00%**	5.00%
Ultimate rate	**3.50%**	3.50%	**3.50%**	3.50%
Year of ultimate	**2025**	2025	**2025**	2025
Cash balance (or similar formula) interest crediting rate	**5.25%**	5.25%	N/A	N/A
Pension increases for in-payment benefits increase trend:				
Initial rate	**1.00%**	1.50%	N/A	N/A
Ultimate rate	**0.13%**	0.25%	N/A	N/A
Year of ultimate	**2024**	2025	N/A	N/A
Current health care cost trend rate:				
Pre-65	N/A	N/A	**7.25%**	7.00%
Post-65	N/A	N/A	**6.75%**	7.00%
EGWP	N/A	N/A	**16.00%**	7.00%
Ultimate health care cost trend rate:				
Pre-65 and Post-65	N/A	N/A	**5.00%**	5.00%
EGWP	N/A	N/A	**4.00%**	5.00%
Year of ultimate	N/A	N/A	**2029**	2029
Weighted-average assumptions used to determine net periodic benefit (income)/cost:				
Discount rate	**5.05%**	3.15%	**4.90%**	3.20%
Expected long-term rate of return on plan assets	**4.75%**	4.50%	N/A	N/A
Compensation increase trend:				
Average rate	N/A	3.50%	N/A	3.50%
Initial rate	**5.00%**	0.00%	**5.00%**	N/A
Ultimate rate	**3.50%**	N/A	**3.50%**	N/A
Year of ultimate	**2025**	N/A	**2025**	N/A
Pension increases for in-payment benefits increase trend:				
Average rate	N/A	0.25%	N/A	N/A
Initial rate	**1.50%**	N/A	N/A	N/A
Ultimate rate	**0.25%**	N/A	N/A	N/A
Year of ultimate	**2025**	N/A	N/A	N/A
Health care cost trend rate:				
Initial rate	N/A	N/A	**7.00%**	6.50%
Ultimate rate	N/A	N/A	**5.00%**	4.75%
Year of ultimate	N/A	N/A	**2029**	2025

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, 2023 and 2022, along with target allocations for June 30, 2024, is as follows:

	2024 Target	June 30, 2023	June 30, 2022
Asset allocation by category for pension plan:			
Fixed income securities	75-85%	80.4%	79.7%
Equity securities	15-25	19.5	19.6
Cash	1-5	0.1	0.7
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 2023, the University increased its allocation to fixed income securities to manage the interest rate volatility associated with its pension obligations. The University expects to keep 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, 2023 and 2022 (in thousands of dollars):

	2023					2022
	Level 1	Level 2	Level 3	NAV as practical expedient	Total	Total
PLAN ASSETS:						
Cash and short-term investments	$ 13,408				**$ 13,408**	$ 17,942
Domestic equity	64,305				**64,305**	87,025
Foreign equity	30,339			$ 41,876	**72,215**	62,956
Domestic fixed income				589,061	**589,061**	633,453
Emerging market equity and debt	14,776				**14,776**	12,880
Hedge funds				137	**137**	265
Private equity				1,250	**1,250**	1,368
High yield				37,974	**37,974**	35,313
PLAN ASSETS SUBJECT TO FAIR VALUE LEVELING	**$ 122,828**	**$ 0**	**$ 0**	**$ 670,298**	**$ 793,126**	**$ 851,202**
Other assets not subject to fair value					**7**	3
TOTAL PLAN ASSETS					**$ 793,133**	**$ 851,205**

Expected future benefit payments

Employer contributions of $13.3 million are expected for fiscal year 2024 to fund the pension benefit plan.

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

	Expected benefit payments	
Fiscal year	Pension	Postretirement health
2024	$ 66,508	$ 28,005
2025	66,150	29,851
2026	67,254	32,217
2027	68,262	34,674
2028	69,101	37,187
Thereafter	349,471	227,876

12. STUDENT FINANCIAL AID

Financial aid granted to students in fiscal 2023 and 2022 is summarized as follows (in thousands of dollars):

	2023	2022
Scholarships and other student awards:		
Scholarships applied to student income[1]	**$ 530,743**	$ 505,904
Scholarships and other student awards paid directly to students	**181,295**	171,312
Total scholarships and other student awards	**712,038**	**677,216**
Student employment	**101,699**	93,581
Student loans	**13,722**	14,124
Agency financial aid[2]	**23,889**	21,505
TOTAL STUDENT FINANCIAL AID	**$ 851,348**	**$ 806,426**

1 *Includes $235,832 and $224,863 in fiscal 2023 and 2022, respectively, 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 $676.1 million and $642.1 million in fiscal year 2023 and 2022, 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, the Medical School (including the School of Dental Medicine), and the T.H. Chan School of Public Health through fiscal year 2024. 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, 2023 are summarized as follows (in thousands of dollars):

	2023		
	Gifts received	Donor redesignations/ other changes	Total
Current use	$ 482,107	$ 3,775	**$ 485,882**
Non-federal sponsored grants	232,226	(2,782)	**229,444**
Endowment funds	566,660	(6,053)	**560,607**
Split interest agreements[1]	6,279		**6,279**
Loan funds and facilities	96,210	(35)	**96,175**
TOTAL GIFTS	**$ 1,383,482**	**$ (5,095)**	**$ 1,378,387**

[1] *Shown at net present value. The undiscounted value of these gifts was $12,342 for the year ended June 30, 2023.*

Gifts received for the year ended June 30, 2022 are summarized as follows (in thousands of dollars):

	2022		
	Gifts received	Donor redesignations/ other changes	Total
Current use	$ 514,361	$ (9,625)	**$ 504,736**
Non-federal sponsored grants	235,481	(3,361)	**232,120**
Endowment funds	579,987	3,663	**583,650**
Split interest agreements[1]	12,290		**12,290**
Loan funds and facilities	81,943	5,931	**87,874**
TOTAL GIFTS	**$ 1,424,062**	**$ (3,392)**	**$ 1,420,670**

[1] *Shown at net present value. The undiscounted value of these gifts was $26,626 for the year ended June 30, 2022.*

15. OTHER REVENUE

The major components of other revenue for the years ended June 30, 2023 and 2022 were as follows (in thousands of dollars):

	2023	2022
Publications and royalties from copyrights	**$ 281,024**	$ 277,104
Rental and parking[1]	**141,449**	116,070
Services income	**136,811**	135,240
Health and clinic fees	**72,580**	70,214
Royalties from the commercialization of intellectual property[2]	**58,989**	152,078
Sales income	**32,376**	31,423
Interest income	**15,317**	8,373
Other student income	**5,025**	4,326
Other	**49,345**	43,495
TOTAL OTHER REVENUE	**$ 792,916**	**$ 838,323**

[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 distribution to external parties.*

16. OTHER EXPENSES

The major components of other expenses for the years ended June 30, 2023 and 2022 were as follows (in thousands of dollars):

	2023	2022
Subcontract expenses under sponsored projects	**$ 179,941**	$ 179,212
Travel	**93,449**	43,737
Advertising	**65,353**	53,007
Publishing	**50,202**	45,097
Taxes and Fees	**42,196**	38,706
Insurance	**23,207**	25,669
Postage	**14,911**	14,907
Telephone	**10,971**	11,153
Fixed asset impairments	**7,394**	21,385
Other	**90,756**	61,702
TOTAL OTHER EXPENSES	**$ 578,380**	**$ 494,575**

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 classification for the year ended June 30, 2023 were as follows (in thousands of dollars):

	2023				
	Instruction and academic support	Research[1]	Student services and support	Institutional support and auxiliary	Total
Salaries and wages	$ 1,261,358	$ 330,493	$ 164,182	$ 665,043	**$ 2,421,076**
Employee benefits	307,980	77,943	54,257	188,124	**628,304**
Services purchased	407,481	126,438	69,973	188,049	**791,941**
Depreciation	47,043	155,078	16,595	206,093	**424,809**
Space and occupancy	128,490	68,282	33,859	163,448	**394,079**
Supplies and equipment	85,546	60,946	44,306	92,525	**283,323**
Interest	21,307	48,498	14,397	124,388	**208,590**
Scholarships and other student awards			181,295		**181,295**
Other expense and overhead allocations	37,026	442,002	35,189	64,163	**578,380**
TOTAL EXPENSES	**$ 2,296,231**	**$ 1,309,680**	**$ 614,053**	**$ 1,691,833**	**$ 5,911,797**

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

Operating expenses by functional classification for the year ended June 30, 2022 were as follows (in thousands of dollars):

	2022				
	Instruction and academic support	Research[1]	Student services and support	Institutional support and auxiliary	Total
Salaries and wages	$ 1,149,598	$ 310,492	$ 144,458	$ 601,794	**$ 2,206,342**
Employee benefits	286,322	74,786	49,844	172,979	**583,931**
Services purchased	374,555	95,246	60,739	202,169	**732,709**
Depreciation	47,664	155,568	16,520	209,108	**428,860**
Space and occupancy	106,798	62,355	31,766	152,867	**353,786**
Supplies and equipment	90,926	55,364	41,906	82,888	**271,084**
Interest	18,549	43,775	13,071	112,139	**187,534**
Scholarships and other student awards			171,312		**171,312**
Other expense and overhead allocations	1,866	424,292	28,407	40,010	**494,575**
TOTAL EXPENSES	**$ 2,076,278**	**$ 1,221,878**	**$ 558,023**	**$ 1,573,954**	**$ 5,430,133**

[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 finance leases. The University determines whether a contract is a lease at inception. Identified leases are subsequently measured, classified, and recognized at lease commencement. The University categorizes leases with contractual terms longer than twelve months as either operating or finance. The University's leases generally have terms that range from one to five years for equipment and one to twenty years for property, with certain leases inclusive of renewal options if they are considered to be reasonably assured at lease commencement. Right of use assets and lease liabilities for operating leases are included in "Operating leases—right of use assets" and "Operating lease liabilities", respectively, in the *Consolidated Balance Sheets*. Finance lease right of use assets and lease liabilities are included in "Fixed assets, net" and "Deferred revenue and other liabilities", respectively, in the *Consolidated Balance Sheets*. Lease assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease.

