NEW ISSUE – BOOK-ENTRY ONLY

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

$1,500,000,000
YALE UNIVERSITY
Taxable Bonds, Series 2020A

Consisting of

$500,000,000 0.873% Bonds due April 15, 2025 Price: 100% CUSIP: 98459LAA1†
$500,000,000 1.482% Bonds due April 15, 2030 Price: 100% CUSIP: 98459LAB9†
$500,000,000 2.402% Bonds due April 15, 2050 Price: 100% CUSIP: 98459LAC7†

Interest Payable: April 15 and October 15 **Dated: Date of Delivery**

Yale University Taxable Bonds, Series 2020A (the "Bonds") will be issued pursuant to the terms of an Indenture of Trust, dated as of June 1, 2020 (the "Indenture"), by and between Yale University (the "Issuer") and U.S. Bank National Association, as trustee (the "Trustee"). The Issuer has authorized the issuance of the Bonds.

The Bonds will be issued in fully-registered form in denominations of $1,000 or any integral multiple thereof and, when issued, will be registered under a 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 or 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. See "BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" herein.

Interest on the Bonds will be payable on April 15 and October 15 of each year, commencing on October 15, 2020. So long as the Bonds are held by DTC, the principal or Redemption Price (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 or redemption price and interest to the DTC Participants (as defined herein) for subsequent disbursement to the Beneficial Owners of the Bonds, as more fully described in "BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" herein.

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

Interest on the Bonds is generally subject to inclusion in federal gross income of the Holders thereof. For a discussion of certain federal tax considerations, see "CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS" herein.

The Bonds constitute an unsecured general obligation of the Issuer. The Issuer has other unsecured indebtedness outstanding. See APPENDIX A – "THE UNIVERSITY – Outstanding Indebtedness". The Issuer 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 quick reference only. It is not intended to be a summary of this issue. Investors are advised to read this entire Offering Memorandum to obtain information essential to the making of an informed investment decision.

The Bonds are offered when, as and if issued and received by the Underwriters, subject to prior sale, to withdrawal or modification of the offer without notice, and to the approval of legality and certain other matters by Day Pitney LLP, Hartford, Connecticut, bond counsel to the Issuer. Certain legal matters will be passed upon for the Underwriters by their counsel, Greenberg Traurig, LLP, Boston, Massachusetts. It is expected that the Bonds in book-entry form will be available for delivery to DTC in New York, New York or its custodial agent on or about June 9, 2020.

Barclays **Goldman Sachs & Co. LLC** **J.P. Morgan**

June 2, 2020

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

No dealer, broker, salesperson or other person has been authorized by the Issuer or the Underwriters to give any information or to make any representations with respect to the Bonds, other than those contained in this Offering Memorandum, and, if given or made, such other information or representations must not be relied upon as having been authorized by any of the foregoing. This Offering Memorandum does not constitute an offer by any person to sell or the solicitation by any person of an offer to buy, nor shall there be any sale of the Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

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 the exemption contained in Section 3(a)(4) thereof. 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 Issuer 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 Issuer or the Underwriters that 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. To be clear, action may be required to secure exemptions from the blue sky registration requirements either for the primary distributions 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 Issuer 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 Issuer since the date hereof.

Certain statements included or incorporated by reference in this Offering Memorandum may 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 – "THE UNIVERSITY". A number of important factors, including factors affecting the Issuer'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 ISSUER DOES NOT PLAN TO ISSUE ANY UPDATES OR REVISIONS TO THOSE FORWARD-LOOKING STATEMENTS IF OR WHEN ITS EXPECTATIONS CHANGE, OR EVENTS, CONDITIONS OR CIRCUMSTANCES ON WHICH SUCH STATEMENTS ARE BASED OCCUR. In addition, forward-looking statements and reports included in this Offering Memorandum do not contemplate the economic or other effects related to the COVID-19 pandemic, unless specifically referenced.

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.

INFORMATION CONCERNING OFFERING RESTRICTIONS IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES

REFERENCES HEREIN TO THE "ISSUER" MEAN YALE UNIVERSITY 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 INVESTORS IN THE EUROPEAN ECONOMIC AREA AND UNITED KINGDOM

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 RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA (THE "EEA") OR THE UNITED KINGDOM. FOR THESE PURPOSES, A 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 2016/97/EU (AS AMENDED), 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 2017/1129 (EU) (AS AMENDED OR SUPERSEDED, THE "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 RETAIL INVESTORS IN THE EEA OR THE UNITED KINGDOM HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE EEA OR THE UNITED KINGDOM MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION. THIS OFFERING MEMORANDUM HAS BEEN PREPARED ON THE BASIS THAT ANY OFFER OF BONDS IN ANY MEMBER STATE OF THE EEA OR THE UNITED KINGDOM WILL BE MADE PURSUANT TO AN EXEMPTION UNDER THE PROSPECTUS REGULATION FROM THE REQUIREMENT TO PUBLISH A PROSPECTUS FOR OFFERS OF BONDS. THIS OFFERING MEMORANDUM IS NOT A PROSPECTUS FOR THE PURPOSES OF THE PROSPECTUS REGULATION.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

THIS OFFERING MEMORANDUM HAS NOT BEEN APPROVED FOR THE PURPOSES OF SECTION 21 OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 ("FSMA") AND DOES NOT CONSTITUTE AN OFFER TO THE PUBLIC IN ACCORDANCE WITH THE PROVISIONS OF SECTION 85 OF THE FSMA. IT IS FOR DISTRIBUTION ONLY TO, AND IS DIRECTED SOLELY AT, PERSONS WHO (I) ARE INVESTMENT PROFESSIONALS, AS SUCH TERM IS DEFINED IN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005, AS AMENDED (THE "FINANCIAL PROMOTION ORDER"), (II) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A) TO (D) OF THE FINANCIAL PROMOTION ORDER, OR (III) ARE PERSONS TO WHOM AN INVITATION OR INDUCEMENT TO ENGAGE IN INVESTMENT ACTIVITY (WITHIN THE MEANING OF SECTION 21 OF THE FSMA) IN CONNECTION WITH THE ISSUE OR SALE OF ANY SECURITIES MAY OTHERWISE BE LAWFULLY COMMUNICATED OR CAUSED TO BE COMMUNICATED (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). THIS OFFERING MEMORANDUM IS DIRECTED

ONLY AT RELEVANT PERSONS AND MUST NOT BE ACTED ON OR RELIED ON BY PERSONS WHO ARE NOT RELEVANT PERSONS, INCLUDING IN CIRCUMSTANCES IN WHICH SECTION 21(1) OF THE FSMA APPLIES TO THE ISSUER. 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. ANY PERSON WHO IS NOT A RELEVANT PERSON SHOULD NOT ACT OR RELY ON THIS OFFERING MEMORANDUM OR ANY OF ITS CONTENTS.

NOTICE TO PROSPECTIVE INVESTORS IN SWITZERLAND

THE BONDS MAY NOT BE PUBLICLY OFFERED, DIRECTLY OR INDIRECTLY, IN SWITZERLAND WITHIN THE MEANING OF THE SWISS FINANCIAL SERVICES ACT (THE "FINSA") AND WILL NOT BE ADMITTED TO TRADING ON ANY TRADING VENUE (EXCHANGE OR MULTILATERAL TRADING FACILITY) IN SWITZERLAND. NEITHER THIS OFFERING MEMORANDUM NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE BONDS CONSTITUTES A PROSPECTUS AS SUCH TERM IS UNDERSTOOD PURSUANT TO FINSA, AND NEITHER THIS OFFERING MEMORANDUM NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE BONDS MAY BE PUBLICLY DISTRIBUTED OR OTHERWISE MADE PUBLICLY AVAILABLE IN SWITZERLAND.

NOTICE TO PROSPECTIVE INVESTORS IN HONG KONG

THE BONDS MAY NOT BE OFFERED OR SOLD 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) ("COMPANIES (WINDING UP AND MISCELLANEOUS PROVISIONS) ORDINANCE") OR WHICH DO NOT CONSTITUTE AN INVITATION TO THE PUBLIC WITHIN THE MEANING OF THE SECURITIES AND FUTURES ORDINANCE (CAP. 571 OF THE LAWS OF HONG KONG) ("SECURITIES AND FUTURES ORDINANCE"), OR (II) TO "PROFESSIONAL INVESTORS" AS DEFINED IN THE SECURITIES AND FUTURES ORDINANCE AND ANY RULES MADE THEREUNDER, OR (III) IN OTHER CIRCUMSTANCES WHICH DO NOT RESULT IN THE DOCUMENT BEING A "PROSPECTUS" AS DEFINED IN THE COMPANIES (WINDING UP AND MISCELLANEOUS PROVISIONS) ORDINANCE, AND 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 SECURITIES LAWS OF HONG KONG) OTHER THAN WITH RESPECT TO BONDS WHICH ARE OR ARE INTENDED TO BE DISPOSED OF ONLY TO PERSONS OUTSIDE HONG KONG OR ONLY TO "PROFESSIONAL INVESTORS" IN HONG KONG AS DEFINED IN THE SECURITIES AND FUTURES ORDINANCE AND ANY RULES MADE THEREUNDER.

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 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 INVESTORS IN KOREA

NO SECURITIES REGISTRATION STATEMENT REGARDING THE BONDS HAS BEEN OR WILL BE FILED WITH THE FINANCIAL SERVICES COMMISSION OF KOREA FOR PUBLIC OFFERING OF THE BONDS IN 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 FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN KOREA OR TO ANY RESIDENT (AS DEFINED UNDER THE FOREIGN EXCHANGE TRANSACTION ACT OF KOREA AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY THE "FETL")) OF KOREA FOR A PERIOD OF ONE YEAR FROM THE DATE OF ISSUANCE OF THE BONDS, EXCEPT AS OTHERWISE PERMITTED UNDER THE APPLICABLE LAWS AND REGULATIONS OF KOREA. WITHOUT PREJUDICE TO THE FOREGOING, THE NUMBER OF LOTS OF BONDS OFFERED, SOLD OR DELIEVERED IN KOREA OR TO A RESIDENT OF KOREA SHALL BE LESS THAN FIFTY AND FOR A PERIOD OF ONE YEAR FROM THE ISSUE DATE OF THE BONDS, NONE OF THE LOTS OF BONDS SOLD IN KOREA MAY BE DIVIDED OR SPLIT IN A MANNER WHICH WOULD RESULT IN AN INCREASED NUMBER OF LOTS OF THE BONDS. FURTHERMORE, THE BONDS MAY NOT BE RESOLD TO KOREAN RESIDENTS EXCEPT AS OTHERWISE PERMITTED UNDER THE APPLICABLE LAWS AND REGULATIONS OF KOREA.

NOTICE TO INVESTORS IN SINGAPORE

THIS OFFERING MEMORANDUM HAS NOT BEEN REGISTERED AS A PROSPECTUS WITH THE MONETARY AUTHORITY OF SINGAPORE AND THE OFFER OF THE BONDS IS MADE ONLY TO INSTITUTIONAL AND ACCREDITED INVESTORS, EACH AS DEFINED IN SECTION 4A OF THE SECURITIES AND FUTURES ACT, CHAPTER 289 OF SINGAPORE (THE "SFA"). ACCORDINGLY, THIS OFFERING MEMORANDUM AND ANY OTHER DOCUMENT OR MATERIAL USED IN CONNECTION WITH THE OFFER OR SALE, OR INVITATION FOR SUBSCRIPTION OR PURCHASE, OF THE BONDS MAY NOT BE 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 OF THE SFA) UNDER SECTION 274 OF THE SFA, OR (II) TO AN ACCREDITED INVESTOR (AS DEFINED IN SECTION 4A OF THE SFA) PURSUANT TO SECTION 275(1) OF THE SFA.

NOTICE TO INVESTORS IN JAPAN

THE SECURITIES 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 ORGANIZED UNDER THE LAWS OF ANY OTHER JURISDICTION BUT HAVING A BRANCH IN 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 PROSPECTIVE INVESTORS IN THE REPUBLIC OF CHINA (TAIWAN)

THE BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED OR FILED WITH, OR APPROVED BY, THE FINANCIAL SUPERVISORY COMMISSION OF THE REPUBLIC OF CHINA (TAIWAN) AND/OR OTHER REGULATORY AUTHORITY OF THE REPUBLIC OF CHINA (TAIWAN) PURSUANT TO RELEVANT SECURITIES LAWS AND REGULATIONS AND MAY NOT BE SOLD, RESOLD, ISSUED OR OFFERED WITHIN THE REPUBLIC OF CHINA (TAIWAN) THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES THAT CONSTITUTE AN OFFER OR A SOLICITATION OF AN OFFER OR A PRIVATE PLACEMENT WITHIN THE MEANING OF THE SECURITIES AND EXCHANGE LAW OF THE REPUBLIC OF CHINA (TAIWAN) OR RELEVANT LAWS AND REGULATIONS THAT REQUIRES A REGISTRATION, FILING OR APPROVAL OF THE FINANCIAL SUPERVISORY COMMISSION OF THE REPUBLIC OF CHINA (TAIWAN) AND/OR OTHER REGULATORY AUTHORITY OF THE REPUBLIC OF CHINA (TAIWAN). NO PERSON OR ENTITY IN THE REPUBLIC OF CHINA (TAIWAN) HAS BEEN AUTHORIZED TO OFFER, SELL, GIVE ADVICE REGARDING OR OTHERWISE INTERMEDIATE THE OFFERING, REMARKETING OR SALE OF THE BONDS. INVESTORS IN THE REPUBLIC OF CHINA (TAIWAN) WHO SUBSCRIBE FOR OR PURCHASE THE BONDS SHALL COMPLY WITH ALL RELEVANT SECURITIES, TAX AND FOREIGN EXCHANGE LAWS AND REGULATIONS IN EFFECT IN REPUBLIC OF CHINA (TAIWAN).

NOTICE TO PROSPECTIVE INVESTORS IN THE PEOPLE'S REPUBLIC OF CHINA

THIS OFFERING MEMORANDUM AND ANY INFORMATION CONTAINED HEREIN DO NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY ANY BONDS OR ANY TYPE OF SECURITIES IN THE PEOPLE'S REPUBLIC OF CHINA (EXCLUDING HONG KONG, MACAU AND TAIWAN, THE "PRC") TO ANY PERSON TO WHOM IT IS UNLAWFUL TO MAKE SUCH AN OFFER OR SOLICITATION IN THE PRC. THE BONDS HAVE NOT BEEN SUBMITTED TO OR APPROVED OR VERIFIED BY OR REGISTERED WITH THE CHINA SECURITIES REGULATORY COMMISSION, THE PEOPLE'S BANK CHINA OR OTHER RELEVANT GOVERNMENTAL AUTHORITIES IN THE PRC. THE BONDS MAY NOT BE OFFERED, SOLD OR DELIVERED OR AVAILABLE FOR REOFFERING, RESALE OR REDELIVERY DIRECTLY OR INDIRECTLY TO ANY PERSON IN THE PRC, OTHER THAN IN FULL COMPLIANCE WITH THE RELEVANT LAWS AND REGULATIONS OF THE PRC. NEITHER ISSUER 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 THE PRC, OR PURSUANT TO AN EXEMPTION AVAILABLE THEREUNDER, OR ASSUME ANY RESPONSIBILITY FOR FACILITATING ANY SUCH DISTRIBUTION OR OFFERING. NEITHER THIS OFFERING MEMORANDUM NOR ANY ADVERTISEMENT OR OTHER OFFERING MATERIAL MAY BE DISTRIBUTED OR PUBLISHED IN THE PRC, EXCEPT UNDER CIRCUMSTANCES THAT WILL RESULT IN COMPLIANCE WITH ANY APPLICABLE LAWS AND REGULATIONS.

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SUMMARY OF THE OFFERING

Issuer:	Yale University
Securities Offered:	$1,500,000,000 Taxable Bonds, Series 2020A, consisting of: $500,000,000 0.873% Bonds due April 15, 2025 Price: 100% $500,000,000 1.482% Bonds due April 15, 2030 Price: 100% $500,000,000 2.402% Bonds due April 15, 2050 Price: 100%
Interest Accrual Date:	Interest will accrue from the Date of Issuance.
Interest Payment Dates:	April 15 and October 15 of each year, commencing October 15, 2020.
Redemption:	The Bonds are subject to optional redemption (i) on or after the applicable Par Call Date, at a redemption price of par, and (ii) prior to the applicable Par Call Date, at the Make-Whole Redemption Price, all as discussed more fully herein.
Date of Issuance:	June 9, 2020.
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 net proceeds of the Bonds will be used for general corporate purposes of the Issuer.
Ratings:	Moody's: Aaa S&P: AAA

OFFERING MEMORANDUM

Relating to

$1,500,000,000
YALE UNIVERSITY
Taxable Bonds, Series 2020A

INTRODUCTION

Purpose of this Offering Memorandum

The purpose of this Offering Memorandum, including the cover page and appendices hereto, is to set forth certain information concerning Yale University (the "Issuer"), and the issuance of $1,500,000,000 Yale University Taxable Bonds, Series 2020A (the "Bonds"). The information contained in this Offering Memorandum is provided for use in connection with the initial sale of the Bonds. The definitions of certain terms used and not defined herein are contained in APPENDIX C – "DEFINITIONS OF CERTAIN TERMS".

Purpose of the Bonds

The Issuer expects to use the proceeds of the Bonds for its general corporate purposes and consistent with its status as an organization described in Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the "Code").

The Issuer

General

Yale University is an independent, nonprofit, nonsectarian institution of higher education. The Issuer, which educates both men and women in all its academic departments, consists of Yale College, the Graduate School of Arts and Sciences, 12 professional schools, and various research institutes and museums. The Issuer was founded and given its original charter by the General Assembly of the Colony of Connecticut in 1701. For the fall semester 2019, the Issuer enrolled 6,092 undergraduate students and 7,517 students in its graduate and professional programs. As of the beginning of the fall semester 2019, the Issuer employed 4,838 faculty (plus 1,427 postdoctoral associates) and 10,298 staff. For further information concerning the Issuer, see APPENDIX A - "THE UNIVERSITY," and APPENDIX B - "CONSOLIDATED FINANCIAL STATEMENTS OF YALE UNIVERSITY," both of which should be read in their entirety.

Effects of COVID-19

The information contained under this heading updates and supplements the information contained in APPENDIX A – "THE UNIVERSITY". Appendix A has not been updated to provide information in connection with impacts of the COVID-19 pandemic on the Issuer. The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was declared a pandemic by the World Health Organization on March 11, 2020, and a national emergency by the President of the United States on March 13, 2020. The outbreak has affected travel, commerce and financial markets globally, and is widely expected to affect economic growth worldwide and the higher education landscape in general. On March 10, 2020, the Governor of Connecticut issued declarations of public health and civil preparedness emergencies, and subsequently issued a series of executive orders intended to address the spread of COVID-19, implementing various actions and limiting certain activities, including restrictions on the number of people who can attend gatherings, closure of campuses to most students and the closure of all non-essential businesses. Additional executive orders further restricting activities or easing restrictions may be forthcoming.

The Issuer is carefully monitoring the COVID-19 pandemic and the associated public health crisis and has taken a number of measures to protect its campus and surrounding communities, including:

- Asking students to leave and remain off-campus beginning on March 10, 2020 and crediting students who remained off-campus their unused portions of room and meal plans;
- Teaching classes and administering final examinations remotely through online tools through the end of the spring semester;
- Limiting the size of meetings and events at the Issuer;
- Reducing the number of people working on campus by urging most faculty and staff to work from home beginning March 23, 2020; and
- Canceling all in-person, campus-based summer programs at least through June 27, 2020.

The Issuer cannot predict when it will resume on-campus instruction or how many students will return when on-campus instruction resumes. The pandemic is limiting the ability of potential future students from visiting the Issuer's campus, which may limit the size of its future student body. The pandemic also has resulted in the cancellation or deferral of elective procedures at many healthcare institutions, which is likely to affect patient care revenues in fiscal year 2020, and perhaps beyond, derived from the School of Medicine's Yale Medicine practice.

The Issuer is tracking the impacts of the COVID-19 pandemic on the current fiscal year 2020 budget and on the fiscal year 2021 budget plan. The Issuer is revisiting assumptions in the original fiscal year 2021 budget plan and also is developing and analyzing various scenarios and contingency plans to respond both operationally and financially to the impacts of COVID-19. The Issuer has undertaken cost containment measures and is adjusting its operating and capital budget plans in light of the impacts of COVID-19, and continues to monitor, plan and adjust its plans as the situation evolves.

While the potential impact on the Issuer cannot be predicted at this time, the continued spread of the outbreak could have a material adverse effect on the Issuer's financial performance. The extent of the impact will depend on future developments beyond the control of the Issuer, including (i) the duration and spread of the outbreak, (ii) any additional restrictions and advisories imposed by federal, state and local governments, (iii) the continued effects of the pandemic on the financial markets and higher education institutions generally, and (iv) the continued effects of the pandemic on the economy overall, all of which are highly uncertain and cannot be predicted. Any forward-looking statements and reports included in this Offering Memorandum do not contemplate the economic or other effects related to the COVID-19 pandemic on the Issuer, unless specifically referenced. Actual results could differ materially from those anticipated in such forward-looking statements and reports.

Additional information about the Issuer's actions and response to the COVID-19 pandemic can be found at https://covid19.yale.edu. Reference to the Issuer's website address is presented herein for informational purposes only. Such website and the information or links contained therein are not incorporated into, and are not part of, this Offering Memorandum.

The Bonds

The Bonds are to be issued in accordance with the provisions of the Indenture of Trust, dated as of June 1, 2020 (the "Indenture"), by and between the Issuer and U.S. Bank National Association, 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 Issuer will pay the Trustee a sum equal to the amount payable on such Payment Date as principal of and interest on the Bonds. See "THE BONDS" herein.

Book-Entry 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, DTC Participants. 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 or Redemption Price of and interest on the Bonds are payable by the Trustee to DTC, which will in turn remit such payments to the DTC 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. Purchasers may own beneficial ownership interests in the Bonds through DTC (in the United States) or Clearstream Banking S.A. ("Clearstream Luxembourg") or Euroclear Bank S.A./N.V. or its successor, as operator of the Euroclear System ("Euroclear") (in Europe). See "BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" herein.

Security for the Bonds

The Bonds constitute unsecured general obligations of the Issuer. The Issuer has other unsecured indebtedness outstanding. See APPENDIX A – "YALE UNIVERSITY – Outstanding Indebtedness". The Issuer 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 and APPENDIX A – "YALE UNIVERSITY – Outstanding Indebtedness" and APPENDIX B – "CONSOLIDATED FINANCIAL STATEMENTS OF YALE UNIVERSITY".

Additional Bonds

The Issuer may, from time to time, without the consent of the Bondholders, issue additional bonds under the Indenture ("Additional Bonds"), pursuant to a supplement to the Indenture. Such Additional Bonds, if issued, will become part of the same series as the Bonds, will bear interest at the same rate, mature on the same date, be issued in the same Authorized Denomination, be subject to the same redemption provisions, and have the same CUSIP number as one or more of the Bonds.

Outstanding Indebtedness

As of May 1, 2020, the outstanding long-term indebtedness of the Issuer totaled approximately $3.1 billion. For additional information regarding the outstanding indebtedness of the Issuer, see APPENDIX A – "YALE UNIVERSITY – Outstanding Indebtedness" and APPENDIX B – "CONSOLIDATED FINANCIAL STATEMENTS OF YALE UNIVERSITY" attached hereto.

Redemption

The Bonds are subject to optional redemption by the Issuer prior to maturity as described herein. See "THE BONDS – Redemption" 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 D – "EXCERPTS FROM THE INDENTURE" attached hereto for excerpts from the Indenture.

All capitalized terms used in this Offering Memorandum and not otherwise defined herein have the same meanings as in the Indenture. See APPENDIX C – "DEFINITIONS OF CERTAIN TERMS" 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 Issuer.

THE BONDS

General

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 cover page hereof. The Bonds will be delivered in the form of fully registered Bonds in denominations of $1,000 or any integral multiple thereof. The Bonds will be registered under a book-entry system initially in the name of "Cede & Co.," as nominee of DTC and will be evidenced by a single Bond in the aggregate principal amount of each maturity of the Bonds. Registered ownership of the Bonds, or any portions thereof, may not thereafter be transferred except as set forth in the Indenture. See "BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" herein.

Interest on the Bonds will be payable on April 15 and October 15 of each year (each, an "Interest Payment Date"), commencing on October 15, 2020 and will be calculated on the basis of a 360-day year, consisting of twelve 30-day months.

The principal and the Redemption Price 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 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. The Record Date is the last day of the month immediately preceding each Interest Payment Date. 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 and interest payments will be made to Cede & Co. by wire transfer in immediately available funds.

Redemption

Optional Redemption at Par

The Bonds are subject to optional redemption prior to maturity at the written direction of the Issuer to the Trustee, in whole or in part (in Authorized Denominations) on any Business Day, on or after the applicable Par Call Date (as defined below), at a Redemption Price equal to 100% of the principal amount of Bonds to be redeemed, plus accrued and unpaid interest on such Bonds to, but excluding, the redemption date.

Optional Redemption at Make-Whole Redemption Price

The Bonds are subject to optional redemption prior to maturity at the written direction of the Issuer to the Trustee, in whole or in part (in Authorized Denominations) on any Business Day, prior to the applicable Par Call Date, at the Make-Whole Redemption Price (as defined below).

"*Par Call Date*" means (i) in the case of the Bonds maturing on April 15, 2025, the date that is one month prior to the maturity date of such Bonds (March 15, 2025), (ii) in the case of the Bonds maturing on April 15, 2030, the date that is three months prior to the maturity date of such Bonds (January 15, 2030), and (iii) in the case of the Bonds maturing on April 15, 2050, the date that is six months prior to the maturity date of such Bonds (October 15, 2049).