Operating and finance lease right of use assets and associated lease liabilities are recognized based on the present value of future minimum lease payments to be made over the expected lease term, using the collateralized incremental borrowing rate at the commencement date in determining the present value of future payments. Rent expense related to operating leases, including short-term leases and variable lease payments, was $114.0 million and $101.2 million in fiscal year 2023 and 2022, respectively.

Maturity analysis of the annual undiscounted cash flows reconciled to the carrying value of the operating and finance lease liabilities (in thousands of dollars):

	Operating	Finance
2024	$ 77,369	$ 11,524
2025	80,070	11,913
2026	75,344	21,995
2027	70,808	11,957
2028	69,720	13,018
Thereafter	573,984	98,505
TOTAL LEASE PAYMENTS	947,295	168,912
Less: Imputed Interest	(193,100)	(89,689)
PRESENT VALUE OF LEASE LIABILITIES	**$ 754,195**	**$ 79,223**

Weighted-average remaining lease term and discount rate for operating and finance leases were as follows:

	June 30, 2023
Weighted average remaining lease term	
Operating leases	15.1 YEARS
Finance leases	14.3 YEARS
Weighted average discount rate	
Operating leases	2.9%
Finance leases	2.4%

The University leases properties to customers under agreements that are classified as operating or sales-type leases. Property leased to others in operating lease arrangements are included in "Fixed assets, net" in the *Consolidated Balance Sheets*. Revenue is recognized to the extent that amounts are determined to be collectible.

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, 2023 totaled approximately $478.6 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.

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 18, 2023, 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.

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APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

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APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

The following is a summary of certain provisions of the Indenture that are not described elsewhere in this Offering Memorandum. The Bonds are issued and secured pursuant to the Indenture. Unless otherwise specified to the contrary in this Appendix C, all definitions and provisions summarized refer to the Indenture. This summary does not purport to be comprehensive, and reference should be made to the Indenture for a full and complete statement of its provisions.

Definitions

Unless the context otherwise requires, the following terms shall have the meanings specified below.

"*Authorized Denomination*" means $1,000 or any multiple integral thereof.

"*Authorized Representative*" means the Institution's Vice President for Finance, Treasurer, Assistant Treasurer, or any other Person designated as an Authorized Representative of the Institution by a Certificate of the Institution signed by the Institution's Vice President for Finance or Assistant Treasurer, updated as necessary, and provided to the Trustee.

"*Beneficial Owner*" means any Person which has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any of the Bonds (including any Person holding Bonds through nominees, depositories or other intermediaries) established to the reasonable satisfaction of the Trustee or the Institution.

"*Bond Fund*" means the fund by that name established pursuant to the Indenture.

"*Bonds*" means the President and Fellows of Harvard College, Taxable Bonds, Series 2024A authorized by, and at any time Outstanding pursuant to, the Indenture.

"*Book-Entry Form*" or "*Book-Entry System*" means a form or system, as applicable, under which physical bond certificates in fully registered form are registered only in the name of a Securities Depository or its nominee as Bondholder, with the physical bond certificates held by and "immobilized" in the custody of the Securities Depository and the book-entry system maintained by and the responsibility of others than the Institution or the Trustee is the record that identifies and records the transfer of the interests of the owners of book-entry interests in those Bonds.

"*Business Day*" means any day other than (A) a Saturday or Sunday or legal holiday or a day on which banking institutions in the city or cities in which the Designated Office of the Trustee is located are authorized by law or executive order to close or (B) a day on which the New York Stock Exchange is closed.

"'*Certificate'*, '*Statement'*, '*Request'* or '*Requisition' of the Institution*" mean, respectively, a written certificate, statement, request or requisition signed in the name of the Institution by an Authorized Representative. Any such instrument and supporting opinions or representations, if any, may, but need not, be combined in a single instrument with any other instrument, opinion or representation, and the two or more so combined shall be read and construed as a single instrument. If and to the extent required by the Indenture, each such instrument shall include the statements provided for in the Indenture.

"*Code*" means the Internal Revenue Code of 1986, as amended, or any successor statute thereto and any regulations promulgated thereunder.

"*Commonwealth*" means The Commonwealth of Massachusetts.

"*Comparable Treasury Issue*" means the United States Treasury security or securities selected by a Designated Investment Banker as having an actual or interpolated maturity comparable to the remaining term of the Bonds to be redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of a comparable maturity to the remaining term of such Bonds.

"*Comparable Treasury Price*" means, with respect to any redemption date, the average of the Primary Treasury Dealer Quotations for such redemption date or, if the Designated Investment Banker obtains only one Primary Treasury Dealer Quotation, such Primary Treasury Dealer Quotation.

"*Default*" means any event which is or after notice or lapse of time or both would become an Event of Default.

"*Designated Investment Banker*" means a Primary Treasury Dealer appointed by the Institution.

"*Designated Office*" means the Designated Office of the Trustee, which as of the date of the Indenture is located at 500 Ross Street, 12th Floor, Pittsburgh, Pennsylvania 15262, Attention: Corporate Trust, and such other offices as the Trustee may designate from time to time by written notice to the Institution and the Holders.

"*Event of Default*" means any of the events specified as such in the Indenture and as described herein under the caption "Events of Default and Remedies of Bondholders."

"*Expense Fund*" means the fund by that name established pursuant to the Indenture.

"*Holder*" or "*Bondholder*", whenever used in the Indenture with respect to a Bond, means the Person in whose name such Bond is registered.

"*Indenture*" means the Indenture of Trust, by and between the Institution and the Trustee, as originally executed or as it may from time to time be supplemented, modified or amended by any Supplemental Indenture.

"*Indenture Fund*" means the fund by that name established pursuant to the Indenture.

"*Institution*" means President and Fellows of Harvard College, an educational corporation existing under the laws of the Commonwealth, or said educational corporation's successor or successors.

"*Interest Account*" means the account by that name established pursuant to the Indenture.

"*Interest Payment Date"* means February 15 and August 15 of each year, commencing August 15, 2024.

"*Investment Securities*" means any of the following: (1) direct nonprepayable, noncallable obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States of America) or direct nonprepayable, noncallable obligations, the timely payment of the principal of and interest on which are fully guaranteed by the United States of America, including instruments evidencing a direct ownership interest in securities described in this clause such as CATS, TIGRs, and Stripped Treasury Coupons rated or assessed in the two highest Rating Categories by S&P and Moody's and held by a custodian for safekeeping on behalf of holders of such securities and (2) money market funds registered under the Investment Company Act of 1940, as amended, the shares in which are registered under the Securities Act of 1933, as amended, and that have a rating by S&P or Moody's in such Rating Agency's two highest Rating Categories, including such funds for which the Trustee or its affiliates provide investment advisory or other management services, including those for which the Trustee or an affiliate receives and retains a fee for services provided to the fund, whether as a custodian, transfer agent, investment advisor or otherwise, (3) commercial paper having, at the time of investment or contractual commitment to invest therein, a rating from Moody's and S&P, P-1 and of A1, respectively, (4) repurchase and reverse repurchase agreements collateralized with securities described in clause (1) of this definition, including those of the Trustee or any of its affiliates, and (5) bank deposit products, demand deposits, including interest bearing money market accounts, time deposits, trust funds, trust accounts, overnight bank deposits, interest-bearing deposits, and certificates of deposit, including those placed by a third party pursuant to an agreement between the Trustee and the Institution, or bankers acceptances of depository institutions, including the Trustee or any of its affiliates, which are fully insured by the Federal Deposit Insurance Corporation. Ratings of Investment Securities referred to herein shall be determined at the time of purchase of such Investment Securities. The Trustee shall have no responsibility to monitor the ratings of Investment Securities.

"*Make-Whole Redemption Price*" means the greater of:

(1) 100% of the principal amount of a Bond to be redeemed; or

(2) the sum of the present value of the remaining scheduled payments of principal and interest to the Par Call Date of such Bond, not including any portion of those payments of interest accrued and unpaid as of the date on which such Bond is to be redeemed, discounted to the date on which such Bond is to be redeemed on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at the adjusted Treasury Rate plus ten (10) basis points,

plus, in each case, accrued and unpaid interest on such Bond to, but excluding, the redemption date.

"*Moody's*" means Moody's Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and their assigns, or, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, any other nationally recognized securities rating agency designated by the Institution upon written notice to the Trustee.

"*Opinion of Counsel*" means a written opinion of counsel (which may be subject to customary assumptions and exclusions) from legal counsel who is not unsatisfactory to the Trustee. Such counsel may be an employee of, or outside counsel to, the Institution.

"*Outstanding*" when used as of any particular time with reference to Bonds, means (subject to the provisions of the Indenture) all Bonds theretofore, or thereupon being, authenticated and delivered by the Trustee under the Indenture except (1) Bonds theretofore cancelled by the Trustee or surrendered to the Trustee for cancellation; (2) Bonds with respect to which all liability of the Institution shall have been discharged in accordance with the Indenture; and (3) Bonds for the transfer or exchange of or in lieu of or in substitution for which other Bonds shall have been authenticated and delivered by the Trustee pursuant to the Indenture.