"*Make-Whole Redemption Price*" means an amount equal to the greater of (a) 100% of the principal amount of the Bonds to be redeemed, or (b) the sum of the present values of the remaining scheduled payments of principal and interest to the applicable Par Call Date of the Bonds to be redeemed, not including any portion of those payments of interest accrued and unpaid as of the date on which such Bonds are to be redeemed, discounted to the redemption date selected by the Issuer on a semi-annual basis (assuming a 360-day year consisting of twelve 30-day months) at the adjusted Treasury Rate plus (i) in the case of the Bonds maturing on April 15, 2025, 10 basis points, and (ii) in the case of the Bonds maturing on April 15, 2030 and April 15, 2050, 15 basis points, plus in the case of both (a) and (b), accrued and unpaid interest on the Bonds to be redeemed to, but excluding, the redemption date (without duplication).

"*Treasury Rate*" means, with respect to any redemption date, the yield to the Par Call Date applicable to the Bonds being redeemed of United States Treasury securities with a constant maturity (as compiled and published in the most recent Federal Reserve Statistical Release H.15 (519) that has become publicly available at least two Business Days, but not more than 45 calendar days, prior to the redemption date (excluding inflation indexed securities) (or, if such Statistical Release is no longer published, any publicly available source of similar market data)) most nearly equal to the period from the redemption date to the applicable Par Call Date of the Bonds to be redeemed; provided, however, that if the period from the redemption date to such applicable Par Call Date is less than one year, the weekly average yield on actually traded United States Treasury securities adjusted to a constant maturity of one year will be used.

At the request of the Trustee to the Issuer, the Make-Whole Redemption Price of Bonds to be redeemed pursuant to the Indenture, including the Treasury Rate to be used in such determination, shall be determined by an independent accounting firm, investment banking firm or financial advisor retained by the Issuer at the Issuer's expense to calculate such Make-Whole Redemption Price. The Trustee and the Issuer may conclusively rely on the determination of such Make-Whole Redemption Price by such independent accounting firm, investment banking firm or financial advisor and shall not be liable for such reliance.

Partial Redemption of Bonds

Upon surrender of any Bond redeemed in part only, the Issuer 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 Issuer, 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 as described herein, and moneys for payment of the Redemption Price of the Bonds (or portion thereof) so called for redemption being held by the Trustee, the Bonds (or portion thereof) so called for redemption shall become due and payable on the date fixed for redemption designated in such notice at the Redemption Price specified in such notice, and 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 from funds held by the Trustee for such payment.

Notice of Redemption

Notice of redemption will be mailed by the Trustee by first class mail, not less than 20 days, nor more than 45 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 overnight mail to such securities depositories and/or securities information services as shall be designated in a Certificate of the Issuer delivered to the Trustee together with the delivery of the notice of redemption to the Trustee. 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 the method of calculating the Make-Whole Redemption Price (if 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 each of said Bonds the Redemption Price thereof or of said specified portion of the principal amount thereof in the case of a Bond to be redeemed in part only, together with interest accrued thereon to the redemption date, 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 Issuer, 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 mailed.

The Issuer 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 Issuer no later than five 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.

Selection of Bonds for Redemption

If the Bonds are registered in book-entry 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 are called for redemption prior to maturity, the particular Bonds or portions thereof to be redeemed shall be allocated 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. 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 described above, then the Bonds will be selected for redemption, in accordance with DTC procedures, by lot or in such other manner as is in accordance with the applicable DTC operational arrangements.

The Issuer intends that redemption allocations made by DTC be made on a pro rata pass-through distribution of principal basis as described above. However, neither the Issuer nor the Underwriters can provide any assurance that DTC, DTC's direct and indirect participants or any other intermediary will allocate the redemption of Bonds on such basis.

For purposes of calculation of the pro rata pass-through distribution of principal, "pro rata," means, for any amount of principal to be paid, the application of a fraction to each denomination of the respective Bonds where (i) the numerator is equal to the amount due to the respective bondholders on a payment date, and (ii) the denominator is equal to the total original par amount of the respective Bonds.

If the Bonds are no longer registered in book-entry form, each owner will receive an amount of Bonds equal to the original face amount then beneficially held by that owner, registered in such owner's name. Thereafter, any redemption of less than all of the Bonds of any maturity will continue to be paid to the registered owners of such Bonds on a pro-rata basis, based on the portion of the original face amount of any such Bonds to be redeemed.

BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES

DTC and Book-Entry System

The Depository Trust Company, New York, New York, 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 each maturity of the Bonds in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants" and together with Direct Participants, "DTC Participants"). DTC has a S&P Global Ratings rating of AA+. The DTC Rules applicable to DTC 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 Participants 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 Participants 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 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 Participants 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. Beneficial Owners of the Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, defaults, and proposed amendments to the security documents. For example, Beneficial Owners of the Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

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

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payments of principal, interest and redemption premium, if any, with respect to the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Issuer or the Trustee, on the payment date in accordance with their respective holdings shown on DTC's records. Payments by DTC 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 nor its nominee, the Issuer or the Trustee, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest, and redemption premium, if any, to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer or the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct Participants and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the Issuer or the Trustee. Under such circumstances, in the event that a successor depository is not obtained, Bond certificates are required to be printed and delivered. The Issuer may decide to discontinue use of the system of book-entry only transfers through DTC (or a successor securities depository). In that event, Bond certificates will be printed and delivered. See "Certificated Bonds" below.

THE INFORMATION IN THIS SECTION CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE ISSUER AND THE UNDERWRITERS BELIEVE TO BE RELIABLE, BUT NEITHER THE ISSUER NOR THE UNDERWRITERS TAKE ANY RESPONSIBILITY FOR THE ACCURACY THEREOF.

Each person for whom a DTC Participant acquires an interest in the Bonds, as nominee, may desire to make arrangements with such DTC Participant to receive a credit balance in the records of such DTC Participant, and may desire to make arrangements with such DTC Participant to have all notices of redemption or other communications to DTC, which may affect such persons, to be forwarded in writing by such DTC Participant and to have notification made of all interest payments. NEITHER THE ISSUER NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO SUCH DTC 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 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.

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.

Clearstream Luxembourg and Euroclear Systems

The information set forth below is subject to any change in or reinterpretation of the rules, regulations and procedures of Euroclear and Clearstream Luxembourg. Neither the Issuer nor the Underwriters take any responsibility for the accuracy of this section. Investors wishing to use the facilities of any of Euroclear or Clearstream Luxembourg are advised to confirm the continued applicability of the relevant rules, regulations and procedures.

Beneficial Owners may elect to hold interests in the Bonds through either DTC (in the United States) or Clearstream Luxembourg or Euroclear (in Europe) if they are participants of those systems, or indirectly, through organizations that are participants in such systems. Interests held through Clearstream Luxembourg and Euroclear will be recorded on DTC's books as being held by the U.S. depositary for each of Clearstream Luxembourg and Euroclear, which U.S. depositaries will in turn hold interests on behalf of their participants' securities accounts.

Clearstream Luxembourg and Euroclear are central securities depositaries subject to Regulation (EU) No 909/2014, as amended, (the "CSDR"). The aim of the CSDR is to harmonize certain aspects of the settlement cycle and settlement discipline and to provide a set of common requirements for central securities depositaries operating securities settlement systems across Europe.

Clearstream Luxembourg was incorporated as a limited liability company under the laws of Luxembourg. Clearstream Luxembourg holds securities for its participating organizations ("Clearstream Luxembourg Participants") and facilitates the clearance and settlement of securities transactions between Clearstream Luxembourg Participants through electronic book-entry changes in accounts of Clearstream Luxembourg Participants, thereby eliminating the need for physical movement of certificates. Transactions may be settled by Clearstream Luxembourg in many currencies, including United States dollars. Clearstream Luxembourg provides to Clearstream Luxembourg Participants, among other things, services for safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Clearstream Luxembourg has established an electronic bridge with Euroclear to facilitate settlement of trades between Clearstream and Euroclear.

Distributions with respect to Bonds held beneficially through Clearstream Luxembourg will be credited to cash accounts of Clearstream Luxembourg Participants in accordance with its rules and procedures, to the extent received by the U.S. depositary for Clearstream Luxembourg.

Euroclear was created in 1968 to hold securities for participants of Euroclear ("Euroclear Participants") and to clear and settle transactions between Euroclear Participants through simultaneous electronic book-entry delivery against payment, thereby eliminating the need for physical movement of certificates and any risk from lack of simultaneous transfers of securities and cash. Such operations are conducted by Euroclear, and all Euroclear securities clearance accounts and Euroclear cash accounts are accounts with Euroclear. Euroclear Participants include banks (including central banks), securities brokers and dealers and other professional financial intermediaries and may include the agents or their affiliates. Indirect access to the Euroclear system also is available to other firms that clear through or maintain a custodial relationship with a Euroclear Participant, either directly or indirectly.

Securities clearance accounts and cash accounts with Euroclear are governed by the Terms and Conditions Governing Use of Euroclear and the related Operating Procedures of the Euroclear system, and applicable Belgian law (collectively, the "Terms and Conditions"). The Terms and Conditions govern transfers of securities and cash within Euroclear, withdrawals of securities and cash from Euroclear, and receipts of payments with respect to securities in Euroclear. All securities in Euroclear are held on a fungible basis without attribution of specific certificates to specific securities clearance accounts. Euroclear acts under the Terms and Conditions only on behalf of Euroclear Participants, and has no record of, or relationship with, persons holding through Euroclear Participants.

Distributions with respect to Bonds held beneficially through Euroclear will be credited to the cash accounts of Euroclear Participants in accordance with the Terms and Conditions, to the extent received by the U.S. depositary of Euroclear.

Global Clearance and Settlement Procedures

Initial settlement for the Bonds will be made in immediately available funds. Secondary market trading between Participants will occur in the ordinary way in accordance with DTC's rules. Secondary market trading between Clearstream Luxembourg Participants and/or Euroclear Participants will occur in the ordinary way in accordance with the applicable rules and operating procedures of Clearstream Luxembourg and Euroclear and will be settled using the procedures applicable to conventional eurobonds in immediately available funds.

Cross-market transfers between persons holding directly or indirectly through DTC, on the one hand, and directly or indirectly through Clearstream Luxembourg or Euroclear Participants, on the other, will be effected within DTC in accordance with DTC's rules on behalf of the relevant European international clearing system by its U.S. depositary; however, such cross-market transactions will require delivery of instructions to the relevant European international clearing system by the counterparty in such system in accordance with its rules and procedures and within its established deadlines (European time). The relevant European international clearing system will, if the transaction meets its settlement requirements, deliver instructions to its U.S. depositary to take action to effect final settlement on its behalf by delivering or receiving Bonds in DTC, and making or receiving payment in accordance with normal procedures. Clearstream Luxembourg Participants and Euroclear Participants may not deliver instructions directly to their respective U.S. depositaries.

Because of time-zone differences, credits of Bonds received in Clearstream Luxembourg or Euroclear as a result of a transaction with a participant will be made during subsequent securities settlement processing and dated the business day following the DTC settlement date. Such credits, or any transactions in the Bonds settled during such processing, will be reported to the relevant Euroclear Participants or Clearstream Luxembourg Participants on that business day. Cash received in Clearstream Luxembourg or Euroclear as a result of sales of Bonds by, or through a Clearstream Luxembourg Participant or a Euroclear Participant to a participant will be received with value on the business day of settlement in DTC but will be available in the relevant Clearstream Luxembourg or Euroclear cash account only as of the business day following settlement in DTC.

Although DTC, Clearstream Luxembourg and Euroclear have agreed to the foregoing procedures in order to facilitate transfers of securities among participants of DTC, Clearstream Luxembourg and Euroclear, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued at any time.

No Responsibility of Issuer, Underwriters or Trustee. NONE OF THE ISSUER, THE UNDERWRITERS OR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DIRECT PARTICIPANTS OR INDIRECT PARTICIPANTS OF DTC, CLEARSTREAM LUXEMBOURG, CLEARSTREAM LUXEMBOURG PARTICIPANTS, EUROCLEAR, EUROCLEAR PARTICIPANTS, OR ANY BENEFICIAL OWNER WITH RESPECT TO (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC, ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF DTC, CLEARSTREAM LUXEMBOURG, ANY CLEARSTREAM LUXEMBOURG PARTICIPANT, EUROCLEAR OR ANY EUROCLEAR 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, ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF DTC, CLEARSTREAM LUXEMBOURG, ANY CLEARSTREAM LUXEMBOURG PARTICIPANT, EUROCLEAR OR ANY EUROCLEAR PARTICIPANT OF ANY PERSON TO RECEIVE PAYMENT IN THE EVENT OF A PARTIAL REDEMPTION OF THE BONDS; (IV) THE PAYMENT BY DTC, ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF DTC, CLEARSTREAM LUXEMBOURG, ANY CLEARSTREAM LUXEMBOURG PARTICIPANT, EUROCLEAR OR ANY EUROCLEAR PARTICIPANT OF ANY AMOUNT WITH RESPECT TO THE PRINCIPAL OR REDEMPTION PREMIUM, IF ANY, OR INTEREST DUE WITH RESPECT TO THE BONDS; (V) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS THE OWNER OF THE BONDS; OR (VI) ANY OTHER MATTER.

Certificated Bonds. DTC may discontinue providing its services as securities depository with respect to the Bonds at any time by giving reasonable notice to the Issuer and the Trustee. In addition, the Issuer may determine that continuation of the system of book-entry transfers through DTC (or a successor securities depository) is not in the best interest 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 Bondholder. Thereafter, Bonds may be exchanged for an equal aggregate principal amount of Bonds in other Authorized Denominations and of the same maturity, upon surrender thereof at the 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 Bonds, the Issuer and the Trustee may make a charge sufficient to reimburse them for any tax or other governmental charge required to be paid with respect to such exchange or registration of transfer, and the Trustee also may require the Bondholder requesting such exchange or registration of transfer of the Bonds to pay a reasonable sum to cover any expenses incurred by the Trustee or the Issuer in connection with any such exchange or registration of transfer. The Trustee will not be required to transfer (i) any Bond during the 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, the Issuer will pay the Trustee a sum equal to the amount payable on such Payment Date as principal of and interest on the Bonds. 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 Issuer is required to pay such deficiency to the Trustee. Upon the receipt thereof, the Trustee will deposit all payments received from the Issuer into certain funds and accounts established pursuant to the Indenture. See APPENDIX D – "EXCERPTS FROM THE INDENTURE".

The Bonds constitute unsecured general obligations of the Issuer. The Bonds are not secured by a reserve fund, mortgage lien or security interest on or in any funds, property or other assets of the Issuer, except for the Bond Fund and certain other funds held from time to time by the Trustee for the benefit of the Holders of the Bonds under the Indenture. Pursuant to the Indenture, the proceeds of the Bonds are held by the Issuer, rather than the Trustee, and, as described above, the Issuer 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. Amounts held by the Issuer are not subject to any lien or charge in favor of the Holders of the Bonds and do not constitute security for the Bonds.

The Indenture does not contain any covenants limiting the ability of the Issuer to incur indebtedness, encumber or dispose of its property, merge with or into any other entity, or any other similar covenants. Further, the Issuer is not required by the Indenture to produce revenues at any specified level, maintain any specified liquidity levels or reserves, or obtain any insurance with respect to its property or operations.

The remedies granted to the Trustee or the Holders of the Bonds upon an Event of Default under the Indenture may be dependent upon judicial actions which are often subject to discretion and delay. Under existing law, the remedies specified in the Indenture may not be readily available or may be limited. The various legal opinions to be delivered concurrently with the delivery of the Bonds will be qualified as to the enforceability of the provisions of the Indenture by limitations imposed by state and federal laws, rulings and decisions affecting equitable remedies regardless of whether enforceability is sought in a proceeding at law or in equity and by bankruptcy, reorganization, insolvency, receivership or other similar laws affecting the rights of creditors generally.

The Issuer has other unsecured indebtedness outstanding. See APPENDIX A – "YALE UNIVERSITY – Outstanding Indebtedness", and APPENDIX B – "CONSOLIDATED FINANCIAL STATEMENTS OF YALE UNIVERSITY". Moreover, the Issuer 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.

CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following discussion summarizes certain United States 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 current provisions of the Internal Revenue Code of 1986, as amended (the "Code"), current final, temporary and proposed United States Treasury Regulations, current administrative rulings and pronouncements of the Internal Revenue Service (the "IRS") and judicial authority, 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 IRS with respect to any of the United States federal income tax considerations discussed below, and no assurance can be given that the IRS will not take a contrary position. Legislative, judicial or administrative changes or interpretations may occur that could alter or modify the statements and conclusions set forth herein. Further, following discussion does not address all possible United States federal income tax considerations applicable to any given investor, nor does it address the United States federal income tax considerations applicable to categories of investors some of which may be subject to special taxing rules (regardless of whether or not such persons constitute U.S. Holders), such as certain U.S. expatriates, banks, REITs, RICs, insurance companies, accrual method taxpayers subject to special tax accounting rules as a result their use of financial statements, 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. In addition, it does not address alternative minimum tax consequences or the indirect effects on persons who hold equity interests in a holder. This discussion is limited to persons purchasing the Bonds for cash in this offering at their "issue price" within the meaning of Section 1273 of the Code (i.e., the first price at which a substantial amount of the Bonds are sold to the public for cash), and who will hold their Bonds as "capital assets" within the meaning of Section 1221 of the Code. This discussion does not address the tax consequences to holders that purchase the Bonds after their original issuance.

As used herein, "U.S. Holder" means a beneficial owner of a Bond that for United States federal income tax purposes is an individual citizen or resident of the United States, a corporation or 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 United States 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 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 United States 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 of 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).

U.S. Holders

Interest

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

Bonds Purchased at Original Issue Premium

If the initial public offering prices of certain maturities of the Bonds are greater than the principal amount payable on such Bonds at maturity, the excess of the initial public offering price at which a substantial amount of these Bonds are sold over the principal amount payable at maturity constitutes original issue premium. The offering prices relating to the yields set forth on the cover page of this Offering Memorandum are expected to be the initial public offering prices at which a substantial amount of each maturity of the Bonds were ultimately sold to the public. Under Section 171 of the Code, a holder of a Bond may elect to treat such excess as "amortizable bond premium", in which case the amount of interest required to be included in the taxpayer's income each year with respect to interest on the Bond will be reduced by the amount of amortizable bond premium allocable (based on the Bond's yield to maturity) to that year. If such an election is made, the amount of each reduction in interest income will result in a corresponding reduction in the taxpayer's adjusted basis in the Bond. Any election to amortize bond premium is applicable to all taxable debt instruments held by the taxpayer at the beginning of the first taxable year to which the election applies or thereafter acquired by the taxpayer and may not be revoked without the consent of the IRS.

Bonds Purchased at Original Issue Discount

If a Bond is issued at a discount from its stated redemption price at maturity, and the discount is at least the product of one-quarter of one percent (0.25%) of the stated redemption price at maturity of the Bond multiplied by the number of full years to maturity, the Bond will be an original issue discount bond ("OID Bond"). In general, the excess of the stated redemption price at maturity of an OID Bond over its issue price will constitute original issue discount ("OID") for United States federal income tax purposes. The stated redemption price at maturity of a Bond is the sum of all scheduled amounts payable on the Bond (other than qualified stated interest). The term "qualified stated interest" generally means stated interest that is unconditionally payable in cash or property (other than debt instruments of the University), or that is treated as constructively received, at least annually at a single fixed rate. U.S. Holders of OID Bonds will be required to include OID in income for United States federal income tax purposes as it accrues, in accordance with a constant yield method based on a compounding of interest (which may be after the receipt of cash payments attributable to such income). Under this method, U.S. Holders generally will be required to include in income increasingly greater amounts of OID in successive accrual periods.

Disposition of the Bonds

Unless a recognition provision of the Code applies, the sale, exchange, redemption, retirement (including pursuant to an offer by the University) or other disposition of a Bond, will be a taxable event for United States 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 the amount of cash plus 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 under "Interest") and the U.S. Holder's adjusted United States 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 United States 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

It should be noted that the University has the right to defease the Bonds. Under current law, a defeasance of the Bonds by the University would be treated, for United States federal income tax purposes, as a disposition by a U.S. Holder of such U.S. Holder's Bonds on the date of the defeasance. Assuming that the Bonds are treated as publicly traded debt instruments for United States federal income tax purposes (which is expected to be the case), a U.S. Holder of a Bond will recognize gain or loss equal to the difference between the fair market value of such U.S. Holder's Bonds on the date of the defeasance (except to the extent of accrued but unpaid interest on the Bonds which will be taxed in the manner described above under "Interest") and the U.S. Holder's adjusted United States 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 United States 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.

Tax on Net Investment Income

Certain non-corporate U.S. Holders of the Bonds will be subject to a 3.8% tax on the lesser of the U.S. Holder's "net investment income" (in the case of individuals) or "undistributed net investment income" (in the case of estates and certain trusts) for the relevant taxable year and the excess of the U.S. Holder's "modified adjusted gross income" (in the case of individuals) or "adjusted gross income" (in the case of estates and certain trusts) for the taxable year over a certain threshold. A U.S. Holder's calculation of net investment income generally will include its interest income on the Bonds and its net gains from the disposition of the Bonds, unless such interest income on the Bonds and its net gains are derived from the ordinary course of the conduct of a trade or business (other than a trade or business that consists of certain passive or trading activities). If you are an individual, estate or trust, you are urged to consult your tax advisors regarding the applicability of this tax to your income and gains in respect of your investment in the Bonds.

Information Reporting and Backup Withholding

Payments on the Bonds generally will be subject to United States information reporting and "backup withholding." Under Section 3406 of the Code and applicable 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 (a) the payee fails to furnish a United States taxpayer identification number ("TIN") to the payor in the manner required, (b) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (c) there has been a "notified payee underreporting" described in Section 3406(c) of the Code or (d) there has been a failure of the payee 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 furnished to the IRS in a timely manner.

Non-U.S. Holders

Interest

Provided that interest on the Bonds is not "effectively connected with the conduct of a trade or business within the United States" by a Non-U.S. Holder, and subject to the "Foreign Account Tax Compliance Act" and "Information Reporting and Backup Withholding" discussions below, a Non-U.S. Holder generally will not be subject to United States federal income or withholding tax on payments of interest on the Bonds provided such Non-U.S. Holder (a) is not a controlled foreign corporation that is related to the University directly or constructively through stock ownership, (b) is not a bank receiving such interest on an extension of credit made pursuant to a loan agreement entered into in the ordinary course of its trade or business, and (c) satisfies certain certification requirements. Such certification requirements generally will be met if (x) the Non-U.S. Holder provides its name and address, and certifies on an IRS Form W-8BEN or IRS Form W-8BEN-E (or substantially similar form), under penalties of perjury, that it is not a United States person or (y) a securities clearing organization or certain other financial institutions holding the Bonds on behalf of the Non-U.S. Holder certifies on IRS Form W-8IMY, under penalties of perjury, that such certification has been received by it and furnishes the payor with a copy thereof. In addition, the University or its paying agent must not have actual knowledge or reason to know that the beneficial owner of the Bonds is a United States person.

If interest on the Bonds is not effectively connected with the conduct of a trade or business within the United States by a Non-U.S. Holder, but such Non-U.S. Holder does not satisfy the other requirements outlined in the preceding paragraph, interest on the Bonds generally will be subject to United States withholding tax at a rate of 30% (or a lower applicable income tax treaty rate).

If 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 certain income tax treaties apply, is attributable to a permanent establishment or fixed base within the United States, the Non-U.S. Holder generally will be generally (and, with respect to corporate Non-U.S. Holders, may also be subject to a 30% branch profits tax (or a lower applicable income tax treaty branch profits tax rate)). If interest is effectively connected with the conduct by a Non-U.S. Holder of a trade or business within the United States, such interest payments will not be subject to United States withholding tax if the Non-U.S. Holder provides the University or its paying agent with the appropriate documentation (generally an IRS Form W-8ECI).

Sale or Other Taxable Disposition of the Bonds

Subject to the "Foreign Account Tax Compliance Act" and "Information Reporting and Backup Withholding" discussions below, a Non-U.S. Holder generally will not be subject to United States federal withholding tax with respect to gain, if any, recognized on the sale or other taxable disposition of the Bonds. A Non-U.S. Holder will also generally not be subject to United States federal income tax with respect to such gain, unless (a) the gain is effectively connected with the conduct by such Non-U.S. Holder of a trade or business within the United States, and, if certain income tax treaties apply, is attributable to a permanent establishment or fixed base within the United States, or (b) in the case of a Non-U.S. Holder that is a nonresident alien individual, such Non-U.S. Holder is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are satisfied. In the case described in (a) above, gain or loss recognized on the disposition of such Bonds generally will be subject to United States federal income taxation in the same manner as if such gain or loss were recognized by a U.S. Holder, and, in the case of a Non-U.S. Holder that is a foreign corporation, may also be subject to branch profits tax a rate of 30% (or a lower applicable income tax treaty branch profits tax rate). In the case described in (b) above, the Non-U.S. Holder will be subject to a 30% tax (or lower applicable income tax treaty rate) on any capital gain recognized on the disposition of the Bonds (after being offset by certain United States source capital losses).