"*Par Call Date*" means November 15, 2034.

"*Payment Date*" means an Interest Payment Date or a Principal Payment Date.

"*Person*" means an individual, corporation, firm, association, partnership, trust, limited liability company or other legal entity or group of entities, including a governmental entity or any agency or political subdivision thereof.

"*Primary Treasury Dealer*" means one or more entities appointed by the Institution, which, in each case, is a primary U.S. Government securities dealer in The City of New York, New York, and its successors.

"*Primary Treasury Dealer Quotations*" means, with respect to each Primary Treasury Dealer and any redemption date, the average, as determined by the Designated Investment Banker, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Designated Investment Banker by such Primary Treasury Dealer at 3:30 p.m. New York time on the third Business Day preceding such redemption date.

"*Principal Account*" means the account by that name established pursuant to the Indenture.

"*Principal Payment Date*" means the date of final maturity of each of the Bonds.

"*Rating Agency*" means Moody's and S&P.

"*Rating Category*" means a generic securities rating category, without regard to any refinement or gradation of such rating category by a numerical modifier or otherwise.

"*Record Date*" means the first (1st) day (whether or not a Business Day) of the month of each Interest Payment Date.

"*Redemption Fund*" means the fund by that name established pursuant to the Indenture.

"*Redemption Price*" means 100% of the principal amount of a Bond to be redeemed plus accrued and unpaid interest on such Bond to, but excluding, the redemption date.

"*Responsible Officer*" means any vice president, assistance vice president or officer of the Trustee within the designated corporate trust office specified herein (or any other successor corporate trust office) customarily performing functions similar to those performed by the persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred at the designated corporate trust office because of such person's knowledge and familiarity with the particular subject and having direct responsibility for the administration of this Indenture.

"*S&P*" means S&P Global Ratings, previously Standard & Poor's, a division of The McGraw-Hill Companies, a corporation organized and existing under the laws of the State of New York, its successors and their assigns, or, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, any other nationally recognized securities rating agency designated by the Institution upon written notice to the Trustee.

"*Securities Depository*" means The Depository Trust Company and its successors and assigns, or any other securities depository selected as set forth in the Indenture, which agrees to follow the procedures required to be followed by such securities depository in connection with the Bonds.

"*Special Record Date*" means the date established by the Trustee pursuant to the Indenture as the record date for the payment of defaulted interest on the Bonds.

"*Supplemental Indenture*" means any indenture hereafter duly authorized and entered into between the Institution and the Trustee, supplementing, modifying or amending the Indenture; but only if and to the extent that such Supplemental Indenture is specifically authorized under the Indenture.

"*Treasury Rate*" means, with respect to any redemption date, the rate per annum equal to (i) the semiannual equivalent yield to maturity or (ii) if no such semiannual equivalent yield to maturity is available, the interpolated yield to maturity (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date.

"*Trustee*" means The Bank of New York Mellon Trust Company, N.A., a national banking association duly organized and existing under and by-virtue of the laws of the United States of America, or its successor or successors, as Trustee under the Indenture as provided in the Indenture.

"*Underwriters*" means Goldman Sachs & Co. LLC, Barclays Capital Inc., Morgan Stanley & Co. LLC, Wells Fargo Securities, LLC, BofA Securities, Inc., J.P. Morgan Securities LLC, Loop Capital Markets, TD Securities (USA) LLC, Academy Securities LLC, RBC Capital Markets LLC, and Siebert Williams Shank & Co., LLC.

"*Uniform Commercial Code*" means the Uniform Commercial Code as in effect in the Commonwealth from time to time.

Establishment and Pledge of Indenture Fund

Subject only to the provisions of the Indenture permitting or requiring the application thereof for the purposes and on the terms and conditions set forth therein, the Indenture Fund and all amounts held therein are pledged, assigned and transferred by the Institution to the Trustee for the benefit of the Bondholders to secure the full payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of the Indenture. The Institution grants to the Trustee a security interest in and acknowledges and agrees that the Indenture Fund and all amounts on deposit therein shall constitute collateral security to secure the full payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of the Indenture. For purposes of creating, perfecting and maintaining the security interest of the Trustee on behalf of the Bondholders in and to the Indenture Fund and all amounts on deposit therein, the parties to the Indenture agree as follows: (1) the Indenture shall constitute a "security agreement" for purposes of the Uniform Commercial Code and the Institution shall prepare and file or cause to be prepared and filed the initial Uniform Commercial Code filings if necessary; (2) the Trustee shall maintain on its books records reflecting the interest, as set forth in the Indenture, of the Bondholders in the Indenture Fund and/or the amounts on deposit therein; and (3) the Indenture Fund and the amounts on deposit therein and any proceeds thereof shall be held by the Trustee acting in its capacity as an agent of the Bondholders, and the holding of such items by the Trustee (including the transfer of any items among the funds and accounts in the Indenture Fund) is deemed possession of such items on behalf of the Bondholders.

Nothing in the Indenture or in the Bonds, expressed or implied, shall be construed to constitute a security interest under the Uniform Commercial Code or otherwise in the assets of the Institution other than in any interest of the Institution in the Indenture Fund and/or the amounts on deposit therein. No recourse for the payment of the principal, Redemption Price or Make-Whole Redemption Price of or interest on any Bond, or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Institution in the Indenture or in any Supplemental Indenture or in any Bond, or because of the creation of any indebtedness represented thereby, shall be had against any employee, agent, or officer, as such, past, present or future, of the Institution or of any successor entity, either directly or through any successor entity, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, it being expressly understood that all such liability is expressly waived and released as a condition of, and as a consideration for, the execution of the Indenture and the issue of the Bonds.

Redemption

The Bonds are subject to optional redemption in whole or in part prior to maturity on or after the Par Call Date at the written direction of the Institution to the Trustee. Such redemption shall be in accordance with the terms of the Bonds, as a whole or in part on any Business Day in such order of maturity as directed by the Institution at the Redemption Price, as described in the form of the Bonds in the Indenture. Prior to the Par Call Date, the Bonds are subject to optional redemption in whole or in part prior to maturity at the written direction of the Institution to the Trustee. Such redemption shall be in accordance with the terms of the Bonds, as a whole or in part on any Business Day in such order of maturity as directed by the Institution at the Make-Whole Redemption Price, as described in the form of the Bonds in the Indenture. The Institution shall retain an independent accounting firm or an independent financial advisor to determine the Make-Whole Redemption Price of the Bonds to be redeemed pursuant to the Indenture and perform all actions and make all calculations required to determine such Make-Whole Redemption Price. The Trustee and the Institution may conclusively rely on such accounting firm's or financial advisor's calculations in connection with, and its determination of, such Make-Whole Redemption Price, and neither the Trustee nor the Institution shall have any liability for such reliance. The determination of the Make-Whole Redemption Price by such accounting firm or financial advisor shall be conclusive and binding on the Trustee, the Institution and the Holders of the Bonds.

Selection of the Bonds for Redemption. If less than all of the Bonds are called for optional redemption, the Institution shall select the maturity or maturities from which the Bonds are to be redeemed. If the Bonds are registered in Book-Entry Form and for so long as the Securities Depository or a successor securities depository is the sole registered owner of the Bonds, if less than all of the Bonds of a maturity are called for prior redemption, the particular Bonds or portions thereof to be redeemed shall be selected on a pro rata pass-through distribution of principal basis in accordance with the Securities Depository procedures, provided that, so long as the Bonds are held in Book-Entry Form, the selection for redemption of such Bonds shall be made in accordance with the operational arrangements of the Securities Depository then in effect.

Notice of Redemption. Notice of redemption shall be sent by the Trustee by first class mail, or sent by electronic means, not less than seven (7) days (or, if longer, the minimum number of days necessary to comply with the operational requirements of the Securities Depository then in effect), nor more than sixty (60) days prior to the redemption date, to the respective Holders of any Bonds designated for redemption at their addresses appearing on the registration books of the Trustee. If the Bonds are no longer held by the Securities Depository or its successor or substitute, the Trustee shall also give notice of redemption by electronic means to such securities depositories and/or securities information services as shall be designated in a Certificate of the Institution. Each notice of redemption shall state the date of such notice, the date of issue of the Bonds, the redemption date, the Redemption Price or method of determining the Make-Whole Redemption Price (as applicable), the place or places of redemption (including the name and appropriate address or addresses of the Trustee), the maturity (including CUSIP number, if any), and, in the case of Bonds to be redeemed in part only, the portion of the principal amount thereof to be redeemed. Each such notice shall also state that on said date there will become due and payable on each of said Bonds the Redemption Price or Make-Whole Redemption Price thereof (as applicable) or of said specified portion of the principal amount thereof in the case of a Bond to be redeemed in part only and that on and after such redemption date interest thereon shall cease to accrue, and shall require that such Bonds be then surrendered.

Failure by the Trustee to give notice pursuant to the Indenture to any one or more of the securities information services or depositories designated by the Institution, or the insufficiency of any such notice shall not affect the sufficiency of the proceedings for redemption. Failure by the Trustee to send notice of redemption pursuant to the Indenture to any one or more of the respective Holders of any Bonds designated for redemption shall not affect the sufficiency of the proceedings for redemption with respect to the Holders to whom such notice was sent.

The Institution may instruct the Trustee to provide conditional notice of redemption, which may be conditioned upon the receipt of moneys or any other event. Additionally, any notice given pursuant to the Indenture may be rescinded by written notice given to the Trustee by the Institution no later than five (5) Business Days prior to the date specified for redemption. The Trustee shall give notice of such rescission, as soon thereafter as practicable, in the same manner, to the same Persons, as notice of such redemption was given pursuant to the Indenture.

Partial Redemption of Bonds. Upon surrender of any Bond redeemed in part only, the Institution shall execute (but need not prepare) and the Trustee shall prepare or cause to be prepared, authenticate and deliver to the Holder thereof, at the expense of the Institution, a new Bond or Bonds of Authorized Denominations, equal in aggregate principal amount to the unredeemed portion of the Bond surrendered.

Effect of Redemption. Notice of redemption having been duly given as provided in the Indenture, and moneys for payment of the Redemption Price or Make-Whole Redemption Price of the Bonds (or portion thereof) so called for redemption being held by the Trustee, on the date fixed for redemption designated in such notice, the Bonds (or portion thereof) so called for redemption shall become due and payable at the Redemption Price or Make-Whole Redemption Price specified in such notice, interest on the Bonds so called for redemption shall cease to accrue, said Bonds (or portion thereof) shall cease to be entitled to any benefit or security under the Indenture, and the Holders of said Bonds shall have no rights in respect thereof except to receive payment of said Redemption Price or Make-Whole Redemption Price from funds held by the Trustee for such payment.

Funds and Accounts

The Indenture creates an Indenture Fund, a Bond Fund, a Redemption Fund, and an Expense Fund thereunder. The Indenture also creates an Interest Account and a Principal Account under the Bond Fund. All of the funds and accounts are to be held by the Trustee.

Application of Proceeds of Bonds. The proceeds from the sale of the Bonds (net of underwriter's discount and original issue discount, if any) shall be transferred by the Underwriters pursuant to the instructions of the Institution.

Indenture Fund. The Trustee establishes for the sole benefit of the Bondholders, a master fund referred to in the Indenture as the "Indenture Fund" containing the Bond Fund, the Expense Fund, and the Redemption Fund and each of the accounts contained therein. The Indenture Fund and each of the funds and accounts in the Indenture Fund shall be identified on the books of the Trustee with reference hereto and shall be maintained by the Trustee and held in trust apart from all other moneys and securities held under the Indenture or otherwise, and the Trustee shall have the exclusive and sole right of withdrawal therefrom in accordance with the terms of the Indenture. All amounts deposited with the Trustee pursuant to the Indenture shall be held, disbursed, allocated and applied by the Trustee only as provided in the Indenture.

Bond Fund. Upon the receipt thereof, the Trustee shall deposit all payments received from the Institution (other than amounts which are to be deposited in the Redemption Fund or the Expense Fund or income or profit from investments which are to be applied pursuant to the Indenture) in a special fund designated the "Bond Fund" which the Trustee shall establish and maintain and hold in trust and which shall be disbursed and applied only as authorized in the Indenture.

At the times specified below, the Trustee shall allocate within the Bond Fund in the following order of priority the following amounts to the following accounts or funds, each of which the Trustee shall establish and maintain and hold in trust and each of which shall be disbursed and applied only as hereinafter authorized: (1) On each Interest Payment Date, the Trustee shall deposit in the Interest Account the aggregate amount of interest becoming due and payable on such Interest Payment Date on all Bonds then Outstanding, until the balance in said account is equal to said aggregate amount of interest; and (2) On each Principal Payment Date, the Trustee shall deposit in the Principal Account the aggregate amount of principal becoming due and payable on such Principal Payment Date, until the balance in said account is equal to said aggregate amount of such principal.

Interest Account. All amounts in the Interest Account shall be used and withdrawn by the Trustee solely for the purpose of paying interest on the Bonds as it shall become due and payable (including accrued interest on any Bonds redeemed prior to maturity pursuant to the Indenture).

Principal Account. All amounts in the Principal Account shall be used and withdrawn by the Trustee solely to pay at maturity the Bonds.

Redemption Fund. Upon the receipt thereof, the Trustee shall deposit the following amounts in a special fund designated the "Redemption Fund" which the Trustee shall establish and maintain and hold in trust: (1) all moneys deposited by the Institution with the Trustee directed to be deposited in the Redemption Fund; and (2) all interest, profits and other income received from the investment of moneys in the Redemption Fund.

All amounts deposited in the Redemption Fund shall be used and withdrawn by the Trustee solely for the purpose of redeeming Bonds, in the manner and upon the terms and conditions specified in the Indenture, at the next succeeding date of redemption for which notice has been given; provided that, at any time prior to the selection of Bonds for such redemption, the Trustee shall, upon written direction of the Institution, apply such amounts to the purchase of Bonds at public or private sale, as and when and at such prices (including brokerage and other charges, but excluding accrued interest, which is payable from the Interest Account) as the Institution may direct, except that the purchase price (exclusive of accrued interest) may not exceed the Redemption Price or Make-Whole Redemption Price (in each case, exclusive of accrued interest) then applicable to such Bonds; and provided further that in lieu of redemption at such next succeeding date of redemption, or in combination therewith, amounts in such account may be transferred to the Principal Account as set forth in a Request of the Institution.

Expense Fund. The amount estimated to be needed to pay the costs of issuing the Bonds shall be deposited in the Expense Fund. The moneys in the Expense Fund shall be held in trust and, except as otherwise provided in the Indenture, shall be applied by the Trustee solely to the payment or reimbursement of the costs of issuing the Bonds. After all costs of issuing the Bonds have been paid, any amounts remaining in the Expense Fund shall be transferred to the Bond Fund. To the extent the Expense Fund is insufficient to pay any of the above costs, the Institution shall be liable for the deficiency and shall pay an amount equal to such deficiency as directed by the Trustee.

Payments by the Institution; Allocation of Funds. On or before each Payment Date, until the principal of and interest on the Bonds shall have been fully paid or provision for such payment shall have been made as provided in the Indenture, the Institution shall pay to the Trustee a sum equal to the amount payable on such Payment Date as principal of and interest on the Bonds, less the amount, if any, in the Bond Fund and available therefor. Each payment made pursuant to this paragraph shall at all times be sufficient to pay the total amount of interest and principal (whether at maturity or upon acceleration) becoming due and payable on the Bonds on such Payment Date. If on any Payment Date the amounts held by the Trustee in the accounts within the Bond Fund are insufficient to make any required payments of principal of (whether at maturity or upon acceleration) and interest on the Bonds as such payments become due, the Institution shall forthwith pay such deficiency to the Trustee.

The obligations of the Institution to make the payments required by the Indenture and to perform and observe the other agreements on its part contained therein shall be a general obligation of the Institution, absolute and unconditional, irrespective of any defense or any rights of set-off, recoupment or counterclaim it might otherwise have against the Trustee, and during the term of the Indenture, the Institution shall pay all payments required to be made under the Indenture (which payments shall be net of any other obligations of the Institution) as prescribed therein and all other payments required thereunder, free of any deductions and without abatement, diminution or set-off. Until such time as the principal of and interest on the Bonds shall have been fully paid, or provision for the payment thereof shall have been made as required by the Indenture, the Institution (i) will not suspend or discontinue any payments provided for in the Indenture; (ii) will perform and observe all of its other covenants contained in the Indenture; and (iii) except as provided in the Indenture, will not terminate the Indenture for any cause, including, without limitation, the occurrence of any act or circumstances that may constitute failure of consideration, destruction of or damage to all or a portion of the projects financed with the proceeds of the Bonds, commercial frustration of purpose, any change in the tax or other laws of the United States of America or of the Commonwealth or any political subdivision of either of these, or any failure of the Trustee to perform and observe any covenant, whether express or implied, or any duty, liability or obligation arising out of or connected with the Indenture, except to the extent permitted by the Indenture.

Validity of Bonds

The recital contained in the Bonds that the same are issued pursuant to the Indenture shall be conclusive evidence of their validity and of compliance with the provisions of the Indenture in their issuance.

Additional Bonds

The Institution may, from time to time, without the consent of the Bondholders, issue additional bonds under the Indenture in addition to the Bonds ("Additional Bonds"). If issued, the Additional Bonds will become part of the same series as the Bonds and will have the same interest rate, redemption provisions, maturity date and CUSIP number as one or more of the Bonds.

Use of Securities Depository

Notwithstanding any provision of the Indenture to the contrary:

The Bonds shall be initially issued as provided in the Indenture. Registered ownership of the Bonds, or any portion thereof, may not thereafter be transferred except: (1) to any successor of the Securities Depository or its nominee, or to any substitute depository designated pursuant to the Indenture; provided that any successor of the Securities Depository or substitute depository shall be qualified under any applicable laws to provide the service proposed to be provided by it; (2) to any substitute depository designated by the Institution and not objected to by the Trustee, upon (i) the resignation of the Securities Depository or its successor (or any substitute depository or its successor) from its functions as depository or (ii) a determination by the Institution that the Securities Depository or its successor (or any substitute depository or its successor) is no longer able to carry out its functions as depository; provided that any such substitute depository shall be qualified under any applicable laws to provide the services proposed to be provided by it; or (3) to any Person as provided below, upon (i) the resignation of the Securities Depository or its successor (or substitute depository or its successor) from its functions as depository; provided that no substitute depository which is not objected to by the Trustee can be obtained or (ii) a determination by the Institution that it is in the best interests of the Institution to remove the Securities Depository or its successor (or any substitute depository or its successor) from its functions as depository.