Information Reporting and Backup Withholding

Information returns will be filed annually with the IRS in connection with the University's payment of interest on the Bonds. Copies of these information returns may also be made available under the provisions of a specific income tax treaty or other agreement to the tax authorities of the country in which the Non-U.S. Holder resides. Unless the Non-U.S. Holder complies with certification procedures to establish that it is not a United States person, information returns may be filed with the IRS in connection with the proceeds from a sale or other disposition of the Bonds, and the Non-U.S. Holder may be subject to backup withholding tax (currently at a rate of 24%) on payments of interest on the Bonds or on proceeds from a sale or other disposition of the Bonds. The certification procedures required to claim the exemption from withholding tax on interest described above will satisfy the certification requirements necessary to avoid the backup withholding tax as well. The amount of any backup withholding from a payment to a Non-U.S. Holder may be allowed as a credit against the Non-U.S. Holder's United States federal income tax liability or may entitle the Non-U.S. Holder to a refund, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act

The Foreign Account Tax Compliance Act, Sections 1471 through 1474 of the Code ("FATCA"), when applicable, imposes a United States federal withholding tax of 30% on certain payments on, and the gross proceeds from the sale or other disposition of, obligations that produce United States source income to foreign financial institutions and certain other non-United States entities, unless certain information reporting and certification requirements have been satisfied. The obligation to withhold under FATCA, if applicable, will apply to payments of interest made on the Bonds. The IRS has issued proposed regulations, on which taxpayers may rely, that exclude gross proceeds from the sale or other disposition of the Bonds from the application of the withholding tax imposed under FATCA and related administrative guidance. Further, FATCA withholding may apply to certain foreign pass-through payments in accordance with future regulations. Holders are encouraged to consult with own tax advisors regarding the effects of FACTA on their investment in the Bonds.

THE FOREGOING SUMMARY IS INCLUDED HEREIN FOR GENERAL INFORMATION ONLY AND DOES NOT DISCUSS ALL ASPECTS OF UNITED STATES FEDERAL INCOME TAXATION THAT MAY BE RELEVANT TO A PARTICULAR HOLDER OF BONDS IN LIGHT OF THE HOLDER'S PARTICULAR CIRCUMSTANCES AND 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 OF STATE, LOCAL, FOREIGN AND OTHER TAX LAWS.

CERTAIN ERISA CONSIDERATIONS

The information under this heading summarizes certain considerations associated with the purchase of the Bonds by employee pension and welfare plans. The Employee Retirement Income Security Act of 1974, as amended ("ERISA"), imposes certain fiduciary obligations and prohibited transaction restrictions on employee benefit plans subject to Title I of ERISA ("ERISA Plans"). Section 4975 of the Code imposes essentially the same prohibited transaction restrictions on certain arrangements set forth in Section 4975(e)(1) which include, among other arrangements, 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, individual retirement accounts, individual retirement annuities, Archer MSAs, health savings accounts, and Coverdell education savings accounts, as described in Sections 4975(e)(1)(B) through (F) of the Code (collectively, "Tax-Favored Plans," and together with ERISA Plans, the "Plans"). Certain types of U.S. employee benefit plans, such as governmental plans (as defined in Section 3(32) of ERISA), and church plans (as defined in Section 3(33) of ERISA and Section 4975(g)(3) of the Code) for which no election has been made under Section 410(d) of the Code, as well as non-U.S. employee benefit plans, are exempt from ERISA requirements and Code requirements but may nonetheless be subject to similar provisions of state and federal or foreign laws ("Similar Laws"). The information under this heading addresses the requirements of ERISA and the Code, but it should be understood that Similar Laws may impose comparable requirements.

General Fiduciary Matters. Among other requirements, ERISA requires fiduciaries to exercise prudence when investing ERISA Plan assets, taking into account diversification of the ERISA Plan's portfolio, liquidity needs and the requirement that ERISA Plan investments be made in accordance with the documents governing such ERISA Plan. Under ERISA, any person who has any discretionary authority or responsibility in the administration of an ERISA Plan or who exercises any discretionary authority or control with respect to the management, or disposition of the assets of an ERISA Plan, or who renders investment advice for a fee or other compensation, direct or indirect, with respect to the assets of an ERISA Plan, or has any authority or responsibility to do so, is generally considered to be a fiduciary of the ERISA Plan, unless a statutory or administrative exemption is available. The term "plan assets" is defined at 26 CFR 2510.3-101.

Prohibited Transaction Issues. Section 406 of ERISA and Section 4975 of the Code (the "Prohibited Transaction Rules") prohibit a broad range of transactions between plans and "Parties in Interest" under ERISA or "Disqualified Persons" under the Code. The definitions of "Party in Interest" and "Disqualified Person" are expansive. While other entities may be encompassed by these definitions, they include: (i) a fiduciary with respect to a Plan (including the owner of a Tax-Favored Plan); (ii) a person or entity providing services to a Plan; and (iii) an employer or employee organization any of whose employees or members are covered by the Plan. Certain Parties in Interest (or Disqualified Persons) that participate in a prohibited transaction may be subject to a penalty (or an excise tax or other liability) imposed pursuant to Section 502(i) of ERISA (or Section 4975 of the Code) unless a statutory or administrative exemption is available and certain prohibited transactions may be subject to rescission.

ERISA and the Code generally prohibit the lending of money or other extension of credit between an ERISA Plan or Tax-Favored Plan and a Party in Interest or Disqualified Person. The acquisition of any of the Bonds by a Party in Interest or Disqualified Person would involve the lending of money or extension of credit. In such a case, however, certain exemptions from the prohibited transaction rules might be available depending on the type and circumstances of the plan fiduciary making the decision to acquire a Bond. In this regard, the U.S. Department of Labor has issued prohibited transaction class exemptions, or "PTCEs." These class exemptions include, without limitation, PTCE 84-14 respecting transactions determined by independent qualified professional asset managers, PTCE 90-1 respecting insurance company pooled separate accounts, PTCE 91-38 respecting bank collective investment funds, PTCE 95-60 respecting life insurance company general accounts and PTCE 96-23 respecting transactions determined by in-house asset managers. In addition, Section 408(b)(17) of ERISA and Section 4975(d)(20) of the Code provide limited relief from the Prohibited Transaction Rules for certain transactions, provided, among other things, that neither the issuer of the securities nor any of its affiliates (directly or indirectly) have or exercise any discretionary authority or control or render any investment advice with respect to the assets of any ERISA Plan or Tax-Favored Plan involved in the transaction and provided further that the ERISA Plan or Tax-Favored Plan pays no more than adequate consideration in connection with the transaction. There can be no assurance that all of the conditions of any such exemptions will be satisfied with respect to any purchase, holding or disposition of the Bonds by any investor, and even if the conditions specified in one or more of these exemptions are satisfied, the scope of relief provided by these exemptions might or might not cover all acts which might be construed as prohibited transactions.

Plan Asset Issues. Under the Department of Labor's regulations governing what constitutes "plan assets", assets of an entity in which a Plan invests may be treated as plan assets for the purposes of ERISA and the Code only if the plan acquires an "equity interest" by reason of the investment and no other exception is available. If a Plan invests in an entity whose assets thereby are considered plan assets, the manager of the entity would be a plan fiduciary to the extent it exercises any authority or control respecting management or disposition of the entity's assets or provides investment advice for a fee. Any such manager that is considered a plan fiduciary would be separately required to comply with ERISA's prohibited transaction provisions. An equity interest is defined for this purpose as an interest in an entity other than an instrument which is treated as indebtedness under applicable local law and which has no substantial equity features. Although there can be no assurances in this regard, it appears that the Bonds should be treated as debt for these purposes.

Representation and Warranty. By acquiring a Bond, each purchaser of a Bond will be deemed to have represented and warranted that either (i) no portion of the assets used by such purchaser to acquire or hold the Bonds constitutes assets of any ERISA Plan or Tax-Favored Plan or of a plan subject to Similar Laws or (ii) the acquisition and holding of the Bonds will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or a similar violation under applicable Similar Laws.

THE FOREGOING DISCUSSION IS GENERAL IN NATURE AND IS NOT INTENDED TO BE ALL INCLUSIVE. DUE TO THE COMPLEXITY OF THE "PLAN ASSET" RULES AND THE PENALTIES THAT MAY BE IMPOSED UPON PERSONS INVOLVED IN NON-EXEMPT PROHIBITED TRANSACTIONS, IT IS PARTICULARLY IMPORTANT THAT PLAN FIDUCIARIES AND OTHER FIDUCIARIES, AND OTHER PERSONS CONSIDERING PURCHASING THE BONDS, CONSULT WITH THEIR COUNSEL REGARDING THE POTENTIAL APPLICABILITY OF ERISA, SECTION 4975 OF THE CODE AND ANY SIMILAR LAWS TO THE ASSETS

INTENDED TO BE USED IN THE ACQUISITION OF SUCH INVESTMENT AND TO THE PARTICULAR CIRCUMSTANCES OF THE TRANSACTION.

RATINGS

Moody's Investors Service, Inc. ("Moody's") and S&P Global Ratings ("S&P") have assigned ratings of "Aaa" and "AAA," respectively, to the Bonds. Such rating reflects only the views of such rating agencies and any desired explanation of the significance of such ratings may be obtained from such rating agencies. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. The above ratings are not a recommendation to buy, sell or own the Bonds, and there is no assurance any such rating will continue for any period of time or that any such rating will not be revised or withdrawn entirely by the applicable rating agency, if in the judgment of such rating agency, circumstances so warrant. Any revision or withdrawal of the rating may have an effect on the market price of the Bonds.

UNDERWRITING

The Bonds will be purchased for reoffering by the underwriters listed on the cover page of this Offering Memorandum (the "Underwriters"), for whom Barclays Capital Inc. is serving as representative. The Bonds will be purchased pursuant to a bond purchase contract to be entered into by and between the Issuer and the Underwriters. The Underwriters will agree, subject to certain conditions, to purchase the Bonds at a price of $1,493,325,631.54, equal to the principal amount thereof, less an aggregate Underwriters' discount of $6,674,368.46. The bond purchase contract will provide that the Underwriters will purchase all of the Bonds if any are purchased, and that the Issuer will indemnify the Underwriters and certain other parties against losses, claims, damages, and liabilities arising out of any incorrect statements of information, including the omission of material facts, contained in this Offering Memorandum pertaining to the Issuer and other specified matters. The public offering prices set forth on the cover page of this Offering Memorandum may be changed after the initial offering by the Underwriters.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage services. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Issuer, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities, which may include credit default swaps) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Issuer.

The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

J.P. Morgan Securities LLC ("JPMS"), one of the Underwriters of the Bonds, has entered into negotiated dealer agreements (each, a "Dealer Agreement") with each of Charles Schwab & Co., Inc. ("CS&Co.") and LPL Financial LLC ("LPL") for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, if applicable to this transaction, each of CS&Co. and LPL will purchase Series 2020 Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Series 2020 Bonds that such firm sells.

CONTINUING DISCLOSURE

The Issuer has entered into continuing disclosure undertakings (the "Continuing Disclosure Undertakings") in connection with certain tax-exempt revenue bonds issued for the benefit of the Issuer (the "Tax Exempt Bonds"). See Note 9 to the consolidated financial statements of the Issuer appearing in APPENDIX B. Holders and prospective purchasers of the Bonds may obtain copies of the information provided by the Issuer under those Continuing Disclosure Undertakings on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access system ("EMMA"). Each Continuing Disclosure Undertaking will terminate when the related Tax Exempt Bonds are paid or deemed paid in full. During the past five years, the Issuer has complied in all material respects with its existing Continuing Disclosure Undertakings with respect to the Tax Exempt Bonds.

The Issuer covenants in the Indenture that unless otherwise available on EMMA or any successor thereto or to the functions thereof, copies of the Issuer's annual audited financial statements will be posted on the Issuer's website within 150 days after the end of each fiscal year of the Issuer.

LEGAL MATTERS

All legal matters incidental to the authorization and issuance of the Bonds by the Issuer are subject to the approval of Day Pitney LLP, Hartford, Connecticut, bond counsel to the Issuer. Certain legal matters will be passed on for the Underwriters by their counsel, Greenberg Traurig, LLP, Boston, Massachusetts.

There is no litigation pending or, to the Issuer's knowledge, threatened against the Issuer or its officers or trustees contesting or questioning the validity of the issuance or sale of the Bonds, or the ability of the Issuer to perform its obligations under the Indenture. See APPENDIX A – "THE UNIVERSITY – Litigation" with respect to litigation affecting the Issuer.

INDEPENDENT ACCOUNTANTS

The consolidated statements of financial position as of June 30, 2019 and 2018, the related consolidated statement of activities for the year ended June 30, 2019, and the related consolidated statements of cash flows for the years ended June 30, 2019 and 2018, included in APPENDIX B in this Offering Memorandum, have been audited by PricewaterhouseCoopers LLP, independent accountants, as stated in their report appearing therein.

MISCELLANEOUS

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

Information relating to DTC and the book-entry system and the Clearstream Luxembourg and Euroclear systems described herein under the heading "BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES" is based on information furnished by DTC, Clearstream Luxembourg and Euroclear and is believed to be reliable, but neither the Underwriters nor the Issuer makes any representations or warranties whatsoever with respect to such information.

Appendix A to this Offering Memorandum contains certain information relating to the Issuer. While such information contained therein is believed to be reliable, the Underwriters do not make any representations or warranties whatsoever with respect to such information.

Appendix B to this Offering Memorandum contains the consolidated statements of financial position of the Issuer as of June 30, 2019 and 2018, the related consolidated statement of activities for the year ended June 30, 2019, and the related consolidated statements of cash flows for the years ended June 30, 2019 and 2018.

The Underwriters have relied on the information contained in Appendix A and the financial statements contained in Appendix B.

Appendix C – "DEFINITIONS OF CERTAIN TERMS" and Appendix D – "EXCERPTS FROM THE INDENTURE" have been prepared by Day Pitney LLP, bond counsel to the Issuer.

All appendices are incorporated as integral parts of this Offering Memorandum.

The delivery of this Offering Memorandum has been duly authorized by the Issuer.

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YALE UNIVERSITY

By: */s/ Stephen C. Murphy*
Vice President for Finance and
Chief Financial Officer

THE UNIVERSITY

General

Yale University ("Yale" or the "university") is an independent, nonprofit, nonsectarian institution of higher education. The university is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended. The university consists of Yale College, the Graduate School of Arts and Sciences, twelve professional schools, and various research institutes and museums.

The university was founded and given its original charter by the General Assembly of the Colony of Connecticut in 1701 as the "Collegiate School" wherein "Youth may be instructed in the Arts & Sciences who through the blessing of Almighty God may be fitted for Public employment both in Church and Civil State." The original location was at Old Saybrook near the mouth of the Connecticut River. The university moved to New Haven in 1716. In 1718 Elihu Yale, a retired East India merchant living in London, donated the proceeds from the sale of several bales of goods, and the Trustees renamed the institution Yale College in his honor. The charter was restated in 1745, at which time the university was designated "the President and Fellows of Yale College in New Haven." In 1887, the university was authorized to use the name "Yale University."

Yale College graduated its first student in 1703. Professional school development began in 1813 with the founding of the Medical Institution of Yale College, now the Yale School of Medicine (the "School of Medicine"). The Divinity School was founded in 1822, the Law School in 1824, the School of Engineering & Applied Science in 1852, and the School of Fine Arts, now the School of Art, in 1865. Other professional schools came later: the School of Music in 1894, the School of Forestry & Environmental Studies in 1900, the School of Nursing in 1923, the School of Public Health in 1946, the School of Drama in 1955, the School of Architecture in 1972, and the School of Organization and Management, now the School of Management, in 1975. Graduate students in Arts and Sciences are enrolled in the Graduate School, founded in 1847, which shares its faculty with Yale College.

Governance and Administration

Final authority for the governance of the university rests with The Yale Corporation (the "Corporation"), a body consisting of the President, ten Successor Trustees, six Alumni Fellows, and the Governor and Lieutenant Governor of Connecticut, *ex officio*. Successor Trustees serve up to two six-year terms, with the possibility of an additional term of up to three years on recommendation of the President in special circumstances. Successor Trustees select their own successors. Alumni Fellows are elected by the alumni and serve six-year terms.

The Corporation appoints the President, who is the chief executive officer of the university. The academic affairs of the university are managed by the President, the Provost, and the deans of the university's faculty, each dean being appointed for a term of not more than five years by the Corporation, upon recommendation of the President after consultation with the tenured or senior faculty of the applicable school. The university's non-academic affairs are managed by the President, together with other officers as the President may request and nominate, and the Corporation may authorize and elect. The current officers of the university and their titles are as follows:

Peter Salovey	President
Scott A. Strobel	Provost
John H. Bollier	Vice President for Facilities and Campus Development
Jack F. Callahan, Jr.	Senior Vice President for Operations
Alexander E. Dreier	Senior Vice President for Institutional Affairs and General Counsel
Kimberly M. Goff-Crews	Secretary and Vice President for University Life
Pericles Lewis	Vice President for Global Strategy
Janet E. Lindner	Vice President for Human Resources and Administration
Stephen C. Murphy	Vice President for Finance and Chief Financial Officer*
Nathaniel W. Nickerson	Vice President for Communications
Joan E. O'Neill	Vice President for Alumni Affairs and Development

* The Vice President for Finance also serves as the Treasurer of the university.

APPENDIX A

Campus Facilities

Yale's campus, primarily located in New Haven, Connecticut, has four main components. The Central Campus encompasses Yale College and the Graduate, Architecture, Art, Drama, Law, and Music Schools. It extends to the north along Prospect Street, Hillhouse Avenue, and Whitney Avenue with buildings used by departments of the natural and social sciences and the Schools of Engineering & Applied Science, Management, Forestry & Environmental Studies, and Divinity. The Medical Campus, to the south, adjacent to the York Street campus of Yale New Haven Hospital, includes the Schools of Medicine and Public Health. Approximately three miles to the west near the city line between New Haven and West Haven are the university's principal outdoor athletic facilities at the Athletic Campus. Including all campuses in New Haven and surrounding areas, the university owns approximately 963 acres (302 acres Central and Medical Campuses, 151 acres Athletics Campus and 510 acres Golf Course and Nature Preserve) and 310 buildings with a total of 17.7 million gross square feet of space. Approximately 50% of this space is used for instruction, research, and related administrative activities. Another 20% provides dormitories, including the fourteen undergraduate residential colleges, apartments, and other housing for undergraduate and graduate students. The remaining 30% is devoted to libraries, museums and galleries, athletics, clinical space, utilities, and other support functions. The university also owns 136 acres, known as the West Campus, positioned in both the City of West Haven and the Town of Orange, Connecticut, which includes 21 buildings totaling approximately 1.7 million gross square feet. The West Campus is being used for the School of Nursing; interdisciplinary research centers and institutes; university Collections and Preservation; conference facilities; storage; and other support functions. In addition, the university owns 1.2 million gross square feet of non-academic properties in approximately 100 buildings in New Haven. These residential, commercial, and mixed-use properties are acquired and managed by Yale's Office of University Properties to promote community development in surrounding neighborhoods, to land-bank adjacent properties for future university expansion, and to realize the properties' investment potential.

Faculty and Staff

As of the beginning of the fall semester 2019, the university employed 4,838 faculty (plus 1,427 postdoctoral and postgraduate associates) and 10,298 staff. All employment figures are based on headcounts and include only employees that are paid by the university. Each school within the university determines faculty staffing policies, including hiring, wage and salary administration, and faculty tenure levels, subject to the approval of the Provost and the Corporation. Approximately 68.0% of full-time ladder faculty (eligible for advancement to tenured status) had been granted tenure as of the fall semester 2019. A total of 4,995 employees are managerial and professional staff. Benefit policies for faculty and managerial and professional staff are uniform. A total of 5,106 employees are unionized, and staffing and benefit policies are governed by the terms of their respective collective bargaining contracts. Contracts for the clerical-technical staff (3,664 employees) and the service-maintenance staff (1,237 employees) will expire in January 2022. The contract for security personnel (125 employees) was renewed in May 2019 and will expire in January 2023. The contract for certain teachers in a junior and senior high school operated by Yale (nine employees) was renewed in May 2019 and will expire in June 2023. The contract for the Yale Police (71 employees) will expire in June 2023. The university provides pension and post-retirement benefits through defined benefit and defined contribution plans that are disclosed in the footnotes to the financial statements for the fiscal year ended June 30, 2019 included in Appendix B.

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Student Enrollments and Admissions

The university's enrollment during the current year and past four academic years, based on fall registration, is shown below.

Academic Year	Undergraduate	Graduate and Professional	Total Enrollment
2019-20	6,092	7,517	13,609
2018-19	5,964	7,469	13,433
2017-18	5,743	7,228	12,971
2016-17	5,472	6,986	12,458
2015-16	5,532	6,853	12,385

Following the construction of two new residential colleges, which was completed prior to the beginning of the 2017-18 academic year, the university's plans provide for an increase in students at Yale College through 2021.

The university receives applications substantially in excess of the number of students it can accept into its undergraduate, graduate, and professional programs. The following table sets forth the number of Yale College first-year applications for admission, the number admitted, and the number matriculating for the current academic year and past four fall terms. The admission rates in the graduate and professional schools vary by discipline.

Academic Year	First-Year Applications Received	First-Year Admitted	Admissions Rate	First-Year Enrollment	Yield[1]
2019-20	36,844	2,269	6.2%	1,550	68.3%
2018-19	35,306	2,229	6.3	1,573	70.6
2017-18	32,879	2,277	6.9	1,579	69.3
2016-17	31,445	1,988	6.3	1,371	70.3
2015-16	30,236	2,034	6.7	1,364	68.8

Tuition and Fees

Approximately 9.4% of the university's total operating revenue for fiscal year 2019 was in the form of net tuition, room, and board. Of the approximately $730.4 million in gross term billings (tuition, room, and board) in fiscal year 2019, more than half was from Yale College students. The table below displays the term bill for undergraduates, as well as tuition rates in the Graduate School of Arts and Sciences, for the current academic year and each of the past four academic years.

	Yale College				Graduate School
Academic Year	Tuition	Room & Board	Annual Term Bill	Increase	Tuition
2019-20	$55,500	$16,600	$72,100	3.8%	$43,300
2018-19	53,430	16,000	69,430	3.8	42,100
2017-18	51,400	15,500	66,900	3.5	41,000
2016-17	49,480	15,170	64,650	3.9	39,800
2015-16	47,600	14,600	62,200	4.0	38,700

[1] Academic years 2015-16 and 2016-17: Yield is computed by dividing (i) matriculants by (ii) admitted students less those postponing enrollment for one year. Academic years 2017-18 through 2019-2020: Yield is computed by dividing (i) matriculants by (ii) admitted students. The change in computation is reflective of the formula currently used by the IPEDS system, which does not account for postponements.

Student Financial Aid

The university maintains a policy of offering Yale College admission to qualified applicants without regard to family financial circumstances. The "need-blind" admission policy is supported with a commitment to meet in full the demonstrated financial need of all students throughout their undergraduate years. During the 2018-19 academic year, 53% of Yale College undergraduates received financial aid, 95% of students in the Graduate School of Arts and Sciences received financial aid in the form of tuition discounts, stipends and health insurance, and 80% of students in the professional schools received financial aid. In all, during academic year 2018-19, 71% of total university eligible students enrolled received some form of university-administered student aid in the form of scholarships, loans, or a combination of both scholarships and loans.

The university manages loans under federally funded revolving programs (i.e., the Federal Perkins Loan Program, the Health Professions Student Loan Program, and the Nursing Loan Program). Total loans to students as of June 30, 2019 included $23.1 million of loans made under federally funded revolving loan programs, and $46.6 million of loans funded by donors or by unrestricted funds of the university. The Federal Perkins Loan Program expired in September 2017; as such, there were no related loans disbursed to students in fiscal years 2018 and 2019.

Student Loan Program
($ in thousands as of June 30)

	2019	**2018**	**2017**	**2016**	**2015**
Federally Funded Programs	$23,115	$27,117	$31,899	$33,684	$34,163
Yale Student Loan Programs	46,627	47,211	46,815	50,114	53,709
Total Student Loans	$69,742	$74,328	$78,714	$83,798	$87,872

Patient Care

The School of Medicine's Yale Medicine practice ("YM") is one of the largest academic multi-specialty practices in the country and the largest in Connecticut. As of the end of fiscal year 2019, YM was composed of 1,267 full-time and 243 part-time physicians providing services in over 100 specialty and subspecialty areas organized into 21 departments, engaging in research and participating in teaching approximately 995 students (excluding Ph.D. students) and 876 residents. Total YM direct patient care revenue, net of contractual adjustments and implicit price concessions to uninsured patients for fiscal year 2019 was $667.9 million. The largest YM departments and their percentages of total direct patient care revenue, net of contractual adjustments and implicit price concessions to uninsured patients for fiscal year 2019, are as follows:

YM Departments	**Percentage of Total Patient Care Revenue, Net**
Obstetrics and Gynecology	12.5%
Internal Medicine	11.7
Anesthesiology	9.9
Surgery	9.4
Radiology and Biomedical Imaging	9.0
Comprehensive Yale Cancer Center	6.2
Pediatrics	5.8
Pathology	5.3
Emergency Medicine	4.2
Other	26.0
Total	100.0%

Payments on behalf of certain patients are made to YM by Medicare, Medicaid, commercial insurance carriers and by managed care organizations. The following table shows the historical percentage of YM's net patient revenue by source for the past five fiscal years.

	Share of Net Patient Revenue				
Payor Source	**2019**	**2018**	**2017**	**2016**	**2015**
Managed Care	62%	61%	63%	63%	63%
Medicare	20	20	20	19	16
Medicaid	9	9	7	8	10
Commercial Insurance and Others	6	6	6	6	5
Self-Pay	3	4	4	4	6
Total	100%	100%	100%	100%	100%

The university and Yale-New Haven Hospital, Inc., a legally separate organization from the university (the "Hospital"), are parties to an affiliation agreement, whereby the Hospital is responsible for providing a clinical setting and clinical support for the School of Medicine to carry out its teaching, clinical and research missions.

Budget Process

The annual budget for the university is prepared within the context of a ten-year strategic plan developed by the administration. The strategic plan is modified and extended on a rolling basis yearly with new information and changing events. Major planning units and schools each also prepare a ten-year strategic plan on a rolling basis consistent with the university's overall strategy, which guides the administration in the preparation of the university's annual budget.

Yale monitors its budget performance through monthly reviews at the individual school and academic and non-academic unit level, and periodic reviews of operating results at the university level. The monthly statements and periodic reviews are prepared for budgetary units and subunits, and also for each source of funds (e.g., endowment, gift, grant and contract, etc.) supporting the various programs.

Discussion of Current Budgetary Matters

The university manages its operations to achieve long-term financial equilibrium. It is committed to sustaining both the programs and the capital assets (endowment and facilities) supporting the programs over multiple generations. Endowment income is allocated to the operating budget based on a spending policy that preserves the endowment asset values for future generations, while providing a robust revenue stream for current programs. Similarly, the operating budget includes the funds needed to replenish the capital base necessary to ensure that buildings are maintained to support current programs.

The operating results for budgeting purposes differ from those reported in the Statement of Activities on the following page for a variety of reasons, including that the operating budget (i) does not recognize revenue for unconditional promises to give until funds are received, (ii) recognizes pension and retiree health costs based on annual funding rather than annual service cost, and (iii) measures the consumption of plant assets using an internal formula for capital replacement, rather than depreciation expense.

Revenue, Expense, and Other Activity of the University

The table on the following page summarizes total revenues, expenses, and other activity of the university for the fiscal years ended June 30, 2015 through June 30, 2019. This information is derived from the university's Consolidated Statement of Activities, which, as part of the university's annual financial statements, is presented in conformity with accounting principles generally accepted in the United States of America. Information prior to fiscal year 2019 has been presented consistent with the fiscal year 2019 presentation. The university's consolidated statements of financial position as of June 30, 2019 and 2018 and the related consolidated statements of activities for the year ended June 30, 2019 and of cash flows for the years ended June 30, 2019 and 2018, together with accompanying notes and the report of independent auditors, are included in Appendix B.

	Fiscal Years Ended June 30 ($ in thousands)				
Operating Activity	**2019**	**2018**	**2017**	**2016**	**2015**
Revenues:					
Net tuition, room and board	$ 387,172	$ 375,652	$ 345,322	$ 323,253	$ 315,772
Grant and contract income, primarily for research and training	823,530	789,975	768,292	719,525	673,731
Medical services income	1,041,988	930,163	875,589	797,296	762,489
Contributions	210,903	137,707	141,862	180,796	263,019
Allocation of endowment spending from financial capital	1,354,568	1,282,072	1,226,170	1,153,366	1,082,476
Other investment income	94,839	91,459	72,704	66,450	77,219
Other income	192,358	209,892	188,304	183,451	183,197
Total revenues	**4,105,358**	**3,816,920**	**3,618,243**	**3,424,137**	**3,357,903**
Expenses:					
Salaries and wages	1,796,642	1,696,655	1,607,838	1,537,325	1,472,933
Employee benefits	577,782	569,375	553,384	516,545	487,131
Depreciation, amortization and interest	359,432	329,920	316,531	328,683	342,980
Other operating expenditures	1,101,011	1,030,509	973,411	935,261	847,368
Total expenses	**3,834,867**	**3,626,459**	**3,451,164**	**3,317,814**	**3,150,412**
Increase in net assets from operating activities	**270,491**	**190,461**	**167,079**	**106,323**	**207,491**
Non-operating Activity					
Contributions	416,379	223,197	355,195	254,380	138,521
Total endowment return	1,629,992	3,277,910	2,747,729	753,230	2,579,415
Allocation of endowment spending to operations	(1,354,568)	(1,282,072)	(1,226,170)	(1,153,366)	(1,082,476)
Other investment (loss) income	(301,819)	127,507	255,607	(435,102)	(119,759)
Change in funding status of defined benefit plans	(663,686)	313,884	246,399	(393,574)	(119,262)
Other decreases	(6,221)	(33,071)	(18,243)	(31,130)	(17,864)
(Decrease) increase in non-operating activities	**(279,923)**	**2,627,355**	**2,360,517**	**(1,005,562)**	**1,378,575**
Total (decrease) increase in net assets - Yale University	**(9,432)**	**2,817,816**	**2,527,596**	**(899,239)**	**1,586,066**
Change in non-controlling interests	(5,932)	453,141	(79,870)	52,498	(1,726)
Total (decrease) increase in net assets	**$ (15,364)**	**$3,270,957**	**$2,447,726**	**$ (846,741)**	**$1,584,340**

As reported above, the university generated an operating surplus during fiscal year 2019 of $270.5 million, or approximately 6.6% of revenue. This result was higher than the prior fiscal year primarily due to increases in net tuition, room and board, grant and contract income, medical services income, contributions, and allocation of endowment spending from financial capital in fiscal year 2019 compared to fiscal year 2018. Operating results are monitored closely, and the university maintains a strong financial position with net assets of $32.2 billion at June 30, 2019. The university continues to employ prudent management practices in fulfilling its mission with a long-term view.

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The sections that follow discuss major sources of income.

Net Tuition, Room and Board. In fiscal year 2019, net tuition, room and board revenue increased 3.1% from fiscal year 2018. Gross tuition billings of $637.2 million increased 7.6% over fiscal year 2018, and gross room and board billings of $93.2 million increased 5.9% over fiscal year 2018. In accordance with generally accepted accounting principles, student income is presented net of certain scholarships and fellowships which totaled $343.3 million in fiscal year 2019, compared to $304.4 million in fiscal year 2018, a 12.8% increase for the period. The university continues to maintain its commitment to offering Yale College admission to qualified applicants without regard to family financial circumstances. This “need-blind” admission policy is supported with a commitment to meet in full the demonstrated financial need of all students throughout their undergraduate years.

Grant and Contract Income. In fiscal year 2019, grant and contract income experienced a 4.2% increase from fiscal year 2018. The federal government funded 74.3% of grant and contract income in fiscal year 2019, in support of Yale’s research and training programs. The university’s largest federal sponsor in fiscal year 2019 was the U.S. Department of Health and Human Services (“DHHS”), which experienced a 3.9% increase compared to fiscal year 2018. The university also receives significant research funding from the National Science Foundation, the Department of Energy, the Department of Defense, and student aid awards from the Department of Education. Nonfederal sources, which include foundations, voluntary health agencies, corporations, and the State of Connecticut, provided additional funding in research, training, clinical, and other sponsored agreements during fiscal year 2019.

Grant and contract income includes the recovery of facilities and administrative costs at rates negotiated with the university’s federal cognizant agency, DHHS. The university and the federal government operated under an agreement with an organized research On-Campus reimbursement rate of 67.5% for fiscal year 2019. The federal organized research On-Campus reimbursement rate will remain 67.5% for fiscal years 2020 through 2022.

Medical Services Income. In fiscal year 2019, medical services income increased 12.0% from fiscal year 2018. The largest portion of this revenue stream continues to be derived from patient care services provided by YM. See “Patient Care”. The volume of patient care activity increased 5.2% over fiscal year 2018 due to new faculty hires and the continued focus on improving physician productivity. The strong investment in YM for physician leadership, recruitment, and program development by the Yale-New Haven Health System (“YNHHS”) continued in fiscal year 2019 with YNHHS support increasing by 18.0%. Additional revenue is derived from medical services provided to students.

Endowment Income. Each fiscal year, a portion of accumulated endowment investment returns is allocated to support operational activity. This important source of revenue represented 33.0% of total operating income in fiscal year 2019 and it remains the largest source of operating revenue for the university. The level of spending is computed in accordance with an endowment spending policy that has the effect of smoothing year-to-year market swings. In fiscal year 2019, endowment investment returns allocated to operating activities increased to $1.4 billion, a 5.7% increase over fiscal year 2018. See “Endowment and Similar Funds” and “Spending Rule” .

Capital Program

The university’s capital program emphasizes the preservation and rehabilitation of its extraordinary campus, supplemented by the construction of strategic new facilities where needed. The university continues to undertake planned comprehensive renovations of academic space, including teaching and research space, as well as building mechanicals and infrastructure. During the 2018-19 fiscal year, the largest investments were in the sciences, supporting President Salovey’s academic priorities. This includes the Yale Science Building, which opened its doors in September 2019 and provides new research and teaching space on Science Hill. The university also completed renovation work on Robert C. and Christine Baker Hall at the Law School, which now serves as an academic, social, and residential hub for the community. In addition, the university allocated spending to renovate the Commons and Memorial Hall to function as a student and cultural hub for the campus called the Schwarzman Center, with an expected completion date of December 2020. Lastly, the renovation of the exterior and interior of the former Hall of Graduate Studies to accommodate the Center for the Humanities is underway, with an expected completion date of December 2020.

Contributions

Contribution revenue recognized in the university's financial statements includes cash and marketable securities, as well as unconditional promises to give that are expected to be collected in the future. The amounts for unconditional promises to give are presented net of an estimate for potential uncollectible amounts, and of a discount to the present value for amounts to be collected beyond one year.

The contributions recorded in the university's financial statements for fiscal years 2015 through 2019 were as follows:

Contributions Revenue

	($ in millions)				
	2019	**2018**	**2017**	**2016**	**2015**
Operating	$210.9	$137.7	$141.9	$180.8	$263.0
Non-operating:					
Physical capital	85.2	85.2	151.0	72.0	20.8
Financial capital	331.2	138.0	204.2	182.4	117.7
Total Non-operating	416.4	223.2	355.2	254.4	138.5
Total	$627.3	$360.9	$497.1	$435.2	$401.5

The university continues to enjoy generous support from private sources, and this support provides significant resources for current operations and, in the form of gifts to the endowment, for funds that secure Yale's future financial well-being. Total fundraising consists of assets received in the form of gifts (including tangible objects such as art and books that are not reflected in the university's financial statements) and documented gift intentions. In fiscal year 2019, Yale raised $826.8 million in fundraising dollars (including intentions to give), which is the second largest fundraising total in the university's history. Alumni continue to be significant supporters of the university and contributed approximately 68% of total dollars raised in fiscal year 2019.

A widely used measure of fundraising results is the Higher Education Survey for the Voluntary Support of Education, previously referred to as the Council for Aid to Education's (CAE) Voluntary Support of Education Survey, now managed by the Council for Advancement and Support of Education (CASE). The survey tracks cash, including tangible assets received as well as deferred gifts (such as charitable gift annuities or life income funds) documented during the fiscal year, but not promises to give; only the payments on those promises are included. The following table shows cash receipts, including unrestricted cash for current use for the past five fiscal years. While the Higher Education Survey reflects deferred gifts at present value, the totals below are the Yale Office of Development's internal cash totals and reflect deferred gifts at face value.

Fundraising - Cash
($ in millions)

Fiscal Year	Cash Receipts	Unrestricted Cash for Current Use
2019	$662.8	$46.7
2018	592.5	45.9
2017	600.3	46.0
2016	540.0	41.9
2015	452.6	41.1

Endowment and Similar Funds

Yale's investment philosophy is designed to provide substantial resources to the university's operating budget while maintaining purchasing power of endowment funds and funds functioning as endowment (the "Endowment"). Over the past thirty years, Yale significantly reduced the Endowment's exposure to traditional domestic marketable securities, reallocating assets to nontraditional asset classes. In 1989, nearly 70% of the Endowment was committed to U.S. stocks, bonds, and cash. Today, domestic marketable securities account for approximately 10% of the portfolio, and private equity, absolute return strategies, real assets, and foreign equity represent around 90% of the Endowment.

Asset Allocation. An important component of the investment strategy underlying the portfolio returns of the Endowment is the university's asset allocation policy. The process of selecting long-term policy targets involves defining the asset classes that will constitute the portfolio and determining the proportion of funds to be invested in each class. Yale structures its portfolio using a combination of academic theory and informed market judgment. The university targets a portfolio of the asset classes shown below.

Asset Allocation Category	**June 30, 2019 Allocation**	**June 30, 2019 Target**
Absolute Return	23.2%	23.0%
Venture Capital	21.1	21.5
Leveraged Buyouts	15.9	16.5
Foreign Equity	13.7	13.75
Real Estate	10.1	10.0
Cash and Short-Term Fixed Income	8.4	7.0
Natural Resources	4.9	5.5
Domestic Equity	2.7	2.75
Total	100.0%	100.0%

Performance. During the decade ended June 30, 2019, the Endowment returned an annualized 11.1%, beating the composite passive benchmark, a blend of individual asset class passive benchmarks weighted in a manner consistent with the Endowment's target asset allocation (the "Composite Passive Benchmark"), by 1.7% per annum. The Endowment grew from $16.3 billion at June 30, 2009 to $30.3 billion at June 30, 2019, an increase of $14.0 billion over ten years. This growth reflects approximately $23.0 billion in investment gains, $11.2 billion in spending, and $2.2 billion in gifts and pledges.

Annualized returns for the fiscal years ended June 30, 2019 are as follows:

Years	**Yale Endowment**	**Cambridge Associates Mean**	**Cambridge Associates Median**
1	5.7%	5.2%	5.1%
5	8.8	5.5	5.2
10	11.1	8.6	8.5

This performance places Yale in the top tier of large institutions as measured relative to the Wilshire Associates Trust Universe Comparison Services (TUCS) universe for the ten-year period ended June 30, 2019. Over the same period, Yale has added $7.0 billion relative to the average of a broad universe of colleges and universities as measured by Cambridge Associates, and $3.8 billion relative to the performance of the Composite Passive Benchmark.

Asset class performance for the last ten fiscal years through June 30, 2019 is as follows:

Asset Class	Ten-Year Performance	Benchmark[1]
Venture Capital[2,3]	20.0%	14.9%
Leveraged Buyouts[2,3]	16.1	15.3
Foreign Equity	16.0	6.1
Domestic Equity	15.5	14.7
Real Estate[2,4]	8.0	10.1
Absolute Return	6.4	0.8
Natural Resources[2,4]	5.7	4.8
Fixed Income	1.4	1.4

[1] Benchmarks for each asset class are subject to change and are approved by the Yale Investment Committee.
[2] Yale and benchmark returns are dollar-weighted.
[3] Prior to July 1, 2015, the Leveraged Buyouts and Venture Capital asset classes were reported as a single Private Equity asset class.
[4] Prior to July 1, 2011, the Natural Resources and Real Estate asset classes were reported as a single Real Assets asset class.

Every asset class except fixed income and real estate outperformed its respective benchmark over the past ten years. The largest margin of outperformance was in the Foreign Equity asset class.

Liquidity

The university has various sources of internal liquidity at its disposal. A summary of these sources is displayed in the following table for the dates indicated.

	12/31/2019	6/30/19	12/31/18	6/30/18	12/31/17
Cash	$1,505	$1,268	$ 585	$ 573	$ 903
Fixed Income	1,129	1,164	782	1,642	1,185
Direct and Indirect Equity Investments	1,754	2,275	2,514	2,046	2,018
Total Liquidity Portfolios	$4,388	$4,707	$3,881	$4,261	$4,106

If called upon on December 31, 2019, Yale estimates that it could have liquidated up to $4.4 billion within 90 days, subject to certain contractual restrictions and limitations.

Spending Rule

Yale's Endowment spending policy is designed to meet two competing objectives. The first is to release a stable and significant stream of income to the operating budget. The second is to protect the value of Endowment assets against inflation, allowing university programs to be supported at a constant real level indefinitely into the future.

Yale's spending rule attempts to achieve these two objectives by using a specified target spending rate that is intended to approximate the real (i.e., net of inflation) long-term earning rate of the Endowment, combined with a smoothing rule that adjusts gradually to changes in the Endowment market value. Annual Endowment spending is therefore limited to the sum of 80% of the previous fiscal year's spending, and 20% of the targeted long-term spending rate applied to the ending market value of the Endowment for the fiscal year that is two years prior to the year for which spending is being determined (i.e., in determining spending for fiscal year 2020, the June 30, 2018 market value was used). The spending amount determined by the formula is adjusted for inflation and an allowance for taxes and constrained so that the calculated rate is at least 4.0%, and not more than 6.5% of the Endowment's inflation-adjusted market value. Although it is subject to adjustment, the long-term spending rate target is currently 5.25%. The university has estimated that, over long periods of time, the difference between the inflation rate and its total return from income and market appreciation of the Endowment approximates 5.25% and, therefore, the university believes that a policy that causes the spending rate to average 5.25% should permit it to maintain the purchasing power of the Endowment. The spending rule applied to the Endowment ensures that spending levels will be sensitive to fluctuating Endowment market values, providing stability in long-term purchasing power of the Endowment.

Outstanding Indebtedness

At its fiscal year end for each of fiscal years 2015 through 2019, Yale had outstanding tax-exempt indebtedness issued through the Connecticut Health and Educational Facilities Authority ("CHEFA"), as well as commercial paper, medium-term notes, capital leases, and other indebtedness as summarized below.

			($ in thousands)		
Fiscal Year Ended June 30:	**2019**	**2018**	**2017**	**2016**	**2015**
Physical Capital:					
CHEFA Bonds					
Variable Rate Bonds	$ 200,000	$ 335,865	$ 335,865	$ 335,865	$ 685,865
Fixed Rate Bonds	2,806,635	2,707,795	2,474,415	2,529,975	2,179,975
Total CHEFA Bonds	3,006,635	3,043,660	2,810,280	2,865,840	2,865,840
Commercial Paper	500,000	181,445	181,445	181,445	181,445
Medium-term Notes	125,000	125,000	125,000	125,000	125,000
Medium-term Notes Series B	-	250,000	250,000	250,000	250,000
Capital Leases - Buildings	169,581	39,623	41,090	42,424	54,265
Notes Payable	605	1,020	1,404	1,758	2,086
U.S. Department of Energy	43,891	48,797	53,717	58,055	62,840
	3,845,712	3,689,545	3,462,936	3,524,522	3,541,476
Less: Bond issue costs	(12,359)	(13,271)	(14,224)	(13,037)	(14,619)
Plus: Unamortized premiums and discounts, net	111,600	108,603	65,987	22,187	30,965
Total Outstanding Indebtedness	$3,944,953	$3,784,877	$3,514,699	$3,533,672	$3,557,822

The university's outstanding indebtedness primarily relates to its capital improvement campaign to renovate existing facilities and add new facilities. These investments are integral to Yale's overall mission to provide the highest-quality environment for teaching and research. For the five-year period ending June 30, 2019, disbursements for building projects totaled approximately $2.0 billion.

The university's total outstanding indebtedness at June 30, 2019 was $3.9 billion.

In July 2018, CHEFA's Revenue Bonds, Yale University Issue, Series 2015A maturing July 2035 were remarketed and bear a fixed term rate of 2.05% through July 2021. In July 2018, CHEFA's Revenue Bonds, Yale University Issue, Series 2018A (the "Series 2018A Bonds") were issued to refund, effective as of July 1, 2018, CHEFA's Revenue Bonds, Yale University Issue, Series 2010A-1. The Series 2018A Bonds consist of the $67.6 million Series 2018A maturing July 2025 and bearing interest at a fixed rate of 5.00%.

In February 2019, CHEFA's Revenue Bonds, Yale University Issue, Series S maturing July 2027 were remarketed and bear a fixed term rate of 5.00% through to maturity in July 2027. Also in February 2019, CHEFA's Revenue Bonds Yale University Issue, Series U maturing July 2033 were remarketed and bear a fixed term rate of 2.00% through February 2022, and CHEFA Revenue Bonds Yale University Issue, Series 2010A-4 maturing July 2049, were remarketed and bear a fixed term rate of 2.00% through February 2022.

In April 2019, the university issued $319 million of taxable commercial paper to refinance $250 million of taxable Medium-Term Notes that matured on April 15, 2019 and provide incremental funding for capital projects.

In July 2019, CHEFA's Revenue Bonds, Yale University Issue, Series 2013A maturing in July 2042 were remarketed and bear a fixed term rate of 1.45% through June 2022. In July 2019, CHEFA's Revenue Bonds, Yale University Issue, Series 2016A-1 bonds maturing in July 2042 were remarketed to a fixed term rate of 1.45% through June 2022.

In February 2020, CHEFA's Revenue Bonds, Yale University Issue, Series 2014A maturing in July 2048 were remarketed and bear a fixed term rate of 1.10% through February 2023. In February 2020, CHEFA's Revenue Bonds, Yale University Issue, Series T-2 bonds maturing in July 2029 were remarketed to a fixed term rate of 5.00% through the maturity date.

Used in conjunction with gifts and operating funds, proceeds from tax-exempt debt provide a cost-effective way to finance projects that otherwise might not be feasible to complete in a timely manner. The university continues to benefit from advantageous interest rate conditions through its substantial variable-rate debt program but has hedged a significant portion of its exposure to higher interest expense with interest rate swaps. As of June 30, 2019, the university had a net notional value of $900 million in interest rate swaps outstanding. Further information on the university's outstanding debt and interest rate swaps is disclosed in the financial statements for the fiscal year ended June 30, 2019 included in Appendix B.

Litigation

There is no litigation or governmental proceeding pending or threatened against the university which would materially affect the university's financial position or its ability to perform its obligations in connection with the Series 2020A Bonds (as defined below).

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*   *   *

The information contained herein is submitted for inclusion in the Offering Memorandum relating to Taxable Bonds, Yale University Issue, Series 2020A (the "Series 2020A Bonds"). The use of this information in connection with the issuance of the Series 2020A Bonds, and the execution and delivery hereof by its Vice President for Finance and Chief Financial Officer have been duly authorized by the university.

YALE UNIVERSITY

By: */s/ Stephen C. Murphy*
Vice President for Finance and
Chief Financial Officer

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Yale University

Consolidated Financial Statements

June 30, 2019 and 2018

Yale University

Consolidated Financial Statements

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Report of Independent Auditors

To the President and Fellows of Yale University

We have audited the accompanying consolidated financial statements of Yale University and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2019 and 2018 and the related consolidated statements of activities for the year ended June 30, 2019 and of cash flows for the years ended June 30, 2019 and 2018.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

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

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

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Yale University and its subsidiaries as of June 30, 2019 and 2018 and the changes in their net assets for the year ended June 30, 2019 and their cash flows for the years ended June 30, 2019 and 2018 in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We previously audited the consolidated statement of financial position as of June 30, 2018, and the related consolidated statements of activities and of cash flows for the year then ended (the statement of activities is not presented herein), and in our report dated October 22, 2018, we expressed an unmodified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying summarized financial information as of June 30, 2018 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

PricewaterhouseCoopers LLP

October 22, 2019

Yale University Consolidated Statement of Financial Position

as of June 30, 2019 and June 30, 2018 ($ in thousands)

		2019		2018
Assets:				
Cash and cash equivalents	$	709,449	$	587,847
Accounts receivable, net		299,673		261,642
Contributions receivable, net		670,461		511,744
Notes receivable		110,424		115,596
Investments, at fair value		37,060,058		35,113,711
Other assets		223,543		190,753
Land, buildings and equipment, net of accumulated depreciation		5,354,517		5,091,691
Total assets	$	44,428,125	$	41,872,984

Liabilities:				
Accounts payable and accrued liabilities	$	506,495	$	430,183
Advances under grants and contracts and other deposits		127,955		133,512
Other liabilities		1,999,364		1,310,872
Liabilities under split-interest agreements		144,096		138,606
Bonds and notes payable		3,944,953		3,784,877
Liabilities associated with investments		5,438,228		3,791,731
Advances from federal government for student loans		25,283		26,088
Total liabilities	$	12,186,374	$	9,615,869

Net Assets:				
Net assets without donor restrictions: Yale University	$	5,184,946	$	5,813,581
Net assets without donor restrictions: non-controlling interests		707,411		713,343
Total net assets without donor restrictions		5,892,357		6,526,924
Net assets with donor restrictions		26,349,394		25,730,191
Total net assets	$	32,241,751	$	32,257,115
Total liabilities and net assets	$	44,428,125	$	41,872,984

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

Yale University Consolidated Statement of Activities

for the year ended June 30, 2019 with summarized comparative totals for the year ended June 30, 2018 ($ in thousands)

	Without Donor Restrictions	With Donor Restrictions	2019	2018
Operating				
Revenues and releases:				
Net tuition, room and board	$ 387,172	$ -	$ 387,172	$ 375,652
Grant and contract income, primarily for research and training	823,530	-	823,530	789,975
Medical services income	1,041,988	-	1,041,988	930,163
Contributions	19,490	191,413	210,903	137,707
Allocation of endowment spending from financial capital	381,102	973,466	1,354,568	1,282,072
Other investment income	89,645	5,194	94,839	91,459
Other income	191,823	535	192,358	209,892
Total revenues	2,934,750	1,170,608	4,105,358	3,816,920
Net assets released from restrictions	1,074,031	(1,074,031)	-	-
Total revenues and releases	4,008,781	96,577	4,105,358	3,816,920
Expenses:				
Salaries and wages	1,796,642	-	1,796,642	1,696,655
Employee benefits	577,782	-	577,782	569,375
Depreciation, amortization and interest	359,432	-	359,432	329,920
Other operating expenditures	1,101,011	-	1,101,011	1,030,509
Total expenses	3,834,867	-	3,834,867	3,626,459
Increase in net assets from operating activities	173,914	96,577	270,491	190,461
Non-operating				
Contributions	13,296	403,083	416,379	223,197
Total endowment return	256,170	1,373,822	1,629,992	3,277,910
Allocation of endowment spending to operations	(210,826)	(1,143,742)	(1,354,568)	(1,282,072)
Other investment (loss) income	(301,821)	2	(301,819)	127,507
Change in funding status of defined benefit plans	(663,686)	-	(663,686)	313,884
Other increases (decreases)	65,498	(71,719)	(6,221)	(33,071)
Net assets released from restrictions	38,820	(38,820)	-	-
(Decrease) increase in net assets from non-operating activities	(802,549)	522,626	(279,923)	2,627,355
Total (decrease) increase in net assets - Yale University	(628,635)	619,203	(9,432)	2,817,816
Change in non-controlling interests	(5,932)	-	(5,932)	453,141
Total (decrease) increase in net assets	(634,567)	619,203	(15,364)	3,270,957
Net assets, beginning of year	6,526,924	25,730,191	32,257,115	28,986,158
Net assets, end of year	$ 5,892,357	$ 26,349,394	$ 32,241,751	$ 32,257,115

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

Yale University Consolidated Statement of Cash Flows

for the years ended June 30, 2019 and 2018 ($ in thousands)

		2019		2018
Operating activities:				
Change in net assets	$	(15,364)	$	3,270,957
Adjustments to reconcile change in net assets to net cash used in operating activities:				
Depreciation and amortization		291,604		274,832
Unrealized gain (loss) on other investments		295,426		(161,318)
Net endowment investment gain		(1,174,398)		(2,890,256)
Change in non-controlling interests		5,932		(453,141)
Change in funding status of defined benefit plans		663,686		(313,884)
Non-operating contributions		(416,379)		(223,197)
Contributed securities		(141,628)		(121,351)
Proceeds from sale of donated securities		27,898		24,062
Other adjustments		44,297		(6,736)
Changes in assets and liabilities that provide (use) cash:				
Accounts receivable		(38,031)		(55,538)
Contributions receivable		(50,116)		18,500
Other operating assets		(39,135)		(706)
Accounts payable and accrued expenses		97,089		(40,788)
Advances under grants and contracts and other deposits		(5,557)		(3,074)
Other liabilities		24,806		93,449
Net cash used in operating activities		(429,870)		(588,189)
Investing activities:				
Student loans repaid		12,398		13,321
Student loans granted		(8,062)		(6,731)
Purchases related to capitalized software costs and other assets		(33,407)		(6,174)
Proceeds from sales and maturities of investments		13,777,776		10,436,387
Purchases of investments		(13,204,588)		(9,982,974)
Purchases of land, buildings and equipment		(492,937)		(349,452)
Net cash provided by investing activities		51,180		104,377
Financing activities:				
Proceeds from restricted contributions		307,779		310,718
Proceeds from sale of contributed securities restricted for endowment		113,730		97,290
Contributions received for split-interest agreements		8,228		7,898
Payments made under split-interest agreements		(18,283)		(16,168)
Proceeds from long-term debt		451,525		452,759
Repayments of long-term debt		(362,687)		(156,770)
Repayments to the Federal government for student loans		-		(2,417)
Net cash provided by financing activities		500,292		693,310
Net increase in cash and cash equivalents		121,602		209,498
Cash and cash equivalents, beginning of year		587,847		378,349
Cash and cash equivalents, end of year	$	709,449	$	587,847

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

Yale University
Notes to Consolidated Financial Statements

1. Significant Accounting Policies

a. General

Yale University ("Yale" or the "university") is a private, not-for-profit institution of higher education located in New Haven, Connecticut. The university is governed by the Yale Corporation (the "Corporation"), a body of nineteen Trustees consisting of the President, ten Successor Trustees who are Successors to the original Trustees, six Alumni Fellows, and the Governor and Lieutenant Governor of Connecticut, ex officio.