In the case of any transfer pursuant to the Indenture, upon receipt of the Outstanding Bonds by the Trustee, together with a Certificate of the Institution to the Trustee, new Bonds shall be executed and delivered in the aggregate principal amount of the Bonds then Outstanding, registered in the name of such successor or such substitute depository, or their nominees, as the case may be, all as specified in such Certificate of the Institution. In the case of any transfer pursuant to the Indenture, upon receipt of the Outstanding Bonds by the Trustee together with a Certificate of the Institution to the Trustee, new Bonds shall be executed and delivered in such denominations and registered in the names of such persons as are requested in such a Certificate of the Institution, subject to the limitations of the Indenture, provided the Trustee shall not be required to deliver such new Bonds within a period less than 60 days from the date of receipt of such a Certificate of the Institution.

In the case of partial redemption or an advance refunding of the Bonds evidencing all or a portion of the principal amount Outstanding, the Securities Depository shall make an appropriate notation on the Bonds indicating the date and amounts of such reduction in principal, in form acceptable to the Trustee.

The Institution and the Trustee shall be entitled to treat the person in whose name any Bond is registered as the Bondholder thereof for all purposes of the Indenture and any applicable laws, notwithstanding any notice to the contrary received by the Institution or the Trustee.

So long as the Outstanding Bonds are registered in the name of Cede & Co. or its registered assign, the Institution and the Trustee shall cooperate with Cede & Co., as sole registered Bondholder of the Bonds, and its registered assigns, in effecting payment of the principal, Redemption Price, or Make-Whole Redemption Price of and interest on the Bonds by arranging for payment in such manner that funds for such payments are properly identified and are made immediately available on the date they are due, all in accordance with the letter of representations of the Institution to the Securities Depository or as otherwise agreed by the Trustee and the Securities Depository.

Particular Covenants

Punctual Payment. The Trustee shall, through funds provided by the Institution, punctually pay the principal, Redemption Price or Make-Whole Redemption Price and interest to become due in respect of all the Bonds, in strict conformity with the terms of the Bonds and of the Indenture, according to the true intent and meaning thereof, from funds made available by the Institution. When and as paid in full, all Bonds shall be delivered to the Trustee and shall forthwith be cancelled by the Trustee and delivered to, or upon the order of, the Institution.

Compliance with Indenture. The Institution covenants not to issue, or permit to be issued, any Bonds in any manner other than in accordance with the provisions of the Indenture, and shall not suffer or permit any Default (within its power to prevent) to occur under the Indenture, but shall faithfully observe and perform all the covenants, conditions and requirements of the Indenture.

Against Encumbrances. The Institution shall not create or suffer to be created any pledge, lien, charge or other encumbrance upon all or any part of the Indenture Fund or any of the amounts held therein pledged or assigned under the Indenture while any of the Bonds are Outstanding, except the pledge and assignment created by the Indenture and any statutory liens or other liens arising by operation of law. The Institution will assist the Trustee in contesting any pledge, lien, charge or other encumbrance that does not comply with the provisions of the Indenture.

Power to Issue Bonds and Make Pledge and Assignment. The Institution is duly authorized to issue the Bonds and to enter into the Indenture and to pledge and assign the funds and accounts purported to be pledged and assigned under the Indenture in the manner and to the extent provided in the Indenture. The Bonds are and will be legal, valid and binding obligations of the Institution in accordance with their terms, and the Institution and the Trustee shall at all times, to the extent permitted by law, defend, preserve and protect said pledge and assignment of funds and accounts and all the rights of the Bondholders under the Indenture against all claims and demands of all Persons whomsoever, subject to the limitations set forth in the Indenture relating to the Trustee.

Accounting Records and Financial Statements. With respect to each fund or account established and maintained by the Trustee pursuant to the Indenture, the Trustee shall at all times keep, or cause to be kept, proper books of record and account prepared in accordance with corporate trust accounting standards, in which complete and accurate entries shall be made of all transactions relating to the receipt, investment, disbursement, allocation and application of payments received from the Institution and the proceeds of the Bonds. Such books of record and account shall be available for inspection by the Institution and any Bondholder, or his or her agent or representative duly authorized in writing, at reasonable hours and under reasonable circumstances.

The Trustee shall furnish to the Institution within 30 days after the end of each month, a complete financial statement (which need not be audited and may be its regular account statements) covering receipts, disbursements, allocation and application of any moneys (including proceeds of Bonds) in any of the funds and accounts established pursuant to the Indenture for such month; provided that the Trustee shall not be obligated to deliver an accounting for any fund or account that has a balance of $0.00 and has not had any activity since the last reporting.

Continuing Disclosure. The Institution has entered into continuing disclosure undertakings (the "Continuing Disclosure Undertakings") in connection with revenue bonds issued for the benefit of the Institution. Holders and prospective purchasers of the Bonds may obtain copies of the information provided by the Institution under those Continuing Disclosure Undertakings on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system. Each Continuing Disclosure Undertaking terminates when the related revenue bonds are paid or deemed paid in full.

Events of Default and Remedies of Bondholders

Events of Default. The following events shall be "Events of Default": (1) default in the due and punctual payment of the principal, Redemption Price or Make-Whole Redemption Price of any Bond when and as the same shall become due and payable, whether at maturity as therein expressed, by proceedings for redemption, by acceleration or otherwise; (2) default in the due and punctual payment of any interest on any Bond when and as such interest shall become due and payable; (3) default by the Institution in the performance or observance of any of the other covenants, agreements or conditions on its part contained in the Indenture or in the Bonds, if such default shall have continued for a period of sixty (60) days after written notice thereof, specifying such default and requiring the same to be remedied and stating that such notice is a "Notice of Default" under the Indenture, shall have been given to the Institution by the Trustee, or to the Institution and the Trustee by the Holders of not less than a majority in aggregate principal amount of the Bonds at the time Outstanding; (4) the commencement by the Institution of a voluntary case under the federal bankruptcy laws, or if the Institution 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; (5) the appointment of a trustee, receiver, custodian or similar official or agent for the Institution or for any substantial part of its property and such trustee or receiver shall not be discharged within 60 days; or (6) an order or decree for relief in an involuntary case under the federal bankruptcy laws shall be entered against the Institution, 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.

Acceleration of Maturity. If an Event of Default shall occur, then, and in each and every such case during the continuance of such Event of Default, the Trustee may, upon notice in writing to the Institution, declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration by the Trustee the same shall become and shall be immediately due and payable, anything in the Indenture or in the Bonds contained to the contrary notwithstanding.

Any such declaration, however, is subject to the condition that if, at any time after such declaration and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, there shall be deposited with the Trustee a sum sufficient to pay all the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds payment of which is overdue, with interest on such overdue principal at the rate borne by the Bonds, and the reasonable charges and expenses of the Trustee, and any and all other Defaults known to the Trustee (other than in the payment of principal of and interest on the Bonds due and payable solely by reason of such declaration) shall have been made good or cured to the reasonable satisfaction of the Trustee or provision reasonably deemed by the Trustee to be adequate shall have been made therefor, then, and in every such case, the Trustee shall, on behalf of the Holders of all of the Bonds by written notice to the Institution, rescind and annul such declaration and its consequences and waive such Default; but no such rescission and annulment shall extend to or shall affect any subsequent Default, or shall impair or exhaust any right or power consequent thereon.

Rights as a Secured Party. The Trustee, as appropriate, may exercise all of the rights and remedies of a secured party under the Uniform Commercial Code with respect to securities in the Indenture Fund, including without limitation the Bond Fund, the Redemption Fund, and the Expense Fund, including the right to sell or redeem such securities and the right to retain the securities in satisfaction of the obligation of the Institution under the Indenture. 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 Uniform Commercial Code Sections 9-610 and 9-611, or any successor provision of law shall constitute reasonable notification of such event.

Application of Moneys Collected by the Trustee. If an Event of Default shall occur and be continuing, all moneys then held or thereafter received by the Trustee under any of the provisions of the Indenture (subject to provisions of the Indenture requiring moneys to be held for payment of particular Bonds) shall be applied by the Trustee as follows and in the following order:

(1) To the payment of reasonable fees and expenses of the Trustee (including reasonable fees and disbursements of its counsel) incurred in and about the performance of its powers and duties under the Indenture;

(2) To the payment of any expenses necessary in the opinion of the Trustee to protect the interests of the Holders of the Bonds; and

(3) To the payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest then due on the Bonds (upon presentation of the Bonds to be paid, and stamping thereon of the payment if only partially paid, or surrender thereof if fully paid) subject to the provisions of the Indenture, as follows:

(A) Unless the principal of all of the Bonds shall have become or have been declared due and payable,

First: To the payment to the Persons entitled thereto of all installments of interest then due in the order of the maturity of such installments, and, if the amount available shall not be sufficient to pay in full any installment or installments due on the same date, then to the payment thereof ratably, according to the amounts due thereon, to the Persons entitled thereto, without any discrimination or preference; and

Second: To the payment to the Persons entitled thereto of the unpaid principal, Redemption Price or Make-Whole Redemption Price of any Bonds which shall have become due, whether at maturity or by call for redemption, in the order of their due dates, with interest on the overdue principal at the rate borne by the Bonds, and, if the amount available shall not be sufficient to pay in full all the Bonds due on any date, together with such interest, then to the payment thereof ratably, according to the amounts of principal, Redemption Price or Make-Whole Redemption Price due on such date to the Persons entitled thereto, without any discrimination or preference.

(B) If the principal of all of the Bonds shall have become or have been declared due and payable, to the payment of the principal and interest then due and unpaid upon the Bonds, with interest on the overdue principal at the rate borne by the Bonds, and, if the amount available shall not be sufficient to pay in full the whole amount so due and unpaid, then to the payment thereof ratably, without preference or priority of principal over interest, or of interest over principal, or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, according to the amounts due respectively for principal and interest, to the Persons entitled thereto without any discrimination or preference.