The university provides educational services primarily to students and trainees at the undergraduate, graduate and postdoctoral levels, and performs research, training and other services under grants, contracts and other similar agreements with agencies of the federal government and other sponsoring organizations. The university's academic organization includes Yale College, the Graduate School of Arts and Sciences, twelve professional schools and a variety of research institutions and museums. The largest professional school is the Yale School of Medicine, which conducts medical services in support of its teaching and research missions.

b. Basis of Presentation

The consolidated financial statements of the university include the accounts of all academic and administrative departments of the university, and affiliated organizations that are controlled by the university.

Financial statements of private, not-for-profit organizations measure aggregate net assets and net asset activity based on the absence or existence of donor-imposed restrictions. Net assets are reported as without donor restrictions and with donor restrictions and serve as the foundation of the accompanying consolidated financial statements. Brief definitions of the two net asset classes are presented below:

Net Assets Without Donor Restrictions - Net assets derived from tuition and other institutional resources that are not subject to explicit donor-imposed restrictions. Net assets without donor restrictions also include board designated funds functioning as endowment.

Net Assets With Donor Restrictions - Net assets that are subject to explicit donor-imposed restrictions on the expenditure of contributions or income and gains on contributed assets, net assets from endowments not yet appropriated for spending by the Corporation and student loan funds. In addition, net assets with donor restrictions include restricted contributions from donors classified as funds functioning as endowment. The university records as net assets with donor restrictions the original amount of gifts which donors have given to be maintained in perpetuity. Restrictions include support of specific schools or departments of the university, for professorships, research, faculty support, scholarships and fellowships, library and art museums, building construction and other purposes. When time and purpose restrictions expire, net assets with donor restrictions are reclassified to net assets without donor restrictions.

Measure of Operations - The university's measure of operations as presented in the consolidated statement of activities includes revenue from tuition (net of certain scholarships and fellowships) and fees, grants and contracts, medical services, contributions for operating programs, the allocation of endowment spending for operations and other revenues. Operating expenses are reported on the consolidated statement of activities by natural classification.

The university's non-operating activity within the consolidated statement of activities includes contributions to the university's endowment and for building construction and renovation, investment returns and other activities related to endowment, and long-term benefit plan obligation funding changes.

Liquidity - The university's financial assets available within one year of the balance sheet date for general expenditure as of June 30, 2019 and 2018, are as follows, in thousands of dollars:

		2019	2018
Total assets, at year end		$44,428,125	$41,872,984
Less nonfinancial assets:			
	Land, buildings and equipment, net of accumulated depreciation	5,354,517	5,091,691
	Other assets	223,543	190,753
Financial assets, at year end		38,850,065	36,590,540
Less those unavailable for general expenditure within one year due to:			
	Contractual or donor-imposed restrictions:		
	Restricted by donor with time or purpose restrictions	595,649	452,734
	Subject to appropriation and satisfaction of donor restrictions including board designated endowments	34,779,353	32,855,805
	Other long-term notes receivable	110,424	115,596
	Other contractual restrictions	-	75,968
Financial assets available to meet cash needs for general expenditures within one year		$ 3,364,639	$ 3,090,437

The university has $3,364.6 million of financial assets that are available within one year of the balance sheet date to meet cash needs for general expenditure consisting of cash of $709.4 million, accounts receivable of $299.7 million, contributions receivable of $74.8 million, and short-term investments of $2,280.7 million. In addition to these available financial assets, a significant portion of the university's annual expenditures will be funded by current year operating revenues including tuition, grant and contract income and medical services income. The university has a policy to structure its financial assets to be available as its general expenditures, liabilities, and other obligations come due. As part of its liquidity management, the university invests cash in excess of daily requirements in various short-term investments, including US government instruments.

Additionally, the university has board-designated funds of $5.3 billion. Although the university does not intend to spend from this endowment, other than amounts appropriated for general expenditure as part of its annual budget approval and appropriation process, amounts from its board-designated funds could be made available if necessary. However, both the board-designated funds and donor-restricted endowments contain investments with lock-up provisions that would reduce the total investments that could be made available (see Note 2 for disclosures about investments).

c. Cash and Cash Equivalents

Cash and cash equivalents are recorded at cost, which approximates fair value, and include institutional money market funds and similar temporary investments with maturities of three months or less at the time of purchase. Cash and cash equivalents awaiting investment in the long-term investment pool are reported as investments and totaled $660.8 million and $260.6 million at June 30, 2019 and 2018, respectively. Cash and cash equivalents do not include cash balances held as collateral.

Supplemental disclosures of cash flow information include the following, in thousands of dollars:

		2019		2018
Cash paid during the year for interest	$	129,527	$	110,482
Noncash investing activities:				
Land, buildings and equipment purchases payable to vendor	$	47,308	$	35,718
Assets acquired under capital leases		77,169		-

d. Investments

Fair Value - The university's investments are recorded in the consolidated financial statements at fair value.

Fair value is a market-based measurement based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering assumptions, a three-tier fair value hierarchy has been established which prioritizes the inputs used in measuring fair value. The hierarchy of inputs used to measure fair value and the primary methodologies used by the university to measure fair value include:

- *Level 1* – Quoted prices for identical assets and liabilities in active markets. Market price data is generally obtained from relevant exchange or dealer markets.
- *Level 2* – Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable.
- *Level 3* – Unobservable inputs for which there is little or no market data, requiring the university to develop its own assumptions.

Assets and liabilities measured at fair value are determined based on the following valuation techniques:

- *Market approach* – Prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities; and
- *Income approach* – Techniques to convert future amounts to a single present amount based on market expectations, including present value techniques and option-pricing models.

The fair value of publicly traded fixed income and equity securities is based upon quoted market prices and exchange rates, if applicable. The fair value of direct real estate investments is determined from periodic valuations prepared by independent appraisers.

Investments are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the university's consolidated financial statements.

Derivatives - Derivative financial instruments in the investment portfolio include interest rate swaps, equity swaps, credit default swaps, commodity swap contracts, and currency forward contracts which are recorded at fair value with the resulting gain or loss recognized in the consolidated statement of activities.

Resell and Repurchase Agreements - Cash paid relating to resell agreements is generally collateralized by federal agency and foreign debt securities. The university takes possession of the underlying collateral and monitors the value of the underlying collateral to the amount due under the agreement. Cash received under repurchase agreements is collateralized by investments in asset backed securities, corporate debt, federal agency debt, and foreign debt securities. Collateral fair value is monitored to the amounts due under the agreements.

Management Fees - The university records the cost of managing its endowment portfolio as a decrease in non-operating activity within the applicable net asset class in the consolidated statement of activities. Management fees consist of the internal costs of the university's Investments Office (the "Investments Office"), outside custodian fees, and fees for external investment managers and general partners.

Total Return - The university invests its endowment portfolio and allocates the related earnings for expenditure in accordance with the total return concept. A distribution of endowment return that is independent of the cash yield and appreciation of investments earned during the year is provided for program support. The university has adopted an endowment spending policy designed specifically to stabilize annual spending levels and to preserve the real value of the endowment portfolio over time. The spending policy attempts to achieve these two objectives by using a long-term targeted spending rate combined with a smoothing rule, which adjusts spending gradually to changes in the endowment's fair value. An administrative charge is assessed against the funds when distributed.

To the extent that a donor restricted endowment fund falls below its historic dollar value a deficit would exist, and it would be reported as a reduction of net assets with donor restrictions. Spending from an endowment fund in a deficit position would continue under the spending policy so long as the fund is impaired less than 30% relative to its historical dollar value. There were no funds in a deficit position at June 30, 2019.

The university uses a long-term targeted spending rate of 5.25%. The spending amount is calculated using 80% of the previous year's spending and 20% of the targeted long-term spending rate applied to the fair value two years prior. The spending amount determined by the formula is adjusted for inflation and taxes and constrained so that the calculated rate is at least 4.0% and not more than 6.5% of the endowment's fair value. The actual rate of spending for 2019 and 2018, when measured against the previous year's June 30th endowment fair value, was 4.6% and 4.7%, respectively.

The university determines the expected return on endowment investments with the objective of producing a return exceeding the sum of inflation and the target spending rate. Asset allocation is the key factor driving expected return. Yale's asset allocation policy combines tested theory and informed market judgment to balance investment risks with the need for high returns. Both the need to provide resources for current operations and the desire to preserve the purchasing power of assets leads the endowment to be weighted toward equity.

The university manages the majority of its endowment in its Long Term Investment Pool (the "Pool"). The Pool is unitized and allows for efficient investment among a diverse group of funds with varying restricted purposes. In addition to university funds, the Pool includes assets of affiliated entities where the university has established investment management agreements.

e. Land, Buildings and Equipment

Land, buildings, and equipment are generally stated at cost. Buildings leased under capital leases are recorded at the lower of the net present value of the minimum lease payments or the fair value of the leased asset at the inception of the lease. Annual depreciation is calculated on a straight-line basis over useful lives, or over the lease term for capital leases, ranging from 15 to 50 years for buildings and improvements and 4 to 15 years for furnishings and equipment.

f. Other Assets

Other assets include an insurance receivable, capitalized software costs, deferred expenses, and inventories. Capitalized software costs are amortized on a straight line basis over the estimated useful lives of the software, ranging from 5 to 10 years.

g. Collections

Collections at Yale include works of art, literary works, historical treasures, and artifacts that are maintained in the university's museums and libraries. These collections are protected and preserved for public exhibition, education, research, and the furtherance of public service. Collections are not capitalized; purchases of collection items are recorded as expenses in the university's consolidated statement of activities in the period in which the items are acquired.

h. Split-Interest Agreements

The university's split-interest agreements with donors consist primarily of charitable gift annuities, pooled income funds, and irrevocable charitable remainder trusts for which the university serves as trustee. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements.

Contribution revenue related to charitable gift annuities and charitable remainder trusts are recognized at the date the agreements are established. In addition, the fair value of the estimated future payments to be made to the beneficiaries under these agreements is recorded as a liability. For pooled income funds, contribution revenue is recognized upon establishment of the agreement at the fair value of the estimated future receipts, discounted for the estimated time period until culmination of the agreement.

i. Beneficial Interest in Trust Assets

The university is the beneficiary of certain perpetual trusts and charitable remainder trusts held and administered by others. The estimated fair values of trust assets are recognized as assets and as gift revenue when reported to the university.

j. Net Tuition, Room and Board

Tuition, room and board revenue is generated from an enrolled student population of approximately 13,400 and is recognized in the period in which it satisfies its performance obligations. Net tuition, room and board revenue from undergraduate enrollment represents approximately 59.4% of total tuition, room and board revenue in 2019.

The university maintains a policy of offering qualified applicants admission to Yale College without regard to financial circumstance, as well as meeting in full the demonstrated financial need of those admitted. Student need in all programs throughout the university is generally fulfilled through a combination of scholarships and fellowships, loans and employment during the academic year. Tuition, room and board revenue has been reduced by certain scholarships and fellowships in the amounts of $343.3 million and $304.4 million in 2019 and 2018, respectively.

k. Contributions

Unconditional promises to give that are expected to be collected within one year are recorded at their net realizable value. Amounts expected to be collected in future years are recorded at the present value of estimated future cash flows, which includes estimates for potential uncollectible receivables. The discount on those contributions is computed using an interest rate that reflects fair value applicable to the year in which the promise is received. Amortization of the discount is included in contribution revenue.

Contributions are considered conditional when the underlying agreement includes a performance barrier and a right of return or a right to release promised assets exists. Conditional promises to give are not recognized as revenue until the performance barrier and the right of return or release have been overcome.

l. Grant and Contract Income

The university receives grant and contract income for exchange and non-exchange agreements from both governmental and private sources. Revenue from exchange agreements is recognized when performance obligations are met. Revenue from conditional non-exchange agreements is recognized as performance barriers are overcome and as the university overcomes either a right of return of assets transferred or the right of release of a promisor’s obligation to transfer assets. Grant and contract revenue from conditional non-exchange agreements is generally recognized as qualified costs of sponsored programs are incurred. At June 30, 2019, the university has research activities which are contractually authorized by the sponsor, but for which costs have not yet been incurred, totaling $1,543.5 million.

In 2019 and 2018, grant and contract income received from the federal government totaled $612.0 million and $586.6 million, respectively. Recovery of facilities and administrative costs of federally sponsored programs is at rates negotiated with the university's cognizant agency, the Department of Health and Human Services.

m. Medical Services Income

The university provides medical care to patients primarily under agreements with third party-payors, including health maintenance organizations, that provide payment for medical services at amounts different from standard rates established by the university. The university determines performance obligations based on the nature of the services provided and recognizes revenue as it satisfies those performance obligations. Generally, these performance obligations are satisfied at the point in time the service is provided.

Medical services income is reported net of contractual discounts from third-party payors and of implicit price concessions to uninsured patients. The university estimates the discounts based on contractual agreements and estimates the implicit price concessions based on its historical collection experience with these classes of patients.

In 2019 and 2018, income from medical services totaled $447.9 million and $418.4 million for insurance companies, $143.9 million and $139.2 million for Medicare, and $62.6 million and $61.6 million for Medicaid, respectively.

n. Net Assets Released from Restrictions

Net assets released from restrictions are based upon the satisfaction of the purpose for which the net assets were restricted or the completion of a time stipulation. Restricted operating activity including contributions and net investment return earned, which are restricted, are reported as net assets with donor restrictions and reclassified to net assets without donor restrictions when any donor-imposed restrictions are satisfied. Non-operating restricted net assets associated with building costs are reclassified to net assets without donor restrictions when the capital asset is placed in service.

o. Self-Insurance

The university self-insures at varying levels for unemployment, disability, workers' compensation, property losses, certain healthcare plans, general liability, and professional liability; and obtains coverage through a captive insurance company for medical malpractice and related general liability losses. Insurance is purchased to cover liabilities above self-insurance limits. Estimates of retained exposures are accrued.

p. Tax Status

The university has been granted tax-exempt status under section 501(c)(3) of the Internal Revenue Code.

The Tax Cuts and Jobs Act (the "Act"), enacted on December 22, 2017, impacts the university in several ways, including the new excise taxes on net investment income and executive compensation, as well as updated rules for calculating unrelated business taxable income. The overall impact of the Act remains uncertain, and the full impact will not be known until further regulatory guidance is published. The university has recorded tax assets and liabilities in its consolidated financial statements based on reasonable estimates determined using current guidance. Management will continue to monitor regulatory developments and assess the future impact of the relevant provisions of the Act on the university's consolidated financial statements.

As a result of the Act's changes to the calculation of unrelated business taxable income, the university expects to use net operating loss ("NOL") carryforwards to offset future unrelated business taxable income. The university has recorded a deferred tax asset to reflect the expected benefit of these NOL carryforwards which will expire beginning in 2020 through 2037 if they are not used. The deferred tax asset is the portion of the benefit that is more likely than not to be realized based on management's evaluation of available regulatory guidance and its estimates of future taxable income. The amount of the deferred tax asset could be adjusted in the future if estimates of taxable income during the carryforward period are reduced or increased based on additional information, including the issuance of final regulations.

q. Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosures of contingencies at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period.

Significant estimates made by management include the valuation of alternative investments, the estimated net realizable value of receivables, estimated asset retirement obligations, liabilities under split-interest agreements, estimated tax liabilities and the valuation of the deferred tax asset resulting from provisions of the Act, and the actuarially determined employee benefit and self-insurance liabilities. Actual results could differ from those estimates.

r. Recent Authoritative Pronouncements

On July 1, 2018, the university adopted new guidance (1) Clarifying the Scope and Accounting Guidance for *Contributions Received and Contributions Made* effective for the fiscal year ended June 30, 2019, (2) *Revenue from Contracts with Customers* effective for the fiscal year ended June 30, 2019, and (a) evaluating whether transactions should be accounted for as contributions or exchange transactions and (b) determining whether a contribution is conditional. Under *Revenue from Contracts with Customers*, adopted using the modified retrospective approach, recognition of revenue from customer contracts is a principles-based framework. The impact of adopting the new guidance was not significant to the university's consolidated financial statements.

The Financial Accounting Standards Board has issued the *Leases* accounting standard that the university must adopt for the fiscal year ending June 30, 2020. The *Leases* standard aims to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. Leases will be classified as finance or operating, with classification affecting the pattern and classification of expense recognition in the consolidated statement of activities. In conjunction with the adoption of this standard the university expects to record a right of use asset and a corresponding lease liability in the consolidated statement of financial position.

s. Summarized 2018 Financial Information

The 2019 consolidated financial statements include selected comparative summarized financial information for 2018. Such information does not include sufficient detail to constitute a presentation in conformity with GAAP. Accordingly, such information should be read in conjunction with the university's 2018 consolidated financial statements, from which the summarized financial information was derived. In addition, certain amounts have been reclassified to conform to the current year presentation.

2. Investments

The university endowment maintains a diversified investment portfolio with a strong orientation to equity investments and strategies designed to take advantage of market inefficiencies. The university's investment objectives are guided by its asset allocation policy and are achieved in partnership with external investment managers operating through a variety of investment vehicles, including separate accounts, limited partnerships and commingled funds. The university's heavy allocation to non-traditional asset classes, such as absolute return (hedge strategies), private equity (venture capital and leveraged buyouts), real estate, and natural resources (timber, energy and minerals), generates return potential and diversification in the portfolio.

The components of endowment and non-endowment investments, net of related liabilities at June 30 are presented below, in thousands of dollars:

	2019	2018
Endowment investments:		
Long term investment pool	$ 30,013,883	$ 29,088,879
Other	281,120	356,057
Total net endowment investments	30,295,003	29,444,936
Non-endowment investments:		
Long term investment pool	400,000	350,000
Bonds	526,137	549,866
Derivatives	(459,213)	(174,542)
Other	152,492	438,377
Total non-endowment investments	619,416	1,163,701
Net investments, at fair value	$ 30,914,419	$ 30,608,637

As described in Note 1d, investments are recorded at fair value. The following tables summarize the fair values of the university's investments by major type and related liabilities as of June 30, in thousands of dollars:

2019	Level 1	Level 2	Level 3	Total
Investments, at fair value:				
Cash and cash equivalents	$ 1,300,316	$ -	$ -	$ 1,300,316
Fixed income:				
US government securities	2,367,143	116	61	2,367,320
Foreign government securities	24,145	302,743	11,058	337,946
Corporate and other securities	50,118	2,542,451	253,072	2,845,641
Total fixed income	2,441,406	2,845,310	264,191	5,550,907
Common stock:				
Domestic	1,108,851	42,083	79,520	1,230,454
Foreign	1,642,821	106,236	102,423	1,851,480
Total common stock	2,751,672	148,319	181,943	3,081,934
Other equity investments:				
Venture capital	-	-	194,028	194,028
Natural resources	-	-	189,278	189,278
Total other equity investments	-	-	383,306	383,306
Other investments	475,609	1,283,593	315,942	2,075,144
Total leveled investments, at fair value	$ 6,969,003	$ 4,277,222	$ 1,145,382	12,391,607
Investments at net asset value				24,668,451
Total investments				37,060,058
Liabilities associated with investments:				
Securities sold, not yet purchased	$ 597,722	$ 694,431	$ -	1,292,153
Repurchase agreements	-	1,613,783	1,239	1,615,022
Other liabilities	265,027	1,020,862	1,245,164	2,531,053
Total liabilities associated with investments	$ 862,749	$ 3,329,076	$ 1,246,403	5,438,228
Non-controlling interests				707,411
Net investments				$ 30,914,419

2018		Level 1		Level 2		Level 3		Total
Investments, at fair value:								
Cash and cash equivalents	$	614,547	$	-	$	-	$	614,547
Fixed income:								
US government securities		1,988,449		58,759		58		2,047,266
Foreign government securities		12,934		162,459		-		175,393
Corporate and other securities		30,676		1,998,181		337,352		2,366,209
Total fixed income		2,032,059		2,219,399		337,410		4,588,868
Common stock:								
Domestic		1,496,324		42,298		22,024		1,560,646
Foreign		1,820,450		80,550		93,150		1,994,150
Total common stock		3,316,774		122,848		115,174		3,554,796
Other equity investments:								
Venture capital		-		-		169,949		169,949
Natural resources		-		-		210,163		210,163
Total other equity investments		-		-		380,112		380,112
Other investments		741,675		941,655		336,374		2,019,704
Total leveled investments, at fair value	$	6,705,055	$	3,283,902	$	1,169,070		11,158,027
Investments at net asset value								23,955,684
Total investments								35,113,711
Liabilities associated with investments:								
Securities sold, not yet purchased	$	382,815	$	333,560	$	-		716,375
Repurchase agreements		-		832,610		-		832,610
Other liabilities		299,524		698,425		1,244,797		2,242,746
Total liabilities associated with investments	$	682,339	$	1,864,595	$	1,244,797		3,791,731
Non-controlling interests								713,343
Net investments							$	30,608,637

While not part of a leveling category, fair values for certain investments held are based on the net asset value ("NAV") of such investments as determined by the respective external investment managers, including general partners, if market values are not readily ascertainable. These valuations necessarily involve assumptions and methods that are reviewed by the Investments Office.

Investments at NAV as of June 30, in thousands of dollars, include:

		2019		2018
Absolute return	$	5,372,169	$	5,707,245
Domestic		467,482		898,522
Foreign		2,721,844		2,593,255
Leveraged buyout		4,977,975		4,310,722
Natural resources		1,259,534		1,720,329
Real estate		3,119,090		3,012,179
Venture capital		6,750,357		5,713,432
Total investments, at NAV	$	24,668,451	$	23,955,684

Assets and liabilities of investment companies that are controlled by the university are consolidated for reporting purposes. Certain consolidated subsidiaries are controlled but not wholly owned by the university. The portion of a consolidated entity's net assets that is not owned by the university is reported as a non-controlling interest.

The fair value of consolidated investment company assets and liabilities included in the university's consolidated financial statements, in thousands of dollars, include:

		2019		2018
Consolidated investment company assets	$	6,362,187	$	5,467,241
Consolidated investment company liabilities		3,089,803		1,965,031
	$	3,272,384	$	3,502,210

Level 3 investments are valued by the university or by its external investment managers using valuation techniques standard in the industry in which they operate. The Investments Office reviews these valuation methods and evaluates the appropriateness of these valuations each year. In certain circumstances, when the general partner does not provide a valuation or the valuation provided is not considered appropriate, the Investments Office will determine those values.

The following table summarizes quantitative inputs and assumptions used for Level 3 investments at June 30, 2019 for which fair value is based on unobservable inputs that are not developed by external investment managers. Significant increases or decreases in these unobservable inputs may result in significantly higher or lower valuation results.

Asset Class		Fair Value (in 000's)	Valuation Technique	Significant Unobservable Input	Range	Weighted Average
Equity securities	$	181,943	Market comparables	Enterprise value/assets	0.8% - 3.0%	1.5%
			Price of recent investment	Price of recent round in private investment	+/- 10.0%	8.34%/ (8.34%)
			Dealer pricing	Indicative quotes	NA	NA
			Liquidation model	Liquidation probability	15.0% - 35.0%	25.0%
Fixed income securities	$	264,191	Bank debt model	Discount rate	9.0% - 14.0%	11.0%
			Bond model	Discount rate	7.0% - 11.0%	9.0%
			Dealer pricing	Indicative quotes	NA	NA
Natural resources	$	189,278	Discounted cash flow	Discount rate	8.0% -12.0%	10.0%
Trusts	$	193,753	Net present value	Discount rate	2.8%	2.8%
Other investments	$	316,217	Market comparables	Price per acre	$8,834.00 - $9,164.00	$9,000.00
			Write-off	Recovery rate	30.0% - 70.0%	50.0%
			Dealer pricing	Indicative quotes	NA	NA
			Put model	Volatility	50.0%	50.0%
Liabilities	$	(1,246,403)	Various methods	University pooled unit market value	$ 3,696.07	$ 3,696.07

The valuation process for investments at NAV and those categorized in Level 3 of the fair value hierarchy includes evaluating the operations and valuation procedures of external investment managers and the transparency of those processes through background and reference checks, attendance at investor meetings, and periodic site visits. In determining the fair value of investments, Investments Office staff reviews periodic investor reports, interim and annual audited financial statements received from external investment managers, and material quarter over quarter changes in valuation; and assesses the impact of macro market factors on the performance. The Investments Office meets with the Corporation's Investment Committee quarterly to review investment transactions and monitor performance of external investment managers.

Realized gains and losses are reported in total endowment return, net of fees. Included in net realized and unrealized gain (loss) in Level 3 reported below were unrealized losses of ($26.2) million and unrealized gains of $36.7 million that relate to assets held at June 30, 2019 and 2018, respectively.

The tables below present the change in fair value measurements for the university's Level 3 investments during the years ended June 30, in millions of dollars:

2019	Venture Capital	Natural Resources	Other	Liabilities	Total
Beginning balance	$ 170	$ 210	$ 789	$ (1,245)	$ (76)
Realized and unrealized gain (loss), net	36	(30)	(10)	(12)	(16)
Purchases	7	32	204	(15)	228
Sales	(8)	(23)	(225)	26	(230)
Transfers in	99	-	77	-	176
Transfers out	(110)	-	(73)	-	(183)
Ending balance	$ 194	$ 189	$ 762	$ (1,246)	$ (101)

2018	Venture Capital	Natural Resources	Other	Liabilities	Total
Beginning balance	$ 115	$ 256	$ 780	$ (1,310)	$ (159)
Realized and unrealized gain (loss), net	38	12	25	(40)	35
Purchases	3	18	132	(10)	143
Sales	(1)	(2)	(118)	103	(18)
Transfers in	21	-	69	(2)	88
Transfers out	(6)	(74)	(99)	14	(165)
Ending balance	$ 170	$ 210	$ 789	$ (1,245)	$ (76)

The transfers out of Level 3 consist primarily of investments reclassified from Level 3 to investments at NAV due to the use of the practical expedient for certain limited partnership investments.

Agreements with external investment managers include certain redemption terms and restrictions as noted in the following table:

Asset Class		Fair Value (in 000's)	Remaining Life		Unfunded Commitment (in 000's)	Redemption Terms	Redemption Restrictions
Absolute return	$	5,372,169	No Limit	$	45,567	Redemption terms range from monthly with 30 days notice to annually with 90 days notice.	Lock-up provisions range from none to 5 years.
Domestic equity		467,482	No Limit		-	Redemption terms range from monthly with 3 days notice to annually with 90 days notice.	Lock-up provisions range from none to 7 years.
Foreign equity		2,721,844	No Limit		120,750	Redemption terms range from monthly with 15 days notice to closed end structures not available for redemption.	Lock-up provisions range from none to 7 years.
Leveraged buyout		4,977,975	1-25 years		3,591,298	Closed end funds not eligible for redemption.	Not redeemable.
Venture capital		6,944,385	1-25 years		1,441,745	Redemption terms range from 2 years with 3 years notice to closed end structures not available for redemption.	Not redeemable.
Real estate		3,119,090	1-25 years		2,200,956	Closed end funds not eligible for redemption.	Not redeemable.
Natural resources		1,448,812	1-35 years		534,802	Closed end funds not eligible for redemption.	Not redeemable.
Total	$	25,051,757		$	7,935,118		

The university enters into resell agreements (where securities are purchased under agreements to resell) and into repurchase agreements (where securities are sold under an agreement to repurchase). All resell agreements and repurchase agreements are carried at their contractual value which approximates fair value. Resell and repurchase agreements are presented gross in the university's consolidated statement of financial position as investment assets and liabilities associated with investments.

The table below illustrates the exposure for these financial instruments at June 30, 2019, in thousands of dollars, where enforceable netting agreements are in place:

		Assets		Liabilities
Resell and repurchase agreements	$	805,538	$	1,615,022
Amounts contractually eligible for offset		(692,938)		(692,938)
Collateral		(97,818)		(922,084)
Net exposure for resell and repurchase agreements	$	14,782	$	-

The fair value of fixed income securities of $1,267.0 million was provided at June 30, 2019 to collateralize securities sold, not yet purchased.

The university may employ derivatives and other strategies to (1) manage against market risks, (2) arbitrage mispricings of related securities, and (3) replicate long or short positions more cost effectively.

The university does not invest in derivatives for speculation. The fair value of derivative positions held at June 30, 2019 and related gain (loss) for the year, in thousands of dollars, were as follows:

	Assets	Liabilities	Gain (Loss)
Endowment:			
Credit default swaps	$ 95,741	$ (108,923)	$ (693)
Interest rate swaps	109,164	(149,446)	(15,591)
Other	63,249	(49,440)	(74,685)
	268,154	(307,809)	(90,969)
Other:			
Interest rate swaps	19,639	(490,243)	(306,958)
Energy swaps	-	(407)	148
	19,639	(490,650)	(306,810)
Gross value of derivatives	287,793	(798,459)	$ (397,779)
Other-counterparty netting	(219,627)	219,627	
Net collateral (received)/posted	(38,817)	491,408	
Total net exposure for derivatives	$ 29,349	$ (87,424)	

Derivatives are reported as other investments and other liabilities for fair value leveling purposes. The university initiates derivatives under legally enforceable master netting agreements. The net exposure for derivatives is presented above net of these master netting agreements and required collateral.

Credit default swaps

Credit default swaps are used to simulate long or short positions that are unavailable in the market or to reduce credit risk where exposure exists. The buyer of a credit default swap is obligated to pay to the seller a periodic stream of payments over the term of the contract in return for a contingent payment upon occurrence of a contracted credit event. As of June 30, 2019, the total notional amount of credit default swap contracts for buy protection amounts to $2.9 billion and the notional amount related to sell protection is $1.0 billion.

Interest rate swaps

Interest rate swaps are used to manage exposure to interest rate fluctuations. The notional amount of contracts that pay based on fixed rates and receive based on variable rates at June 30, 2019 were $9.2 billion. The notional amount of contracts that pay based on variable rates and receive based on fixed rates were $10.9 billion at June 30, 2019.

Energy swaps

Energy swaps are used in connection with settling planned purchases of energy consumption and adjusting market exposures.

Derivative assets are reported as investments in the consolidated statement of financial position and derivative liabilities are reported as liabilities associated with investments. Gains and losses on derivatives used for investing are reported as part of total endowment return and gains and losses related to university debt management and energy consumption are reported as other investment (loss) income in the consolidated statement of activities as non-operating activity.

Derivatives held by limited partnerships and commingled investment trusts in which Yale invests pose no off-balance sheet risk to the university due to the limited liability structure of the investments.

Certain investment transactions, including derivative financial instruments, necessarily involve counterparty credit exposure. Such exposure is monitored regularly by the university's Investments Office in accordance with established credit policies and other relevant criteria.

Endowment investments include beneficial interests in outside trusts of $151.8 million and $156.4 million at June 30, 2019 and 2018, respectively. Non-endowment investments include Connecticut Health and Educational Facilities Authority ("CHEFA") proceeds available for approved construction and campus renovation projects. There were no outstanding CHEFA proceeds at June 30, 2019 and $76.0 million at June 30, 2018.

The following investments held under split-interest agreements are included in the endowment investment portfolio, in thousands of dollars:

	2019	2018
Charitable gift annuities	$ 227,355	$ 227,170
Charitable remainder trusts	104,058	107,652
Pooled income funds	6,826	9,524
	$ 338,239	$ 344,346

Split interest liabilities reported in the consolidated statement of financial position total $144.1 million and $138.6 million at June 30, 2019 and 2018, respectively, and are recorded at fair value using Level 2 measurements.

The university has agreements with certain affiliates to invest in the Pool. The obligation to these affiliates included in other liabilities within liabilities associated with investments is $1,160.8 million and $1,171.7 million at June 30, 2019 and 2018, respectively. The largest balance recorded is for Yale-New Haven Health System ("YNHHS") with $916.0 million and $931.7 million invested at June 30, 2019 and 2018, respectively.

A summary of the university's total investment return as reported in the consolidated statement of activities is presented below, in thousands of dollars:

	2019	2018
Investment income	$ 455,594	$ 387,654
Realized and unrealized gain, net of investment management fees	1,174,398	2,890,256
Total endowment return	1,629,992	3,277,910
Other investment (loss) income	(206,980)	218,966
	$ 1,423,012	$ 3,496,876

Endowment investment returns totaling $1,354.6 million and $1,282.1 million were allocated to operating activities in 2019 and 2018, respectively, using the spending policy described in Note 1d.

3. Accounts Receivable

Accounts receivable from the following sources were outstanding at June 30, in thousands of dollars:

	2019	2018
Medical services, net	$ 95,906	$ 117,706
Grant and contracts	105,743	107,143
Affiliated organizations	79,877	64,494
Publications	6,551	5,345
Other	33,597	24,216
	321,674	318,904
Less: Allowance for doubtful accounts	(22,001)	(57,262)
	$ 299,673	$ 261,642

Medical services receivables are net of discounts and allowances of $159.8 million and $118.2 million at June 30, 2019 and 2018, respectively. In connection with the adoption of the new accounting guidance for revenue from contracts with customers, the university changed its presentation of the allowance for doubtful accounts associated with medical services accounts receivable. For 2019 this amount is netted against medical service receivables. For 2018 it is presented in the allowance for doubtful accounts. Receivables for medical services, net of contractual adjustments, are primarily based on negotiated contracts with insurance companies (36%), Medicare (12%), Medicaid (4%), payments due directly from patients (38%) and commercial insurance and others (10%). The university assesses credit losses on certain accounts receivable on a regular basis to determine the allowance for doubtful accounts.

The university and Yale-New Haven Hospital (the “Hospital”) are parties to an affiliation agreement that establishes guidelines for the operation of activities between these two separate organizations. These guidelines set forth each organization's responsibility under the common goal of delivering comprehensive patient care services. The university provides professional services from faculty of the Yale School of Medicine and a variety of other administrative and clinical services. The net receivable from the Hospital amounted to $68.1 million and $50.8 million at June 30, 2019 and 2018, respectively. Balances are settled in the ordinary course of business. The university recognized $341.4 million and $289.2 million in revenue and incurred $115.0 million and $93.5 million in expenses related to activities with the Hospital during the periods ended June 30, 2019 and 2018, respectively.

4. Contributions Receivable

Contributions receivable consist of the following unconditional promises to give as of June 30, in thousands of dollars:

		2019		2018
Purpose:				
Operating programs	$	435,821	$	390,164
Endowment		348,196		186,688
Capital purposes		107,000		135,678
Gross unconditional promises to give		891,017		712,530
Less: Discount to present value		(139,539)		(136,574)
Allowance for uncollectible accounts		(81,017)		(64,212)
	$	670,461	$	511,744

Amounts due in:				
Less than one year	$	235,612	$	230,971
One to five years		350,879		211,038
More than five years		304,526		270,521
	$	891,017	$	712,530

Discount rates used to calculate the present value of contributions receivable ranged from 0.33% to 7.00% at June 30, 2019 and 2018.

At June 30, 2019, the university had conditional pledges of approximately $73.4 million that are subject to a donor-imposed condition.

5. Notes Receivable

Notes receivable at June 30, in thousands of dollars, include:

		2019		2018
Institutional student loans	$	46,627	$	47,211
Federally-sponsored student loans		23,115		27,117
Notes receivable		52,337		52,548
		122,079		126,876
Less: Allowance for doubtful accounts		(11,655)		(11,280)
	$	110,424	$	115,596

Student Loans

Institutional student loans include donor funds restricted for student loan purposes and university funds made available to meet demonstrated need in excess of all other sources of student loan borrowings. Interest accrues at fixed rates upon loan disbursement.

Management regularly assesses the adequacy of the allowance for credit losses for student loans by performing ongoing evaluations of the student loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the level of delinquent loans, and, where applicable, the existence of any guarantees or indemnifications. Federally-sponsored loans represent amounts due from current and former students under certain federal loan programs. Loans disbursed under these programs can be assigned to the federal government in certain non-repayment situations. In these situations, the federal portion of the loan balance is guaranteed. Federally-sponsored student loans have mandated interest rates and repayment terms subject to restrictions as to their transfer and disposition.

Amounts received from the federal government to fund a portion of the federally-sponsored student loans are ultimately refundable to the federal government and have been reported as advances from federal government for student loans in the consolidated statement of financial position. The recorded value of student loan instruments approximates fair value.

Notes Receivable

The university and the Hospital entered into an agreement under which the Hospital will reimburse the university over a 40-year term for advances made relating to the construction of Hospital facilities. The payment includes interest based on the five-year Treasury bill plus 175 basis points, which resets every five years. In 2015, the interest rate was reset, and the monthly payment was adjusted accordingly.

6. Other Assets

Other assets at June 30, in thousands of dollars, include:

	2019	2018
Insurance receivable	$ 96,119	$ 97,364
Software costs, net of accumulated amortization	42,330	47,430
Deferred expenses	70,466	30,996
Inventories	14,628	14,963
	$ 223,543	$ 190,753

Amortization expense related to other assets included in operating expenses amounted to $13.5 million and $13.7 million in 2019 and 2018, respectively.

7. Land, Buildings and Equipment

Land, buildings and equipment at June 30, less accumulated depreciation and amortization, in thousands of dollars, are as follows:

	2019	2018
Land and real estate improvements	$ 137,053	$ 137,053
Buildings	7,124,734	6,889,549
Buildings under capital leases	129,746	50,058
Equipment	614,278	618,119
	8,005,811	7,694,779
Less: Accumulated depreciation and amortization	(3,188,589)	(2,962,493)
	4,817,222	4,732,286
Construction in progress	537,295	359,405
	$ 5,354,517	$ 5,091,691

Depreciation expense included in operating expenses amounted to $270.4 million and $256.4 million in 2019 and 2018, respectively. Amortization expense on capital lease assets amounted to $4.1 million and $1.9 million in 2019 and 2018, respectively.

8. Other Liabilities

Other liabilities consist of obligations of the university that will be paid over extended periods and consist of the following, in thousands of dollars:

		2019		2018
Employee benefit obligations	$	1,622,551	$	977,271
Compensated absences		67,289		65,440
Financial aid grant obligations		64,534		59,774
Asset retirement obligations		39,100		39,100
Other		205,890		169,287
	$	1,999,364	$	1,310,872

Included in employee benefit obligations are defined benefit plan liabilities in excess of plan assets. These liabilities amounted to $1,441.3 million at June 30, 2019 and $815.5 million at June 30, 2018 (see Note 11).

9. Bonds and Notes Payable

Bonds and notes payable outstanding at June 30, in thousands of dollars, include:

	Effective Interest Rate June 30, 2019	Calendar Year of Maturity	Outstanding Balance 2019	Outstanding Balance 2018
CHEFA tax-exempt bonds:				
Series S	5.00%	2027	$ 111,205	$ 135,865
Series T	1.65%	2029	125,000	125,000
Series U	2.00%	2033	250,000	250,000
Series V	1.26%	2036	200,000	200,000
Series X	1.80%	2037	125,000	125,000
Series 2010A	1.90%	2049	300,000	379,975
Series 2013A	1.00%	2042	100,000	100,000
Series 2014A	1.30%	2048	250,000	250,000
Series 2015A	2.05%	2035	300,000	300,000
Series 2016A	1.62%	2042	399,320	399,320
Series 2017A	5.00%	2042	170,920	170,920
Series 2017B	5.00%	2029/2037	224,200	224,200
Series 2017C	5.00%	2040/2057	383,380	383,380
Series 2018A	5.00%	2025	67,610	-
Total CHEFA bonds			3,006,635	3,043,660
Medium-term notes	7.38%	2096	125,000	125,000
Medium-term notes Series B	-	2019	-	250,000
Commercial paper	1.82%	2019	500,000	181,445
Capital leases - buildings	4.17%	2032/2044	169,581	39,623
U.S. Department of Energy	2.71%	2029	43,891	48,797
Other notes payable	7.85%	2020	605	1,020
Principal amount			3,845,712	3,689,545
Less: Bond issue costs			(12,359)	(13,271)
Plus: Unamortized premiums and discounts, net			111,600	108,603
			$ 3,944,953	$ 3,784,877

CHEFA Tax-Exempt Bonds

The university borrows at tax-exempt rates through CHEFA, a conduit issuer. CHEFA debt is a general unsecured obligation of the university. Although CHEFA is the issuer, the university is responsible for the repayment of the tax-exempt debt.

Series S bonds consist of $111.2 million maturing in July 2027. In February 2019, the Series S-1 and S-2 bonds, totaling $135.9 million, were remarketed as a single Series S. The principal was reduced and it was converted from a variable money market municipal interest rate to a fixed interest rate of 5.00%. These bonds include a net premium of $23.4 million as of June 2019.

Series T bonds consist of $125.0 million Series T-2 bonds maturing in July 2029. The Series T-2 bonds bear a fixed interest rate of 1.65% through February 2020.

Series U bonds consist of 1) $125.0 million Series U-1 bonds and 2) $125.0 million Series U-2 bonds. In February 2019, both series were remarketed from a fixed interest rate of 1.00% to a fixed interest rate of 2.00% through February 7, 2022 and mature in July 2033.

Series V bonds consist of $200.0 million, bear interest at a daily rate, and mature in July 2036. The bonds may be converted from a daily rate period to other variable rate modes or to a fixed rate mode at the discretion of the university.

Series X bonds consist of $125.0 million Series X-2 bonds maturing in July 2037. In February 2018, the Series X-2 bonds were remarketed from a fixed interest rate of 0.90%, to a fixed interest rate of 1.80% through January 2021.

Series 2010A bonds consist of 1) $150.0 million Series 2010A-3 bonds, maturing July 2049, that were remarketed from an interest rate of 0.875% that expired in February 2018 to a fixed interest rate of 1.80% through February 2021; and 2) $150.0 million Series 2010A-4 bonds, maturing July 2049, that were remarketed from a fixed interest rate of 1.20% that expired in January 2019 to a fixed interest rate of 2.00% through February 2022. In July 2018 $80.0 million Series 2010A-1 bonds were redeemed by new Series 2018A bonds in the amount of $67.6 million (see Series 2018A below). In December 2017 $150.0 million Series 2010A-2 bonds were redeemed by new Series 2017C-1 bonds in the amount of $150.0 million (see Series 2017C-1 below).

Series 2013A bonds consist of $100.0 million maturing in July 2042. In July 2019, the Series 2013A bonds were remarketed from a fixed interest rate of 1.00% to a fixed interest rate of 1.45% through June 2022.

Series 2014A bonds consist of $250.0 million maturing in July 2048. In July 2017, the Series 2014A bonds were remarketed from a fixed interest rate of 0.80% to a fixed interest rate of 1.30% through February 2020.

Series 2015A bonds consist of $300.0 million maturing in July 2035. In July 2018, the Series 2015A bonds were remarketed from a fixed interest rate of 1.38% to a fixed interest rate of 2.05% through July 2021.

Series 2016A bonds consist of 1) $150.0 million Series 2016A-1 bonds bearing a fixed interest rate of 1.00% through June 30, 2019; and 2) $249.3 million Series 2016A-2 bonds bearing a fixed interest rate of 2.00% through June 30, 2026. Both bond series mature in July 2042. In July 2019, the Series 2016A-1 bonds were remarketed to a fixed interest rate of 1.45% through June 2022.

Series 2017A bonds consist of 1) $85.5 million Series 2017A-1 bonds and 2) $85.5 million Series 2017A-2 bonds. Both bond series mature in July 2042 and bear a fixed interest rate of 5.00% through June 30, 2022. These bonds include a net premium of $17.4 million as of June 30, 2019.

Series 2017B bonds consist of 1) $112.1 million Series 2017B-1 bonds maturing in July 2029 and 2) $112.1 million Series 2017B-2 bonds maturing in July 2037. Both bond series bear a fixed interest rate of 5.00% through June 30, 2020. These bonds include a net premium of $8.6 million as of June 30, 2019.

Series 2017C-1 bonds were issued in December 2017 to refund Series 2010A-2 bonds and consist of $123.3 million maturing in July 2040. The bonds bear a fixed interest rate of 5.00% through January 2028. These bonds include a net premium of $25.1 million as of June 30, 2019. Series 2017C-2 bonds were issued in December 2017 and consist of $260.1 million maturing in July 2057. The bonds bear a fixed interest rate of 5.00% through January 2023. These bonds include a net premium of $28.1 million as of June 30, 2019.

Series 2018A bonds were issued in July 2018 to refund Series 2010A-1 bonds and consist of $67.6 million maturing in July 2025. The bonds bear a fixed interest rate of 5.00%. These bonds include a net premium of $10.6 million as of June 30, 2019.

Notes Payable

Medium-term notes bear a fixed interest rate of 7.38% and mature in 2096, with an optional redemption provision in the year 2026. The discount associated with these notes was $251 thousand as of June 30, 2019.

Medium-term notes Series B bore a fixed interest rate of 2.09% and were redeemed in April 2019.

Commercial paper consists of notes issued in the short-term taxable market and is sold at a discount from par. In April 2019, additional commercial paper was issued and the proceeds were partially used to redeem $250.0 million of medium term notes Series B. The maturities of individual notes are issued in ranges from one day to no more than one year and fall on average in a range of thirty to sixty days.

Certain lease agreements entered into by the university qualify as capital leases with obligations of $169.6 million and $39.6 million at June 2019 and 2018, respectively. The agreements call for the university to lease the buildings through 2032 and 2044.

The university financed a wind energy project, Record Hill Wind, LLC, through a financing arrangement with the US Department of Energy. The financing arrangement is non-recourse debt to the university and bears interest at rates ranging from 2.24% to 2.78%.

Scheduled maturities of the debt obligations, in thousands of dollars, are as follows:

2020	$	507,044
2021		6,914
2022		6,927
2023		7,108
2024		7,301
Thereafter		3,310,418
Total	$	3,845,712

Certain CHEFA Series are subject to tender by bondholders. To the extent all bonds subject to tender could not be remarketed, $2.6 billion of bonds scheduled for maturity between 2029 and 2057 would be due when tendered.

Total interest expense incurred on indebtedness was $72.5 million and $58.1 million in 2019 and 2018, respectively. Interest capitalized to land, buildings and equipment totaled $5.7 million and $4.1 million in 2019 and 2018, respectively. Amortization expense related to bond issue costs included in operating expenses amounted to $1.8 million and $1.0 million in 2019 and 2018, respectively.

10. Retirement Plans – Defined Contribution

The university maintains defined contribution plans for faculty and certain staff employees. Participants may direct employee and employer contributions to annuities, mutual funds, and other investment options. Retirement expense for this plan was $124.9 million and $115.9 million in 2019 and 2018, respectively.

11. Pension and Postretirement Plans – Defined Benefit

The university has a noncontributory, defined benefit pension plan for staff. The staff pension plan provides payments based on the employee's earnings and years of participation.

In addition, the university provides postretirement benefits including health benefits based on years of service, life insurance, and a pay-out of unused sick time. While the university's subsidy of the cost of comprehensive health care benefits differs among retiree groups, substantially all employees who meet minimum age and service requirements and retire from the university are eligible for these benefits. Non-faculty employees are paid 50% of unused sick time and receive life insurance benefits upon retirement from active status.

The university uses a June 30th measurement date for its defined benefit plans.

The following table sets forth the pension and postretirement plans' funded status that is reported in the consolidated statement of financial position at June 30, in thousands of dollars:

	Pension		Postretirement	
	2019	2018	2019	2018
Change in benefit obligation:				
Benefit obligation, beginning of year	$ 1,658,508	$ 1,699,411	$ 1,137,991	$ 1,196,520
Service cost, excluding assumed administrative expenses	56,850	60,804	42,109	49,398
Interest cost	68,036	66,797	46,238	46,567
Benefit payments	(53,477)	(74,401)	(29,568)	(28,946)
Settlements	(156,700)	-	-	-
Assumption changes	358,524	(92,081)	270,442	(44,346)
Actuarial loss (gain)	17,159	(2,022)	(44,616)	(81,202)
Benefit obligation, end of year	$ 1,948,900	$ 1,658,508	$ 1,422,596	$ 1,137,991
Change in plan assets:				
Fair value, beginning of year	$ 1,487,183	$ 1,329,042	$ 493,791	$ 463,027
Actual return on plan assets	33,266	153,370	15,262	56,987
University contributions	107,998	81,844	36,233	3,934
Benefits and expenses paid	(56,136)	(77,073)	(30,684)	(30,157)
Settlements	(156,700)	-	-	-
Fair value, end of year	$ 1,415,611	$ 1,487,183	$ 514,602	$ 493,791
Funded Status	$ (533,289)	$ (171,325)	$ (907,994)	$ (644,200)

Benefit Obligation

The benefit obligation represents the actuarial present value of future payments to plan participants for services rendered prior to that date, based on the pension benefit formula. In calculating the value, the participants' compensation levels are projected to retirement.