Trustee to Represent Bondholders. The Trustee is irrevocably appointed (and the successive respective Holders of the Bonds, by taking and holding the same, shall be conclusively deemed to have so appointed the

Trustee) as trustee and true and lawful attorney of the Holders of the Bonds for the purpose of exercising and prosecuting on their behalf such rights and remedies as may be available to such Holders under the provisions of the Bonds, the Indenture and applicable provisions of any law. Upon the occurrence and continuance of an Event of Default or other occasion giving rise to a right in the Trustee to represent the Bondholders, the Trustee in its discretion may, and upon the written request of the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding, and upon being indemnified to its satisfaction therefor, shall, proceed to protect or enforce its rights or the rights of such Holders by such appropriate action, suit, mandamus or other proceedings as it shall deem most effectual to protect and enforce any such right, at law or in equity, either for the specific performance of any covenant or agreement contained in the Indenture, or in aid of the execution of any power granted in the Indenture, or for the enforcement of any other appropriate legal or equitable right or remedy vested in the Trustee, or in such Holders under the Bonds, the Indenture or any applicable law; and upon instituting such proceeding, the Trustee shall be entitled, as a matter of right, to the appointment of a receiver of the amounts pledged under the Indenture, pending such proceedings. If more than one such request is received by the Trustee from the Holders, the Trustee shall follow the written request executed by the Holders of the greatest percentage (which percentage shall be, in any case, not less than a majority in aggregate principal amount) of the Bonds then Outstanding. All rights of action under the Indenture or the Bonds or otherwise may be prosecuted and enforced by the Trustee without the possession of any of the Bonds or the production thereof in any proceeding relating thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in the name of the Trustee for the benefit and protection of all the Holders of such Bonds, subject to the provisions of the Indenture.

Bondholders' Direction of Proceedings. The Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall have the right, by an instrument or concurrent instruments in writing executed and delivered to the Trustee, and upon indemnifying the Trustee to its satisfaction therefor, to direct the time, method and place of conducting all remedial proceedings taken by the Trustee under the Indenture, provided that such direction shall not be otherwise than in accordance with law and the provisions of the Indenture, and that the Trustee shall have the right to decline to follow any such direction which in the opinion of the Trustee would be unjustly prejudicial to Bondholders not parties to such direction.

Limitation on Bondholder's Right to Sue. No Holder of any Bond shall have the right to institute any suit, action or proceeding at law or in equity, for the protection or enforcement of any right or remedy under the Indenture or any applicable law with respect to such Bond, unless (1) such Holder shall have given to the Trustee written notice of the occurrence of an Event of Default; (2) the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding shall have made written request upon the Trustee to exercise the powers granted in the Indenture or to institute such suit, action or proceeding in its own name; (3) such Holder or said Holders shall have tendered to the Trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred in compliance with such request; and (4) the Trustee shall have refused or omitted to comply with such request for a period of sixty (60) days after such written request shall have been received by, and said tender of indemnity shall have been made to, the Trustee.

Such notification, request, tender of indemnity and refusal or omission are declared by the Indenture, in every case, to be conditions precedent to the exercise by any Holder of Bonds of any remedy under the Indenture or under law; it being understood and intended that no one or more Holders of Bonds shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the security of the Indenture or the rights of any other Holders of Bonds, or to enforce any right under the Indenture or applicable law with respect to the Bonds, except in the manner provided in the Indenture, and that all proceedings at law or in equity to enforce any such right shall be instituted, had and maintained in the manner provided in the Indenture and for the benefit and protection of all Holders of the Outstanding Bonds, subject to the provisions of the Indenture.

Absolute Obligation of Institution. Notwithstanding any other provision of the Indenture, or in the Bonds, nothing shall affect or impair the obligation of the Institution, which is absolute and unconditional, to pay the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds to the respective Holders of the Bonds at their respective dates of maturity, or upon call for redemption, as provided in the Indenture, or, subject to the provisions of the Indenture regarding limitation on Bondholders' right to sue, affect or impair the right of such Holders to enforce such payment by virtue of the contract embodied in the Bonds.

Termination of Proceedings. In case any proceedings taken by the Trustee or any one or more Bondholders on account of any Event of Default shall have been discontinued or abandoned for any reason or shall have been determined adversely to the Trustee or the Bondholders, then in every such case the Institution, the Trustee and the Bondholders, subject to any determination in such proceedings, shall be restored to their former positions and rights under the Indenture, severally and respectively, and all rights, remedies, powers and duties of the Institution, the Trustee and the Bondholders shall continue as though no such proceedings had been taken.

Remedies Not Exclusive. No remedy conferred in the Indenture upon or reserved to the Trustee or to the Holders of the Bonds is in to be exclusive of any other remedy or remedies, and each and every such remedy, to the extent permitted by law, shall be cumulative and in addition to any other remedy given under the Indenture or now or hereafter existing at law or in equity or otherwise.

Delay or Omission Not Waiver. No delay or omission of the Trustee or of any Holder of the Bonds to exercise any right or power arising upon the occurrence of any Default shall impair any such right or power or shall be construed to be a waiver of any such Default or an acquiescence therein; and every power and remedy given by the Indenture to the Trustee or to the Holders of the Bonds may be exercised from time to time and as often as may be deemed expedient.

Waiver of Past Defaults. The Trustee may, and upon request of the Holders of not less than a majority in aggregate principal amount of the Outstanding Bonds shall, on behalf of the Holders of all the Bonds waive any past Default under the Indenture and its consequences, except a Default: (A) In the payment of the principal, Redemption Price or Make-Whole Redemption Price of or interest on any Bond, or (B) in respect of a covenant or other provision of the Indenture which, pursuant to the Indenture, cannot be modified or amended without the consent of the Holder of each Outstanding Bond affected. Upon any such waiver, such Default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured, for every purpose of the Indenture, but no such waiver shall extend to any subsequent or other Default or impair any right consequent thereon.

Undertaking for Costs. Subject to the provisions of the Indenture regarding the Trustee’s rights to compensation and indemnification, the parties to the Indenture agree, and each Holder of any Bond by such Person’s acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under the Indenture, or in any suit against the Trustee for any action taken or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this paragraph shall not apply to any suit instituted by the Trustee or to any suit instituted by any Bondholder or group of Bondholders holding in the aggregate more than a majority in aggregate principal amount of the Outstanding Bonds.

Notice of Default. Upon a Responsible Officer’s actual knowledge of the existence of any Default under the Indenture, the Trustee shall notify the Institution in writing as soon as practicable but in any event within 5 Business Days.

Upon a Responsible Officer’s actual knowledge of the existence of any Default under the Indenture, the Trustee shall transmit by mail to all Bondholders, as their names and addresses appear in the bond register, notice of such Default under the Indenture within 90 days, unless such Default shall have been cured or waived; provided, however, that, except in the case of a Default in the payment of the principal, Redemption Price or Make-Whole Redemption Price of or interest on any Bond, the Trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee or a trust committee of directors or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interest of the Bondholders; and provided, further, that in the case of any Default of the character specified in the Indenture, no such notice to Bondholders shall be given until at least 30 days after the occurrence thereof.

Trustee May File Proofs of Claim. In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to the Institution or any other obligor upon the Bonds or the property of the Institution or of such other obligor or their creditors, the Trustee (irrespective of whether the principal of the Bonds shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Institution for the payment of overdue principal or interest) shall be entitled and empowered, by intervention in such proceeding or otherwise: (1) To file and prove a claim for the whole amount of principal (or Redemption Price or Make-Whole Redemption Price, as applicable) and interest owing and unpaid in respect of the Bonds and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel including expenses and fees of outside counsel and allocated costs of internal legal counsel) and of the Bondholders allowed in such judicial proceeding; and (2) To collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same; and any receiver, assignee, trustee, liquidator or sequestrator (or other similar official) in any such judicial proceeding is, by the Indenture, authorized by each Bondholder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Bondholders, to pay to the Trustee any amount due to it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel including expenses and fees of outside counsel and allocated costs of internal legal counsel, and any other amounts due the Trustee under the Indenture.

Nothing contained in the Indenture shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Bondholder any plan of reorganization, arrangement, adjustment or composition affecting the Bonds or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Bondholder in any such proceeding.

The Trustee

Duties, Immunities and Liabilities of Trustee. The Trustee shall, prior to an Event of Default, and after the curing or waiver of all Events of Default which may have occurred, perform such duties and only such duties as are specifically set forth in the Indenture, and, except to the extent required by law, no implied covenants or obligations shall be read into the Indenture against the Trustee. The Trustee shall, during the existence of any Event of Default (which has not been cured or waived), exercise such of the rights and powers vested in it by the Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.

The Institution may, upon thirty (30) days written notice, remove the Trustee at any time unless an Event of Default shall have occurred and then be continuing, and shall remove the Trustee if at any time requested to do so by an instrument or concurrent instruments in writing signed by the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding (or their attorneys duly authorized in writing) or if at any time the Trustee shall cease to be eligible in accordance with the Indenture, or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or a receiver of the Trustee or its property shall be appointed, or any public officer shall take control or charge of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation, in each case by giving written notice of such removal to the Trustee, and thereupon shall appoint a successor Trustee by an instrument in writing.

The Trustee may at any time resign by giving written notice of such resignation to the Institution and by giving the Bondholders notice of such resignation by mail at the addresses shown on the registration books maintained by the Trustee. Upon receiving such notice of resignation, the Institution shall promptly appoint a successor Trustee by an instrument in writing. The Trustee shall not be relieved of its duties until such successor Trustee has accepted appointment.

Any removal or resignation of the Trustee and appointment of a successor Trustee shall become effective upon acceptance of appointment by the successor Trustee. If no successor Trustee shall have been appointed and have accepted appointment within 30 days of giving notice of removal or notice of resignation as aforesaid, the resigning Trustee or any Bondholder (on behalf of itself and all other Bondholders) may petition any court of competent jurisdiction for the appointment of a successor Trustee, and such court may thereupon, after such notice (if any) as it may deem proper, appoint such successor Trustee. Any successor Trustee appointed under the Indenture, shall signify its acceptance of such appointment by executing and delivering to the Institution and to its predecessor Trustee a written acceptance thereof, and thereupon such successor Trustee, without any further act, deed or conveyance, shall become vested with all the moneys, estates, properties, rights, powers, trusts, duties and obligations of such predecessor Trustee, with like effect as if originally named Trustee in the Indenture; but, nevertheless at the request of the successor Trustee, such predecessor Trustee shall execute and deliver any and all instruments of conveyance or further assurance and do such other things as may reasonably be required for more fully and certainly vesting in and confirming to such successor Trustee all the right, title and interest of such predecessor Trustee in and to any property held by it under the Indenture and shall pay over, transfer, assign and deliver to the successor Trustee any money or other property subject to the trusts and conditions set forth in the Indenture. Upon request of the successor Trustee, the Institution shall execute and deliver any and all instruments as may be reasonably required for more fully and certainly vesting in and confirming to such successor Trustee all such moneys, estates, properties, rights, powers, trusts, duties and obligations. Upon acceptance of appointment by a successor Trustee as provided in this paragraph, the Institution shall mail or cause to be mailed (at the expense of the Institution) a notice of the succession of such Trustee to the trusts under the Indenture to the Bondholders at the addresses shown on the registration books maintained by the Trustee. If the Institution fails to mail such notice within 15 days after acceptance of appointment by the successor Trustee, the successor Trustee shall cause such notice to be mailed at the expense of the Institution.

Any successor Trustee shall be a trust company or bank having trust powers in the Commonwealth, having a combined capital and surplus of (or if such trust company or bank is a member of a bank holding system, its bank holding company shall have a combined capital and surplus of) at least fifty million dollars ($50,000,000), and subject to supervision or examination by federal or Commonwealth authority. In case at any time the Trustee shall cease to be eligible in accordance with the provisions of this paragraph, the Trustee shall resign immediately in the manner and with the effect specified in the Indenture.

Preservation and Inspection of Documents. All documents received by the Trustee under the provisions of the Indenture shall be retained in its possession and shall be subject upon prior written notice to the inspection of the Institution and any Bondholder, and their agents and representatives duly authorized in writing, at reasonable hours and under reasonable conditions.

Modification or Amendment of the Indenture

Amendments Permitted. The Indenture and the rights and obligations of the Institution and of the Holders of the Bonds and of the Trustee may be modified or amended from time to time and at any time by an indenture or indentures supplemental to the Indenture, which the Institution and the Trustee may enter into when the written consent of the Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall have been provided to the Trustee. No such modification or amendment shall (1) extend the fixed maturity of any Bond, or reduce the amount of principal thereof, or reduce the rate of interest thereon, or extend the time of payment of interest thereon, or reduce any redemption price or premium payable upon the redemption thereof, without the consent of the Holder of each Bond so affected, or (2) reduce the aforesaid percentage of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or permit the creation of any lien on the Indenture Fund or the amounts pledged under the Indenture prior to or on a parity with the lien created by the Indenture, or deprive the Holders of the Bonds of the lien created by the Indenture on the Indenture Fund and such amounts (except as expressly provided in the Indenture), without the consent of the Holders of all Bonds then Outstanding. It shall not be necessary for the consent of the Bondholders to approve the particular form of any Supplemental Indenture, but it shall be sufficient if such consent shall approve the substance thereof. Promptly after the execution by the Institution and the Trustee of any Supplemental Indenture pursuant to this paragraph, the Trustee shall mail a notice, setting forth in general terms the substance of such Supplemental Indenture, to the Bondholders at the addresses shown on the registration books maintained by the Trustee. Any failure to give such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such Supplemental Indenture.

The Indenture and the rights and obligations of the Institution, of the Trustee and of the Holders of the Bonds may also be modified or amended from time to time and at any time by an indenture or indentures supplemental to the Indenture, which the Institution and the Trustee may enter into without the necessity of obtaining the consent of any Bondholders, but only to the extent permitted by law and only for any one or more of the following purposes: (1) to add to the covenants and agreements of the Institution contained in the Indenture other covenants and agreements thereafter to be observed, to pledge or assign additional security for the Bonds (or any portion thereof), or to surrender any right or power reserved in the Indenture to or conferred upon the Institution, provided that such covenant, agreement, pledge, assignment or surrender shall not materially adversely affect the interests of the Holders of the Bonds; (2) to make such provisions for the purpose of curing any ambiguity, inconsistency or omission, or of curing or correcting any defective provision, contained in the Indenture, or in regard to matters or questions arising under the Indenture, as the Institution or the Trustee may deem necessary or desirable and not inconsistent with the Indenture, and which shall not materially adversely affect the interests of the Holders of the Bonds; (3) to modify, amend or supplement the Indenture or any Supplemental Indenture in such manner as to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect, and to add such other terms, conditions and provisions as may be permitted by said act or similar federal statute, and which shall not materially adversely affect the interests of the Holders of the Bonds (provided, however, that such modifications, amendments, supplements and additions shall be permitted under this paragraph only if qualification under said act or similar federal statute is required by applicable law now or hereafter in effect); or (4) to provide for the procedures required to permit any Bondholder, at its option, to utilize an uncertificated system of registration of its Bond or to facilitate the registration of the Bonds in the name of a nominee of the Securities Depository in accordance with the provisions of the Indenture.

The Trustee may in its discretion, but shall not be obligated to, enter into any such Supplemental Indenture authorized by either of the two preceding paragraphs which materially adversely affects the Trustee's own rights, duties or immunities under the Indenture or otherwise.

In executing any Supplemental Indenture permitted by the terms described in the preceding three paragraphs, the Trustee shall be entitled to receive, and shall be fully protected in relying upon, an opinion of counsel stating that the execution of such Supplemental Indenture is authorized or permitted by the Indenture and complies with the terms thereof.

Effect of Supplemental Indenture. Upon the execution of any Supplemental Indenture pursuant to the Indenture, the Indenture shall be deemed to be modified and amended in accordance therewith, and the respective rights, duties and obligations under the Indenture of the Institution, the Trustee and all Holders of Bonds Outstanding shall thereafter be determined, exercised and enforced under the Indenture subject in all respects to such modification and amendment, and all the terms and conditions of any such Supplemental Indenture shall be deemed to be part of the terms and conditions of the Indenture for any and all purposes.

Amendment of Particular Bonds. The provisions of the Indenture regarding modification or amendment of the Indenture shall not prevent any Bondholder from accepting any amendment as to the particular Bonds held by such Bondholder, provided that due notation thereof is made on such Bonds.

Defeasance

Discharge of Indenture. The Bonds may be paid or discharged by the Institution or the Trustee on behalf of the Institution in any of the following ways: (A) by paying or causing to be paid the principal, Redemption Price or Make-Whole Redemption Price of and interest on all Bonds Outstanding, as and when the same become due and payable; (B) by depositing with the Trustee, in trust, at or before maturity, moneys or securities in the necessary amount (as provided in the Indenture) to pay when due or redeem all Bonds then Outstanding; or (C) by delivering to the Trustee, for cancellation by it, all Bonds then Outstanding.

If the Institution shall also pay or cause to be paid all other sums payable under the Indenture by the Institution, then and in that case at the election of the Institution (evidenced by a Certificate of the Institution provided to the Trustee signifying the intention of the Institution to discharge all such indebtedness and the Indenture and upon receipt by the Trustee of an Opinion of Counsel to the effect that the obligations under the Indenture and the Bonds have been discharged), and notwithstanding that any Bonds shall not have been surrendered for payment, the Indenture and the pledge of the Indenture Fund and all amounts held therein made under the Indenture and all covenants, agreements and other obligations of the Institution under the Indenture (except as otherwise provided in the Indenture) shall cease, terminate, become void and be completely discharged and satisfied and the Bonds deemed paid.

Discharge of Liability on Bonds. Upon the deposit with the Trustee, in trust, at or before maturity, of money or securities in the necessary amount (as provided in the Indenture) to pay or redeem any Outstanding Bond (whether upon or prior to its maturity or the redemption date of such Bond), provided that, if such Bond is to be redeemed prior to maturity, notice of such redemption shall have been given as provided in the Indenture or provision satisfactory to the Trustee shall have been made for the giving of such notice, then all liability of the Institution in respect of such Bond shall cease, terminate and be completely discharged, and the Bonds shall be deemed paid, except only that thereafter the Holder thereof shall be entitled to payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on such Bond by the Institution, and the Institution shall remain liable for such payments, but only out of such money or securities deposited with the Trustee as aforesaid for their payment, subject, however, to the provisions of the Indenture regarding payment of Bonds after discharge of the Indenture.

The Institution may at any time surrender to the Trustee for cancellation by it any Bonds previously issued and delivered, which the Institution may have acquired in any manner whatsoever, and such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired.