The accumulated benefit obligation differs from the benefit obligation above in that it does not consider assumptions about future compensation levels. It represents the actuarial present value of future payments to plan participants using current and past compensation levels. The accumulated benefit obligation for the pension plan was $1,654.0 million at June 30, 2019 and $1,447.0 million June 30, 2018, respectively.

In January 2019, the staff pension plan purchased a group annuity contract from a third party to settle a portion of its obligation to certain pension plan participants.

Assumptions used in determining the year end obligation of the pension and postretirement plans are:

	2019	2018
Weighted-average discount rate - all plans except unused sick pay plan	3.10%	4.30%
Weighted-average discount rate - unused sick pay plan	2.85%	4.00%
Weighted-average increase in future compensation levels	3.14%	3.20%
Projected health care cost trend rate (pre-65/post-65)	6.66% / 12.40%	7.08% / 6.89%
Ultimate trend rate (pre-65/post-65)	4.50% / 4.50%	4.50% / 4.31%
Year ultimate trend rate is achieved	2028	2028
Mortality	RP2014 Aggregate, Scale MP2014	RP2014 Aggregate, Scale MP2014

In 2019, the university revised its methodology for determining the interest rates it uses to discount the pension and postretirement obligations, primarily because of the changing demographics of benefit plan participants. This change in methodology was the primary reason, combined with a lower interest rate environment, for the reduction in the discount rate.

The health care cost trend rate assumption has a significant effect on the amounts reported. For the fiscal year ended June 30, 2019, a one percent change in the health care cost trend rate would affect 2019 as follows, in thousands of dollars:

	One percent Increase	One percent Decrease
Effect on 2019 postretirement service and interest cost	$ 19,400	$ (13,400)
Effect on postretirement benefit obligation at June 30, 2019	250,000	(177,000)

Changes in assumptions during the year resulted in an increase to the pension benefit obligation and an increase to the postretirement benefit obligation at June 30, 2019, as follows, in thousands of dollars:

	Pension	Postretirement	Total
Salary increase rates	$ (3,401)	$ (64)	$ (3,465)
Inflation	(96)	(1,491)	(1,587)
Discount rate	368,580	280,979	649,559
Demographic changes	(6,559)	(8,982)	(15,541)
	$ 358,524	$ 270,442	$ 628,966

Net Periodic Benefit Cost
Net periodic benefit cost for the plans includes the following components, in thousands of dollars:

	Pension		Postretirement	
	2019	2018	2019	2018
Service cost	$ 56,850	$ 60,804	$ 42,109	$ 49,398
Administrative expenses	2,700	2,500	1,300	1,100
Interest cost	68,036	66,797	46,238	46,567
Expected return on plan assets	(101,485)	(103,010)	(34,070)	(33,930)
Net amortization:				
Prior service cost	3,343	3,343	21	50
Net loss	606	10,123	6	7,586
Net periodic benefit cost	30,050	40,557	55,604	70,771
Settlement charge	20,652	-	-	-
Total expense	$ 50,702	$ 40,557	$ 55,604	$ 70,771

The service cost component of net periodic benefit cost is included in employee benefits as a part of operating expenses in the consolidated statement of activities. The components of net periodic benefit cost, other than service cost, are included in other increases (decreases), which is reported as non-operating activity in the consolidated statement of activities.

Assumptions used in determining the net periodic benefit cost of the pension and postretirement plans are:

	2019	2018
Weighted-average discount rate	4.30%	4.00%
Expected long-term rate of return	7.25%	7.75%
Weighted-average compensation increase	3.20%	3.28%
Health care cost increase (pre-65/post-65)	7.08% / 6.89%	7.30% / 6.48%
Ultimate trend rate (pre-65/post-65)	4.50% / 4.31%	4.50% / 4.27%
Year ultimate trend rate is achieved	2028	2028
Mortality	RP2014 Aggregate, Scale MP2014	RP2014 Aggregate, Scale MP2014

The funded status consists of the cumulative unfunded net periodic benefit cost and the cumulative change in funding status of defined benefit plans. The components of the change in funding status of defined benefit plans, which is reported in non-operating results, for the year ended June 30, in thousands of dollars, include:

2019	Pension	Postretirement	Total
Unrecognized net actuarial loss	$ 443,865	$ 244,450	$ 688,315
Amortization of unrecognized obligation	(24,602)	(27)	(24,629)
	$ 419,263	$ 244,423	$ 663,686

2018	Pension	Postretirement	Total
Unrecognized net actuarial loss	$ (144,292)	$ (148,490)	$ (292,782)
Amortization of unrecognized obligation	(13,467)	(7,635)	(21,102)
	$ (157,759)	$ (156,125)	$ (313,884)

The cumulative amounts of these adjustments reported as deductions to net assets in the consolidated statement of financial position at June 30, in thousands of dollars, include:

2019		Pension		Postretirement		Total
Unrecognized net actuarial loss	$	540,114	$	318,988	$	859,102
Unrecognized prior service cost		14,044		1		14,045
	$	554,158	$	318,989	$	873,147

2018		Pension		Postretirement		Total
Unrecognized net actuarial loss	$	117,508	$	74,544	$	192,052
Unrecognized prior service cost		17,387		22		17,409
	$	134,895	$	74,566	$	209,461

Amounts recorded as an adjustment at June 30, 2019 that are expected to be amortized into non-operating activity during fiscal year 2020, in thousands of dollars, include:

		Pension		Postretirement		Total
Net actuarial loss	$	29,361	$	12,162	$	41,523
Prior service cost		3,343		1		3,344
	$	32,704	$	12,163	$	44,867

Actuarial gains or losses and prior service costs resulting from plan amendments are amortized over the average remaining years of service of active participants.

Plan Assets

The defined benefit plan assets are valued utilizing the same fair value hierarchy as the university's investments as described in Note 1d.

The following table summarizes the fair values of investments by major type held by the staff pension plan at June 30, in thousands of dollars:

		Level 1		Level 2		Level 3		2019		2018
Investments, at fair value:										
Cash and cash equivalents	$	111,261	$	-	$	-	$	111,261	$	23,399
US government securities		113,231		-		-		113,231		116,965
Equity investments:										
Domestic		21,844		-		-		21,844		17,040
Foreign		1,490		34,987		-		36,477		46,797
Total equity investments		23,334		34,987		-		58,321		63,837
Limited partnerships:										
Natural resources		-		-		11,329		11,329		12,101
Total limited partnerships		-		-		11,329		11,329		12,101
Other investments		4		-		-		4		-
Total leveled investments	$	247,830	$	34,987	$	11,329		294,146		216,302
Investments at NAV								1,138,881		1,270,982
Total investments, at fair value								1,433,027		1,487,284
Liabilities associated with investments	$	17,278	$	138	$	-		17,416		101
Net investments, at fair value							$	1,415,611	$	1,487,183

The following table summarizes the fair values of investments by major type held by the retiree health plan at June 30, in thousands of dollars:

	Level 1	Level 2	Level 3	2019	2018
Investments, at fair value:					
Cash and cash equivalents	$ 43,604	$ -	$ -	$ 43,604	$ 14,066
US government securities	20,611	-	-	20,611	19,492
Equity investments:					
Domestic	18,079	-	-	18,079	8,203
Foreign	899	7,138	-	8,037	13,553
Total equity investments	18,978	7,138	-	26,116	21,756
Limited partnerships:					
Natural resources	-	-	156	156	1,008
Total limited partnerships	-	-	156	156	1,008
Total leveled investments	$ 83,193	$ 7,138	$ 156	90,487	56,322
Investments at NAV				426,302	443,352
Total investments, at fair value				516,789	499,674
Liabilities associated with investments	$ 90	$ 34	$ -	124	3,559
Net investments, at fair value				$ 516,665	$ 496,115

The table below represents the change in fair value measurements for Level 3 investments held by the staff pension plan and the retiree health plan for the plans' year ended June 30, 2019, in thousands of dollars:

	Pension	Retiree Health
Beginning balance	$ 12,101	$ 1,008
Unrealized (loss)	(2,027)	(674)
Purchases	2,445	-
Sales	(1,190)	(178)
Ending balance	$ 11,329	$ 156

The investment objective for the pension and retiree health plans seeks a positive long-term total return after inflation to meet the university's current and future plan obligations. Asset allocations for both plans combine tested theory and informed market judgment to balance investment risks with the need for high returns. Plan asset allocations by category at June 30 are as follows:

	Pension		Retiree Health	
	2019	2018	2019	2018
Absolute return	24.4%	28.2%	24.0%	27.5%
Domestic equity	5.9%	7.9%	10.0%	7.6%
Fixed income	8.0%	7.8%	4.0%	3.9%
Foreign equity	22.6%	22.6%	24.6%	21.9%
Leveraged buyouts	8.6%	7.0%	8.4%	8.4%
Venture capital	14.2%	13.0%	12.5%	12.5%
Real estate	6.8%	6.4%	8.8%	10.4%
Natural resources	1.9%	6.0%	0.9%	5.5%
Cash	7.6%	1.1%	6.8%	2.3%

The pension and retiree health long-term rate of return assumption is determined by adding expected inflation to expected long-term real returns of various asset classes, considering expected volatility and correlation between the returns of various asset classes.

Contributions

Annual contributions for the pension and retiree health plans are determined by the university considering calculations prepared by the plans' actuary as well as other factors. Expected contributions on a cash basis to the pension plan and retiree health plan in fiscal 2020 are $76.7 million and $42.2 million, respectively.

Benefit Payments

The following estimated benefit payments, which reflect expected future service, are expected to be paid out of the plans, in thousands of dollars:

Fiscal year		Pension		Postretirement		Total
2020	$	48,620	$	33,094	$	81,714
2021		52,563		37,286		89,849
2022		56,958		40,801		97,759
2023		61,590		45,491		107,081
2024		66,297		48,856		115,153
2025-2029		402,355		286,749		689,104
	$	688,383	$	492,277	$	1,180,660

12. Net Assets

The university's net assets as of June 30, in thousands of dollars, includes:

		2019		2018
With Donor Restrictions:				
Donor-restricted endowments, perpetual in nature	$	4,260,677	$	3,981,513
Student loans, perpetual in nature		47,690		45,622
Donor-restricted endowments, subject to spending policy and appropriation		20,735,383		20,392,002
Board designated endowment, subject to spending policy and appropriation		310,263		255,412
Unexpended gift balances		995,381		1,055,642
Total net assets with donor restrictions		26,349,394		25,730,191
Without Donor Restrictions:				
Board designated endowment, subject to spending policy and appropriation		5,008,493		4,722,139
Undesignated		176,453		1,091,442
Non-controlling interest		707,411		713,343
Total net assets without donor restrictions		5,892,357		6,526,924
Total net assets	$	32,241,751	$	32,257,115

Yale's endowment consists of approximately 7,800 funds established for a variety of purposes.

The endowment includes both donor-restricted endowment funds and funds designated by the Corporation to function as endowments. The university endowment fund composition by fund type as of June 30, in thousands of dollars, includes:

2019	Without Donor Restrictions		With Donor Restrictions		Total	
Donor-restricted endowment	$	-	$	24,996,060	$	24,996,060
Board-designated endowment		5,008,493		310,263		5,318,756
	$	5,008,493	$	25,306,323	$	30,314,816

2018	Without Donor Restrictions		With Donor Restrictions		Total	
Donor-restricted endowment	$	-	$	24,373,515	$	24,373,515
Board-designated endowment		4,722,139		255,412		4,977,551
	$	4,722,139	$	24,628,927	$	29,351,066

Changes in endowment net assets for the fiscal year ended June 30, in thousands of dollars, were:

2019	Without Donor Restrictions		With Donor Restrictions		Total	
Endowment net assets, beginning of year	$	4,722,139	$	24,628,927	$	29,351,066
Investment return:						
Investment income		70,636		393,084		463,720
Net appreciation		185,534		980,738		1,166,272
Total investment return		256,170		1,373,822		1,629,992
Contributions		13,296		367,890		381,186
Allocation of endowment spending		(210,826)		(1,143,742)		(1,354,568)
Other increases		227,714		79,426		307,140
Endowment net assets, end of year	$	5,008,493	$	25,306,323	$	30,314,816

2018	Without Donor Restrictions		With Donor Restrictions		Total	
Endowment net assets, beginning of year	$	4,104,806	$	23,071,235	$	27,176,041
Investment return:						
Investment income		53,608		334,046		387,654
Net appreciation		585,332		2,304,924		2,890,256
Total investment return		638,940		2,638,970		3,277,910
Contributions		7,588		130,452		138,040
Allocation of endowment spending		(163,542)		(1,118,282)		(1,281,824)
Other increases (decreases)		134,347		(93,448)		40,899
Endowment net assets, end of year	$	4,722,139	$	24,628,927	$	29,351,066

13. Functional and Natural Classification of Expenses

The consolidated financial statements report certain categories of expenses that are attributable to one or more program or supporting functions of the university. Expenses reported by functional categories include allocations of costs for operation and maintenance of plant, interest on indebtedness and depreciation and amortization expense. The university applies various methods to allocate costs among the program and support functions, the most significant of which is by the amount of building space utilized.

Operating and non-operating expenses by functional and natural classification for the fiscal year ended June 30, in thousands of dollars, were:

2019	Programmatic support	Patient care and other related services	Administration and other institutional support	Total
Salaries and wages	$ 1,137,449	$ 522,476	$ 136,717	$ 1,796,642
Employee benefits	381,789	146,026	49,967	577,782
Depreciation, amortization and interest	323,722	12,641	23,069	359,432
Other operating expenditures	851,785	190,160	59,066	1,101,011
Total operating expenses	2,694,745	871,303	268,819	3,834,867
Non-operating expenses	34,069	2,460	1,285	37,814
	$ 2,728,814	$ 873,763	$ 270,104	$ 3,872,681

2018	Programmatic support	Patient care and other related services	Administration and other institutional support	Total
Salaries and wages	$ 1,081,891	$ 485,599	$ 129,165	$ 1,696,655
Employee benefits	378,260	143,305	47,810	569,375
Depreciation, amortization and interest	293,762	12,317	23,841	329,920
Other operating expenditures	793,946	178,885	57,678	1,030,509
Total operating expenses	2,547,859	820,106	258,494	3,626,459
Non-operating expenses	39,573	1,338	1,123	42,034
	$ 2,587,432	$ 821,444	$ 259,617	$ 3,668,493

14. Commitments and Contingencies

The university is involved in various legal actions arising in the normal course of activities and is also subject to periodic audits and inquiries by various regulatory agencies. Although the ultimate outcome is not determinable at this time, management, after taking into consideration advice of legal counsel, believes that the resolution of these pending matters should not have a material adverse effect upon the university's financial position.

Minimum lease commitments at June 30, 2019, under agreements to lease space, in thousands of dollars, are as follows:

	Operating Lease Payments	Capital Lease Payments
2020	$ 13,529	$ 16,915
2021	11,071	16,922
2022	9,033	16,914
2023	7,366	16,921
2024	7,141	17,066
Thereafter	36,588	278,132
	84,728	362,870
Executory costs	-	(99,393)
Interest on capital leases	-	(93,895)
	$ 84,728	$ 169,582

The university has outstanding commitments on contracts to construct campus facilities in the amount of $392.5 million at June 30, 2019. Funding for these projects is expected to come from capital replacement reserves, gifts, and debt.

15. Subsequent Events

Management has evaluated subsequent events for the period after June 30, 2019, through October 22, 2019, the date the consolidated financial statements were issued.

(unaudited)
The outbreak of COVID-19 has caused domestic and global disruption in operations for institutions of higher education. Adverse consequences of COVID-19 or any other similar outbreaks in the future may include, but are not limited to, a limitation on the size of the university's future student body due to the inability of potential students to visit campus and decline in medical services income as a result of the cancellation or deferral of elective healthcare procedures. The full impact of COVID-19 and the scope of any adverse impact on the university's finances and operations cannot be fully determined at this time.

DEFINITIONS OF CERTAIN TERMS

In addition to terms defined elsewhere in this Offering Memorandum, the following are definitions of certain terms used in this Offering Memorandum and the Indenture:

"Additional Bonds" means any additional bonds issued pursuant to the Indenture.

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

"Authorized Representative" means the Institution's President, Vice President for Finance and Chief Financial Officer or Chief Investment Officer, or any other Person designated as an Authorized Representative of the Institution by a Certificate of the Institution signed by an Authorized Representative, and filed with 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 Yale University Taxable Bonds, Series 2020A authorized by, and at any time Outstanding, pursuant to the Indenture, including any Additional Bonds.

"Book-Entry Form" or "Book-Entry System" means a form or system, as applicable, (i) 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; (ii) is maintained by and the responsibility of others than the Institution or the Trustee; and (iii) 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" and "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.

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

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

"Designated Office" means the Designated Office of the Trustee, which as of the date of the Indenture is located at 225 Asylum Street, 23rd Floor, Hartford, Connecticut 06103, Attention: Corporate Trust Services, and such other offices as the Trustee may designate from time to time by written notice to the Institution and the Holders.

"DTC" means The Depository Trust Company, a New York corporation.

"Event of Default" means any of the events specified in 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, 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 Yale University, a non-profit corporation duly organized and existing under the laws of the State of Connecticut and incorporated by Special Act of the General Assembly of the Colony and State of Connecticut, the principal place of business of which is presently located in New Haven, Connecticut.

"Interest Account" means the account by that name in the Bond Fund established pursuant to the Indenture.

"Interest Payment Date" means April 15 and October 15 of each year, commencing October 15, 2020.

"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), (2) 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 top two Rating Categories by S&P and Moody's and held by a custodian for safekeeping on behalf of holders of such securities and (3) any other investment determined by the Institution and which is permitted under the Trustee's then current investment policy.

"Make-Whole Redemption Price" means an amount equal to the greater of (1) 100% of the principal amount of the Bonds to be redeemed; or (2) the sum of the present value of the remaining scheduled payments of principal and interest to the applicable Par Call Date of the Bonds to be redeemed, not including any portion of those payments of interest accrued and unpaid as of the date on which the Bonds are to be redeemed, discounted to the date on which the Bonds are 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 (i) in the case of the Bonds maturing on April 15, 2025, ten (10) basis points, (ii) in the case of the Bonds maturing on April 15, 2030, fifteen (15) basis points and (iii) in the case of the Bonds maturing on April 15, 2050,fifteen (15) basis points; plus, in each case, accrued and unpaid interest on the Bonds to be redeemed to, but excluding, the redemption date (without duplication).

"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 notice to the Trustee.

"Offering Memorandum" means the final Offering Memorandum dated June 2, 2020, relating to the Bonds.

"Opinion of Counsel" means a written opinion of counsel (who may be counsel for the Institution) satisfactory to the Trustee.

"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, including Bonds (or portions of Bonds) referred to in 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 (i) in the case of the Bonds maturing on April 15, 2025, the date that is one month prior to the maturity date of such Bonds (March 15, 2025), (ii) in the case of the Bonds maturing on April 15, 2030, the date that is three months prior to the maturity date of such Bonds (January 15, 2030) and (iii) in the case of the Bonds maturing on April 15, 2050, the date that is six months prior to the maturity date of such Bonds (October 15, 2049).

"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.

"Principal Account" means the account by that name in the Bond Fund established pursuant to the Indenture.

"Principal Payment Date" means each date on which principal shall be payable on any of the Bonds according to their respective terms.

"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 last day (whether or not a Business Day) of the month immediately preceding each Interest Payment Date.

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

"Redemption Price" means, when used with respect to a Bond or portion thereof to be redeemed by optional redemption, (i) on or after the applicable Par Call Date, 100% of the principal amount of the Bonds to be redeemed plus accrued and unpaid interest on the Bonds to be redeemed to, but excluding, the redemption date (without duplication) and (ii) prior to the applicable Par Call Date, the Make-Whole Redemption Price payable upon redemption thereof.

"Responsible Officer" means any officer of the Trustee assigned to administer its duties under the Indenture.

"S&P" means S&P Global Ratings, 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 notice to the Trustee.

"Securities Depository" means DTC and its successors and assigns, or any other securities depository selected or substituted 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.

"State" means the State of Connecticut.

"Supplemental Indenture" means any indenture 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 yield to the Par Call Date, applicable to the Bonds being redeemed of United States Treasury securities with a constant maturity (as compiled and published in the most recent Federal Reserve Statistical Release H.15 (519) that has become publicly available at least two Business Days, but no more than 45 calendar days, prior to the redemption date (excluding inflation indexed securities) (or, if such Statistical Release is no longer published, any publicly available source of similar market data)) most nearly equal to the period from the redemption date to the applicable Par Call Date of the Bonds to be redeemed; provided, however, that if the period from the redemption date to such applicable Par Call Date is less than one year, the weekly average yield on actually traded United States Treasury securities adjusted to a constant maturity of one year will be used.

"Trustee" means U.S. Bank National Association, 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 and as provided in the Indenture.

"Underwriters" means, collectively, Barclays Capital Inc., Goldman Sachs & Co. LLC and J.P. Morgan Securities LLC.

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

EXCERPTS FROM THE INDENTURE

The following are excerpts of certain provisions of the Indenture. The following should not be regarded as a full statement of the Indenture. Reference is made to the Indenture in its entirety for a complete statement of the provisions thereof, copies of which are on file with the Trustee.

Section 2.08. Additional Bonds. One or more series of bonds, the "Additional Bonds", may be authenticated and delivered by the Trustee upon original issuance from time to time pursuant to this Section 2.08 for the Project. Additional Bonds shall be authorized by a Supplemental Indenture, and the proceeds of any Additional Bonds shall be applied as provided in the Supplemental Indenture authorizing such Additional Bonds, and such Supplemental Indenture shall set forth the terms and conditions for such Additional Bonds. The Additional Bonds shall be so authorized from time to time in such amounts as directed by the Institution and shall be authenticated by the Trustee and by it delivered to or upon the order of the Institution upon receipt of the consideration therefor. The Additional Bonds and the Bonds originally issued hereunder shall be treated as a single series of Bonds for purposes of this Indenture. Each Supplemental Indenture authorizing the issuance of Additional Bonds shall specify the following:

(a) The authorized principal amount of Additional Bonds to be issued;

(b) The purpose for which the Additional Bonds are to be issued;

(c) The first interest payment date for the Additional Bonds which shall be on an Interest Payment Date for the Bonds;

(d) Directions for the applications of the proceeds of the Additional Bonds; and

(e) Such other provisions as the Institution deems advisable.

The Institution covenants and agrees that the Additional Bonds (i) shall constitute a part of the Bonds; (ii) shall mature on the same date as one of the Bonds originally issued hereunder, shall bear interest at the same rate per annum as the Bonds maturing on such date, shall be subject to redemption at the same times and in the same manner and at the same Redemption Price as the Bonds maturing on such date, and (iii) shall have the same Authorized Denomination. As a condition to the issuance of such Additional Bonds, there shall be delivered to the Trustee a certificate of the Institution, certifying that, after consultation with counsel experienced in federal securities laws, the issuance and consolidation of such Additional Bonds will not cause the Outstanding Bonds to be required to be registered under the Securities Act of 1933, as amended, or cause this Indenture to be required to be qualified under the Trust Indenture Act of 1939, as amended.

Section 3.03. 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.

FUNDS AND ACCOUNTS

Section 5.01. Establishment and Pledge of Indenture Fund.

(a) The Trustee hereby establishes for the sole benefit of the Bondholders, a master fund referred to herein as the "Indenture Fund" containing the Bond 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 this Indenture or otherwise, and the Trustee shall have the exclusive and sole right of withdrawal therefrom in accordance with the terms of this Indenture. All amounts deposited with the Trustee pursuant to this Indenture shall be held, disbursed, allocated and applied by the Trustee only as provided in this Indenture.

(b) Subject only to the provisions of this Indenture permitting or requiring the application thereof for the purposes and on the terms and conditions set forth herein, the Indenture Fund and all amounts held therein are hereby pledged, assigned and transferred by the Institution to the Trustee for the benefit of the Bondholders to secure the full payment of the principal or Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of this Indenture. The Institution hereby 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 or Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of this 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 hereto agree as follows:

(i) this Indenture shall constitute a "security agreement" for purposes of the Uniform Commercial Code;

(ii) the Trustee shall maintain on its books records reflecting the interest, as set forth in this Indenture, of the Bondholders in the Indenture Fund and/or the amounts on deposit therein; and

(iii) 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.

(c) Nothing in this 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 or 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 this 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 hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issue of the Bonds.

(d) No officer or agent of the Institution, nor any Person executing the Bonds, shall in any event be subject to any personal liability or accountability by reason of the issuance of the Bonds.

Section 5.02. Bond Fund.

(a) Upon the receipt thereof, the Trustee shall deposit all payments received from the Institution (other than amounts that are to be applied pursuant to Section 5.05 or income or profit from investments which are to be applied pursuant to Section 5.07) 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 this Article V.

(b) 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:

(i) 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, until the balance in said account is equal to said aggregate amount of interest; and

(ii) 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.