Payment of Bonds After Discharge of Indenture. Notwithstanding any provisions of the Indenture, any moneys held by the Trustee in trust for the payment of the principal, Redemption Price or Make-Whole Redemption Price of, or interest on, any Bonds and remaining unclaimed for three years (or, if shorter, one day before such moneys would escheat to the Commonwealth under then applicable Massachusetts law) after such principal, Redemption Price or Make-Whole Redemption Price or interest, as the case may be, has become due and payable (whether at maturity or upon call for redemption), shall be repaid to the Institution free from the trusts created by the Indenture upon receipt of an indemnification agreement acceptable to the Institution and the Trustee indemnifying the Institution and the Trustee with respect to claims of Holders of Bonds which have not yet been paid, and all liability of the Trustee and the Institution with respect to such moneys shall thereupon cease; provided, however, that before the repayment of such moneys to the Institution as aforesaid, the Trustee may (at the cost of the Institution) first mail to the Holders of Bonds which have not yet been paid, at the addresses shown on the registration books maintained by the Trustee, a notice, in such form as may be deemed appropriate by the Trustee with respect to the Bonds so payable and not presented and with respect to the provisions relating to the repayment to the Institution of the moneys held for the payment thereof.

Substitute Defeasance Securities. At the written Request of the Institution, and upon compliance with the conditions set forth below, the Trustee shall redeem, sell, transfer or otherwise dispose of any Investment Securities held by the Trustee pursuant to the Indenture and purchase substitute Investment Securities, as identified by the Institution, in principal amounts and bearing interest at rates such that the principal of and interest on such substitute Investment Securities to be purchased, together with the principal of and interest on any securities then held by the Trustee pursuant to the Indenture that are not to be redeemed, sold, transferred or otherwise disposed of, shall be sufficient to pay the principal, Redemption Price or Make-Whole Redemption Price and interest as the same become due. The Trustee shall purchase such substitute Investment Securities with the proceeds derived from the redemption, sale, transfer, or other disposition on the date of such transaction. The transactions may be consummated only if the Trustee shall have received (i) a report prepared by a firm of independent, certified public accountants selected by the Institution who are recognized on a nationwide basis for skill and expertise in the preparation of such verifications confirming that the amounts of moneys and investments remaining after such payment will mature and will earn interest in such amounts and at such times so that sufficient moneys will be available to pay when due all outstanding installments of interest on and principal, Redemption Price and Make-Whole Redemption Price of the Bonds; and (ii) an Opinion of Counsel selected by the Institution to the effect that such substitution of Investment Securities is permitted under the Indenture. If, following any such substitution of Investment Securities, the funds held by the Trustee under the Indenture contain moneys that will not be required for the payment of installments of interest on and principal, Redemption Price or Make-Whole Redemption Price of the Bonds, the Institution may direct that such excess moneys be promptly paid over to the Institution.

Purchase of Bonds by Institution. The Institution may purchase the Bonds on the open market and tender them to the Trustee for cancellation at any time. If, following any such tender of Bonds by the Institution, the funds held by the Trustee under the Indenture contain moneys that will not be required for the payment of installments of interest on and principal, Redemption Price or Make-Whole Redemption Price of the Bonds, the Institution may direct that such excess moneys be promptly paid over to the Institution; provided, however, that (i) the Trustee and the Institution shall, at the expense of the Institution, confirm by a mathematical verification prepared by a firm of independent, certified public accountants selected by the Institution who are recognized on a nationwide basis for skill and expertise in the preparation of such verifications that the amounts of moneys and investments remaining after such payment will mature and will earn interest in such amounts and at such times so that sufficient moneys will be available to pay when due all outstanding installments of interest on and principal, Redemption Price and Make-Whole Redemption Price of the Bonds; and (ii) the Trustee shall have received an Opinion of Counsel selected by the Institution to the effect that such purchase, tender and cancellation is permitted under the Indenture.

Limitation of Rights to Parties and Bondholders

Nothing in the Indenture or in the Bonds expressed or implied is intended or shall be construed to give to any Person other than the Institution, the Trustee and the Holders of the Bonds, any legal or equitable right, remedy or claim under or in respect of the Indenture or any covenant, condition or provision therein contained; and all such covenants, conditions and provisions are and shall be held to be for the sole and exclusive benefit of the Institution, the Trustee and the Holders of the Bonds.

Evidence of Rights of Bondholders

Any request, consent or other instrument required or permitted by the Indenture to be signed and executed by Bondholders may be in any number of concurrent instruments of substantially similar tenor and shall be signed or executed by such Bondholders in Person or by an agent or agents duly appointed in writing.

The fact and date of the execution by any Person of any such request, consent or other instrument or writing may be proved by the certificate of any notary public or other officer of any jurisdiction, authorized by the laws thereof to take acknowledgments of deeds, certifying that the Person signing such request, consent or other instrument acknowledged to him the execution thereof, or by an affidavit of a witness of such execution duly sworn to before such notary public or other officer.

The ownership of Bonds shall be proved by the registration books for the Bonds held by the Trustee.

Any request, consent, or other instrument or writing of the Holder of any Bond shall bind every future Holder of the same Bond and the Holder of every Bond issued in exchange therefor or in lieu thereof, in respect of anything done or suffered to be done by the Trustee or the Institution in accordance therewith or reliance thereon.

Waiver of Personal Liability

No member, officer, agent or employee of the Institution shall be individually or personally liable for the payment of the principal, Redemption Price or Make-Whole Redemption Price of or interest on the Bonds or be subject to any personal liability or accountability by reason of the issuance thereof or the performance of any duty under the Indenture; but nothing contained in the Indenture shall relieve any such member, officer, agent or employee from the performance of any official duty provided by law or by the Indenture.

Governing Law; Venue

The Indenture shall be construed in accordance with and governed by the Constitution and the laws of the Commonwealth applicable to contracts made and performed in the Commonwealth. The Indenture shall be enforceable in the Commonwealth, and any action arising under the Indenture shall (unless waived by the Institution) be filed and maintained in the Commonwealth.

CUSIP Numbers

Neither the Trustee nor the Institution shall be liable for any defect or inaccuracy in the CUSIP number that appears on any Bond or in any redemption notice.

APPENDIX D

PROPOSED FORM OF OPINION OF COUNSEL TO THE INSTITUTION

March 12, 2024

President and Fellows of Harvard College
440 Holyoke Center
1350 Massachusetts Avenue
Cambridge, Massachusetts 02138

Ladies and Gentlemen:

As counsel for President and Fellows of Harvard College (the "College"), we have been requested to furnish you with an opinion in connection with the proposed issue by the College of $750,000,000 principal amount of Taxable Bonds, Series 2024A (the "Bonds").

The College is an educational corporation incorporated on May 31, 1650 by act of the Colony of Massachusetts Bay confirmed, as amended, in the Constitution of 1780 of The Commonwealth of Massachusetts, constituting, together with certain acts of the General Court of The Commonwealth of Massachusetts and its predecessors and certain corporate articles of amendment, Harvard's charter (the "Charter").

We have examined executed copies of the Indenture of Trust dated as of March 1, 2024 (the "Indenture of Trust") between the College and The Bank of New York Mellon Trust Company, N.A. (the "Trustee") and a certified copy of proceedings of the College authorizing the execution of the Indenture of Trust and certain other documents.

In addition, we have examined such other documents and have made such investigation and such examination of law as we have deemed necessary for the purposes of the following opinion.

For purposes of this opinion, we have assumed that the Trustee has all requisite power and authority and has taken all necessary corporate action, consistent with all applicable laws and regulations, to execute and deliver the Indenture of Trust and to effect the transactions contemplated thereby.

Based upon the foregoing, we are of the opinion that:

1. The Indenture of Trust has been duly authorized, executed and delivered and constitutes a valid and legally binding obligation of the College and, subject to the qualifications stated in the unnumbered paragraphs at the end of this opinion, is enforceable against the College in accordance with its terms.

2. The Bonds have been duly authorized, issued and delivered against payment of the agreed upon consideration and, subject to the qualifications contained in the unnumbered paragraphs at the end of this opinion, are valid, legally binding, general obligations of the College, enforceable against the College in accordance with their terms.

Our opinion that the Indenture of Trust delivered to you today is the legal, valid and binding obligation of the College, enforceable in accordance with its terms, is subject to (a) bankruptcy, insolvency, reorganization, moratorium, and other similar laws affecting the rights and remedies of creditors and secured parties, and (b) general principles of equity. We do not express any opinion herein as to the availability of the remedy of specific performance or injunctive relief or other relief in equity upon breach of any of the agreements, documents, or obligations referred to herein.

The opinions expressed herein are subject to the qualification that the enforceability of provisions in the Indenture of Trust providing for indemnification or contribution may be limited by public policy considerations. In addition, we express no opinion as to (i) the extent to which broadly worded waivers may be enforced, (ii) the enforceability of any provision of the Indenture of Trust that purports to grant the right of setoff, that permits the exercise of a right of setoff against amounts not then due, or that constitutes a penalty or forfeiture, or (iii) the enforceability of any provision that provides for conclusive presumptions or determinations, non-effectiveness of oral modifications, powers of attorney, waiver of or consent to service of process and venue, or waiver of offset or defenses.

In addition, certain provisions contained in the Indenture of Trust may be unenforceable in whole or in part but the inclusion of such provisions in the Indenture of Trust does not affect the validity of any of the other provisions thereof, and the remaining provisions of the Indenture of Trust are sufficient for the practical realization of the benefits intended to be provided thereby.

This opinion is solely for your benefit and the benefit of the Underwriters who purchase the Bonds, and may not be relied upon by any subsequent holders of the Bonds or by any other person.

Very truly yours,

PRESIDENT AND FELLOWS OF HARVARD COLLEGE • TAXABLE BONDS, SERIES 2024A

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