(c) At least six (6) but not more than twenty (20) Business Days before each Interest Payment Date, the Trustee shall determine (i) the amount, if any, credited from any source prior to the date of determination and (ii) amounts to be credited from any income or profit from investments which are to be applied pursuant to Section 5.07, in each case, to the Bond Fund during the period from the day after the last Interest Payment Date to the next succeeding Interest Payment Date. The Trustee may, but shall not be required to, give notice to the Institution of such amount and the amount due, which notice shall be mailed, sent by facsimile or electronic transmission or delivered in such manner that the Institution will receive such notice by the Business Day before such next succeeding Interest Payment Date. Failure to provide the Institution with a notice as provided in this subsection (c) or any defect in the notice to the Institution, shall not affect the amount due by the Institution. Any oral or telephonic notice may, but shall not be required to be supplemented by notice given in accordance with the preceding sentence.

(d) The Institution may at any time surrender to the Trustee for cancellation by it any Bonds that 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. All Bonds after such surrender and cancellation shall be destroyed by the Trustee.

Section 5.03. Interest Account. All amounts in the Interest Account of the Bond Fund 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 this Indenture).

Section 5.04. Principal Account. All amounts in the Principal Account of the Bond Fund shall be used and withdrawn by the Trustee solely to pay principal on the Bonds as it shall become due and payable on the Principal Payment Dates.

Section 5.05. Redemption Fund.

(a) 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:

(i) all moneys deposited by the Institution with the Trustee directed to be deposited in the Redemption Fund for optional redemption of the Bonds; and

(ii) all interest, profits and other income received from the investment of moneys in the Redemption Fund.

(b) 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 Section 4.01, 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 and at the expense 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 in writing, except that the purchase price (exclusive of accrued interest) may not exceed the Redemption Price (exclusive of accrued interest) then applicable to such Bonds (or, if such Bonds are not then subject to redemption, the par value of 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.

Section 5.06. Payments by the Institution; Allocation of Funds.

(a) On or before 11:00 AM Eastern Standard Time on 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 this 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. Such payments shall be made in federal funds or other funds immediately available at the Designated Office of the Trustee and shall be promptly deposited by the Trustee upon receipt thereof in the Bond Fund.

Each payment made pursuant to this Section 5.06(a) 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.

(b) The obligations of the Institution to make the payments required by Section 5.06(a) hereof and to perform and observe the other agreements on its part contained herein 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 this Indenture, the Institution shall pay all payments required to be made under Section 5.06(a) as prescribed therein and all other payments required hereunder, 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 this Indenture, the Institution (i) will not suspend or discontinue any payments provided for in Section 5.06(a) hereof; (ii) will perform and observe all of its other covenants contained in this Indenture; and (iii) except as provided in Article X hereof, will not terminate this 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 State 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 this Indenture, except to the extent permitted by this Indenture.

Section 5.07. Investment of Moneys in Funds and Accounts Held By Trustee.

(a) Moneys held in the Indenture Fund shall be invested by the Trustee, upon written direction of the Institution, solely in Investment Securities. Investment Securities shall be purchased at such prices as the Institution may direct. All Investment Securities shall be acquired subject to the limitations as to maturities hereinafter in this Section 5.07 set forth and such additional limitations or requirements consistent with the foregoing as may be established by Request of the Institution. No Request of the Institution shall impose any duty on the Trustee inconsistent with its responsibilities hereunder. Absent receipt by the Trustee of written investment instructions from the Institution, moneys in the Indenture Fund shall remain uninvested.

(b) Moneys in such funds and accounts shall be invested in Investment Securities maturing not later than the date on which it is estimated that such moneys will be required for the purposes specified in this Indenture.

(c) All interest, profits and other income received from the investment of moneys in the Redemption Fund shall be deposited when received in the Redemption Fund. All interest, profits and other income received from the investment of moneys in the Bond Fund shall be deposited when received in the Bond Fund.

(d) Investment Securities acquired as an investment of moneys in any fund or account established under this Indenture shall be credited to such fund or account. Registrable Investment Securities held by the Trustee shall be registered in the name of the Trustee. In making any valuations of investments hereunder, the Trustee may utilize and rely on computerized securities pricing services that are available to it, including those available through its regular accounting system.

(e) The Trustee may commingle any of the funds or accounts established pursuant to this Indenture into a separate fund or funds for investment purposes only, provided that all funds or accounts held by the Trustee hereunder shall be accounted for separately as required by this Indenture. The Trustee or its affiliates may act as sponsor, depository, advisor, principal or agent in the making or disposing of any investment. The Trustee is hereby authorized, in making or disposing of any investment permitted by this Section 5.07, to deal with itself (in its individual capacity) or with any one or more of its affiliates, whether it or such affiliate is acting as an agent of the Trustee or for any third person or dealing as principal for its own account. The Trustee may sell at the best price reasonably obtainable by it, or present for redemption, any Investment Securities so purchased whenever it shall be necessary to provide moneys to meet any required payment, transfer, withdrawal or disbursement from the fund or account to which such Investment Security is credited, and, subject to the provisions of Section 8.03, the Trustee shall not be liable or responsible for any loss resulting from any investment made in accordance with provisions of this Section 5.07. The Trustee shall not be responsible for any tax, fee or other charge in connection with any investment, reinvestment or the liquidation thereof.

(f) The parties hereto acknowledge that to the extent regulations of the Comptroller of the Currency or other applicable regulatory entity grant the Institution the right to receive brokerage confirmations of security transactions as they occur, the Institution specifically waives receipt of such confirmations to the extent permitted by law. The Trustee will furnish the Institution with monthly account statements detailing all funds and accounts and investment transactions made by the Trustee hereunder.

(g) The Trustee shall be entitled to conclusively rely on all written investment instructions provided by the Institution hereunder and shall have no investment discretion. The Trustee shall have no responsibility or liability for any depreciation in the value of any investment or for any cost, fee, tax or other charge for any loss, direct or indirect, resulting from any investment, reinvestment or liquidation of investment, to the extent the Trustee has acted at the written direction of the Institution with respect to such investment or has liquidated such investment to provide moneys to meet any required payment, transfer, withdrawal or disbursement from the fund or account to which such Investment Security is credited.

Section 5.08. Amounts Remaining in Funds and Accounts. When (i) there are no longer any Bonds Outstanding, (ii) all fees, charges and expenses of the Trustee, including fees and expenses of outside counsel and internal counsel to the Trustee, have been paid or provided for, (iii) all fees and expenses of the Institution relating to this Indenture have been paid or provided for, and (iv) this Indenture has been discharged and satisfied, the Trustee shall pay any amounts remaining in any of the funds or accounts created under this Indenture to the Institution within thirty (30) days after the date of discharge and satisfaction.

PARTICULAR COVENANTS; REPRESENTATIONS AND WARRANTIES

Section 6.01. Punctual Payment. The Trustee shall solely from funds provided by the Institution punctually pay the principal or Redemption Price and interest when due in respect of all the Bonds. When and as paid in full, all Bonds shall be delivered to the Trustee and shall be cancelled by the Trustee and delivered to, or upon the order of, the Institution.

Section 6.02. Compliance with Indenture. The Institution covenants not to issue, or permit to be issued, any Bonds under this Indenture in any manner other than in accordance with the provisions of this Indenture, and shall not suffer or permit any Default (within its power to prevent) to occur under this Indenture, but shall faithfully observe and perform all the covenants, conditions and requirements of this Indenture.

Section 6.03. 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 this Indenture while any of the Bonds are Outstanding, except the pledge and assignment created by this 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 this Section 6.03.

Section 6.04. Power to Issue Bonds and Make Pledge and Assignment. The Institution represents and warrants that it is duly authorized to issue the Bonds and to enter into this Indenture and to pledge and assign the funds and accounts purported to be pledged and assigned under this 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 this Indenture against all claims and demands of all Persons, subject to the limitations set forth in Article VIII relating to the Trustee.

Section 6.05. Accounting Records and Financial Statements.

(a) With respect to each fund or account established and maintained by the Trustee pursuant to this 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, upon reasonable notice, at reasonable hours and under reasonable circumstances.

(b) The Trustee shall, upon request, make available to each Bondholder who shall have certified such Bondholder's position to the Trustee and provided indemnity to the Trustee satisfactory to it, 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 this Indenture for such month; provided that, notwithstanding the foregoing, 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. The Trustee may conclusively rely and shall be fully protected in conclusively relying upon information furnished by a Bondholder for the purposes described in this Section 6.05. The Trustee shall also, upon request, furnish a copy of a statement to the Institution for the period of time requested by the Institution.

Section 6.06. Representations and Warranties of the Institution.

(a) Corporate Organization, Authorization and Powers. The Institution represents and warrants that it is a corporation organized and validly existing under the laws of the State, with the power to enter into and perform this Indenture, that it is a nonprofit corporation within the State and that by proper corporate action it has duly authorized the execution and delivery of this Indenture. The Institution further represents and warrants that the execution and delivery of this Indenture and the consummation of the transactions contemplated herein will not conflict with or constitute a breach of or default under any bond, indenture, note or other evidence of indebtedness of the Institution, the charter or by-laws of the Institution, any gifts, bequests or devises pledged to or received by the Institution, or any contract, lease or other instrument to which the Institution is a party or by which it is bound or cause the Institution to be in violation of any applicable statute or rule or regulation of any governmental authority.

(b) Tax Matters. (1) The Institution represents and warrants that (a) it is an organization described in Section 501(c)(3) of the Code and it is not a "private foundation" as defined in Section 509 of the Code; (b) it has received letters from the Internal Revenue Service to that effect; (c) such letters have not been modified, limited or revoked; (d) it is in compliance with all terms, conditions and limitations, if any, contained in such letters; (e) the facts and circumstances which form the basis of such letters continue substantially to exist as represented to the Internal Revenue Service; and (f) it is exempt from federal income taxes under Section 501(a) of the Code. To the extent consistent with its status as a nonprofit corporation, the Institution agrees that it will not take any action or omit to take any action if such action or omission would cause any revocation or adverse modification of the Institution's status as an organization described in Section 501(c)(3) of the Code, including, specifically, the Institution will not use any proceeds of the Bonds in any way that constitutes "private inurement" within the meaning of the Code.

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

(d) Annual Reports and Other Current Information. Unless otherwise available on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access ("EMMA") or any successor thereto or to the functions thereof, within one hundred fifty (150) days after the close of each of its fiscal years, the Institution shall post on its website copies of its annual audited financial statements. The Trustee has no duty to review such financial statements, is not considered to have notice of the content of such financial statements or a default based on such content and does not have a duty to verify the accuracy of such statements. The Institution shall furnish to the agencies rating the Bonds such information as they may reasonably require for current reports to their subscribers. Any failure by the Institution to comply with this Section 6.06(d) shall not constitute an Event of Default under this Indenture.

(e) Maintenance of Corporate Existence. The Institution shall maintain its existence under the laws of the State and shall not dissolve or dispose of all or substantially all its assets, or consolidate with or merge into another entity or entities, or permit one or more other entities to consolidate with or merge into it, except that it may consolidate with or merge into one or more other entities or permit one or more other entities to consolidate with or merge into it, or transfer all or substantially all of its assets to one or more other entities (and thereafter dissolve or not dissolve as it may elect), if (1) the surviving, resulting or transferee entity or entities each is a corporation having the status and powers set forth in Sections 6.06(a), 6.06(b) and 6.06(c), (2) the transaction does not result in a conflict, breach or default referred to in Section 6.06(a), (3) the surviving, resulting or transferee entity or entities (if not the Institution) each (a) assumes by written agreement with the Trustee all the obligations of the Institution hereunder, (b) notifies the Trustee of any change in the name of the Institution, and (c) executes, delivers, registers, records and files such other instruments the Trustee may reasonably require to confirm, perfect or maintain the security granted hereunder.

EVENTS OF DEFAULT AND REMEDIES OF BONDHOLDERS

Section 7.01. Events of Default. The following events shall be "Events of Default":

(a) default in the due and punctual payment of the principal or Redemption Price of any Bond when and as the same shall become due and payable, by proceedings for redemption, by acceleration or otherwise;

(b) default in the due and punctual payment of any interest on any Bond when and as such interest shall become due and payable;

(c) default by the Institution in the performance or observance of any of the other covenants, agreements or conditions on its part contained in this Indenture or in the Bonds (other than any default under Section 6.06(d) of this Indenture and other than a covenant, agreement or condition a default in performance or observance of which is elsewhere in this Section 7.01 specifically dealt with), 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 this 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;

(d) 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;

(e) 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 sixty (60) days; or

(f) 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.

Section 7.02. 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, and upon the request of the Holders of not less than a majority in aggregate principal amount of the Bonds at the time Outstanding, the Trustee shall, 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 this 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 or Redemption Price of and interest on the Bonds payment of which is overdue, with interest on such overdue principal at the applicable rate borne by the Bonds, and the reasonable charges and expenses of the Trustee (including counsel fees), 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 satisfaction of the Trustee or provision 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.

Section 7.03. 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 and the Redemption 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 hereunder. 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.

Section 7.04. 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 this Indenture (subject to Section 11.09) shall be applied by the Trustee as follows and in the following order:

(a) 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 this Indenture;

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

(c) To the payment of the principal or 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 this Indenture, as follows:

(i) 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 or Redemption Price of any Bonds that 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 or Redemption Price due on such date to the Persons entitled thereto, without any discrimination or preference.

(ii) 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.

Section 7.05. Trustee to Represent Bondholders. The Trustee is hereby irrevocably appointed as trustee and true and lawful attorney-in-fact 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, this 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 reasonable 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. 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 this 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 this Indenture.

Section 7.06. 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 reasonable satisfaction therefor, to direct the time, method and place of conducting all remedial proceedings taken by the Trustee hereunder, provided that such direction shall not be otherwise than in accordance with law and the provisions of this 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.

Section 7.07. Limitation on Bondholders' 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 this 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 hereinbefore granted 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 reasonably 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 hereby declared, in every case, to be conditions precedent to the exercise by any Holder of Bonds of any remedy hereunder 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 this Indenture or the rights of any other Holders of Bonds, or to enforce any right under this Indenture or applicable law with respect to the Bonds, except in the manner herein provided, and that all proceedings at law or in equity to enforce any such right shall be instituted, had and maintained in the manner herein provided and for the benefit and protection of all Holders of the Outstanding Bonds, subject to the provisions of this Indenture.

Section 7.08. Absolute Obligation of Institution. Notwithstanding any other provision of this Indenture, or in the Bonds, nothing shall affect or impair the obligation of the Institution, which is absolute and unconditional, to pay the principal or 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 herein provided, or, subject to Section 7.07, affect or impair the right of such Holders to enforce such payment by virtue of the contract embodied in the Bonds.

Section 7.09. 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 hereunder, 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.

Section 7.10. Remedies Not Exclusive. No remedy herein conferred upon or reserved to the Trustee or to the Holders of the Bonds is intended 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 hereunder or now or hereafter existing at law or in equity or otherwise.

Section 7.11. 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 this 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.

Section 7.12. 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 hereunder and its consequences, except a Default:

(a) In the payment of the principal or Redemption Price of or interest on any Bond, or

(b) in respect of a covenant or other provision of this Indenture which, pursuant to Section 9.01, 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 this Indenture, but no such waiver shall extend to any subsequent or other Default or impair any right consequent thereon.

Section 7.13. Undertaking for Costs. Subject to the provisions of Section 8.06, the parties to this 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 this 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 Section 7.13 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.

Section 7.14. Notice of Default.

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

(b) Upon a Responsible Officer's actual knowledge of the existence of any Default under this Indenture, the Trustee shall transmit by mail to all Bondholders, as their names and addresses appear in the bond register, written notice of such Default hereunder within ninety (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 or Redemption Price of or interest on any Bond, the Trustee shall be protected in withholding such notice if and so long as 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 Section 7.01(c) no such notice to Bondholders shall be given until at least thirty (30) days after the occurrence thereof.

Section 7.15. Trustee May File Proofs of Claim.

(a) 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:

(i) To file and prove a claim for the whole amount of principal (or Redemption Price) 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

(ii) 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 hereby 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 this Indenture.

(b) Nothing herein contained 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.

(c) The Trustee shall be entitled to participate as a member of any official committee of creditors in the matters it deems advisable.

THE TRUSTEE

Section 8.01. Duties, Immunities and Liabilities of Trustee.

(a) 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 this Indenture, and, except to the extent required by law, no implied covenants or obligations shall be read into this Indenture against the Trustee. The Trustee shall, during the existence of any Event of Default of which it has actual knowledge (which has not been cured or waived), exercise such of the rights and powers vested in it by this 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.

(b) The Institution may 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 subsection (e) of this Section 8.01, 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.

(c) 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.

(d) 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 thirty (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 this 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 herein; but, nevertheless at the written 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 this Indenture and shall pay over, transfer, assign and deliver to the successor Trustee any money or other property subject to the trusts and conditions herein set forth. 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 subsection, 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 hereunder to the Bondholders at the addresses shown on the registration books maintained by the Trustee. If the Institution fails to mail such notice within fifteen (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.

(e) Any successor Trustee shall be a trust company or bank having trust powers in the State, 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). If such bank or trust company publishes a report of condition at least annually, pursuant to law or to the requirements of any supervising or examining authority above referred to, then for the purpose of this subsection the combined capital and surplus of such bank or trust company shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. In case at any time the Trustee shall cease to be eligible in accordance with the provisions of this subsection (e), the Trustee shall resign immediately in the manner and with the effect specified in this Section 8.01.

Section 8.03. Liability of Trustee.

(a) The Trustee assumes no responsibility for the correctness of the recitals of fact herein except as they specifically apply to the Trustee, and makes no representations as to the validity or sufficiency of this Indenture or of the Bonds, nor shall the Trustee incur any responsibility in respect thereof, other than in connection with the duties or obligations herein or in the Bonds assigned to or imposed upon it except for any recital or representation specifically relating to the Trustee or its powers. The Trustee shall, however, be responsible for its representations contained in its certificate of authentication on the Bonds. The Trustee shall not be liable in connection with the performance of its duties hereunder, except for its own negligent action, negligent failure to act or willful misconduct as determined by a court of appropriate jurisdiction in a final, non-appealable judgment.

(b) The Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts as determined by a court of appropriate jurisdiction in a final, non-appealable judgment.

(c) The Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the written direction of the Holders of not less than a majority (or such lesser or greater number as this Indenture may permit to direct the Trustee) in aggregate principal amount of the Bonds at the time Outstanding relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Indenture.

(d) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Bondholders pursuant to the provisions of this Indenture unless such Bondholders shall have offered to the Trustee indemnity satisfactory to it against the costs, expenses and liabilities which may be incurred therein or thereby. The permissive rights of the Trustee hereunder are not to be construed as duties. The Trustee has no obligation or liability to the Holders for the payment of interest, principal or Redemption Price with respect to the Bonds from its own funds; but rather the Trustee's obligations shall be limited to the performance of its duties hereunder. Further, the Trustee shall have no responsibility for the use of Bond proceeds paid out in accordance with this Indenture.

(e) Except with respect to Events of Default specified in Section 7.01(a) or Section 7.01(b), the Trustee shall not be deemed to have knowledge of any Event of Default or any other matter unless and until a Responsible Officer shall have actual knowledge thereof or the Trustee shall have received written notice thereof at the Designated Office. The Trustee shall not be responsible for the validity or effectiveness of any collateral given to or held by it.

(f) The Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through attorneys-in-fact, agents or receivers, and shall not be answerable for the negligence or misconduct (as determined by a court of appropriate jurisdiction in a final, non-appealable judgment) of any such attorney-in-fact, agent or receiver selected by it with due care. The Trustee shall be entitled to advice of counsel and other professionals concerning all matters of trust and its duty hereunder, but the Trustee shall not be answerable for the professional malpractice of any attorney-at-law or certified public accountant in connection with the rendering of his or her professional advice in accordance with the terms of this Indenture, if such attorney-at-law or certified public accountant was selected by the Trustee with due care.

(g) The Trustee shall have no responsibility for and makes no representation as to the validity, sufficiency or adequacy of this Indenture or the Bonds or any information, statement, or recital in the Offering Memorandum or any other official statement, offering memorandum or other disclosure material prepared or distributed with respect to the Bonds.

Section 8.04. Right of Trustee to Rely on Documents. The Trustee shall be protected in conclusively relying and acting upon any notice, resolution, request, consent, order, certificate, report, opinion, bond, statement, requisition, facsimile transmission, electronic mail or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties. The Trustee shall not be bound to make any investigation into the facts or matters stated in any notice, resolution, request, consent, order, certificate, report, opinion, bond, statement, requisition, facsimile transmission, electronic mail or other paper or document. The Trustee may consult with counsel, who may be counsel of or to the Institution, with regard to legal questions, and the opinion or written advice of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by it hereunder in good faith and in accordance therewith.

The Trustee shall not be bound to recognize any Person as the Holder of a Bond unless and until such Bond is submitted for inspection, if required, and such Person's title thereto is satisfactorily established, if disputed.

Whenever in the administration of the trusts imposed upon it by this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a Certificate of the Institution and/or Opinion of Counsel, and such Certificate and/or Opinion of Counsel shall be full warrant to the Trustee for any action taken or suffered in good faith under the provisions of this Indenture in reliance upon such Certificate and/or Opinion of Counsel, but in its discretion the Trustee may, in lieu thereof, accept other evidence of such matter or may require such additional evidence as to it may deem reasonable.

Section 8.05. Preservation and Inspection of Documents. All documents received by the Trustee under the provisions of this 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.

Section 8.06. Compensation and Indemnification.

(a) The Institution shall pay to the Trustee from time to time such compensation for its services as agreed to by the Institution and the Trustee. The Trustee's compensation shall not be limited by any law on compensation of a Trustee of an express trust. The Institution shall reimburse the Trustee upon request for all reasonable and documented out-of-pocket expenses incurred or made by it, including costs of collection, in addition to the compensation for its services. Such expenses shall include the reasonable compensation and expenses, disbursements and advances of the Trustee's agents, counsel, accountants and experts.

(b) No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of its rights or powers, if it has not received the agreed compensation for such services or, in cases where the Trustee has a right to reimbursement or indemnification for such performance or exercise, if it shall have reasonable grounds for believing that repayment of such funds or indemnity reasonably satisfactory to it against such risk or liability is not assured to it.

(c) The Institution further covenants and agrees to indemnify and save harmless the Trustee, and its officers, directors, employees, and agents against any loss, liability, damage, claim, cost or expense (including counsel fees and expenses) that it may incur arising out of or in connection with (1) the exercise and performance of the Trustee's powers and duties hereunder in accordance with the provisions hereof and/or (2) the sale of any Bonds and the carrying out of any of the transactions contemplated by the Bonds or related documents, including the costs and expenses of enforcing this Indenture against the Institution and defending against any claim of liability, but excluding liabilities that are due to the Trustee's negligence, negligent failure to act or willful misconduct as determined by a court of appropriate jurisdiction in a final, non-appealable judgment. The obligations of the Institution under this Section 8.06 shall survive resignation or removal of the Trustee under this Indenture and payment of the Bonds and discharge of this Indenture.

(d) To secure the Institution's payment obligations in this Section, the Trustee shall have a lien prior to the Bonds on all money or property held or collected by the Trustee under this Indenture other than money or property held in trust to pay principal of and interest on particular Bonds.

MODIFICATION OR AMENDMENT OF THE INDENTURE

Section 9.01. Amendments Permitted.

(a) This 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 hereto, 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 filed with 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 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 that 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 this Indenture prior to or on a parity with the lien created by this Indenture, or deprive the Holders of the Bonds of the lien created by this Indenture on the Indenture Fund and such amounts (except as expressly provided in this 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 subsection (a), 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.

(b) This 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 hereto, 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:

(i) to add to the covenants and agreements of the Institution contained in this 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 herein reserved 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;

(ii) to make such provisions for the purpose of curing any ambiguity, inconsistency or omission, or of curing or correcting any defective provision, contained in this Indenture, or in regard to matters or questions arising under this Indenture, as the Institution or the Trustee may deem necessary or desirable and not inconsistent with this Indenture, and which shall not materially adversely affect the interests of the Holders of the Bonds;

(iii) to modify, amend or supplement this 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 subsection (b)(iii) only if qualification under said act or similar federal statute is required by applicable law now or hereafter in effect);

(iv) 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 Section 2.10; or

(v) to provide for the issuance of Additional Bonds in accordance with Section 2.08.

(c) The Trustee may in its discretion, but shall not be obligated to, enter into any such supplemental indenture authorized by subsections (a) or (b) of this Section 9.01 which materially adversely affects the Trustee's own rights, duties or immunities under this Indenture or otherwise. Prior to signing a supplemental indenture, the Trustee shall be entitled to receive and shall be fully protected in relying upon an Opinion of Counsel stating that such supplemental indenture is authorized or permitted by this Indenture and is binding and enforceable against the Institution in accordance with its terms.

Section 9.02. Effect of Supplemental Indenture. Upon the execution of any Supplemental Indenture pursuant to this Article IX, this Indenture shall be deemed to be modified and amended in accordance therewith, and the respective rights, duties and obligations under this Indenture of the Institution, the Trustee and all Holders of Bonds Outstanding shall thereafter be determined, exercised and enforced hereunder 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 this Indenture for any and all purposes.

Section 9.03. Amendment of Particular Bonds. The provisions of this Article IX 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

Section 10.01. 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 or 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 Section 10.03) 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 outstanding fees and expenses of, and any other amounts owed to, the Trustee and its counsel, then and in that case at the election of the Institution (evidenced by a Certificate of the Institution filed with the Trustee signifying the intention of the Institution to discharge all such indebtedness and this Indenture), and notwithstanding that any Bonds shall not have been surrendered for payment, this Indenture and the pledge of the Indenture Fund and all amounts held therein made under this Indenture and all covenants, agreements and other obligations of the Institution under this Indenture (except as otherwise provided in Section 8.06) shall cease, terminate, become void and be completely discharged and satisfied and the Bonds shall be deemed paid. In such event, upon the Request and at the expense of the Institution, the Trustee shall cause an accounting for such period or periods as may be requested by the Institution to be prepared and filed with the Institution and shall execute and deliver to the Institution all such instruments as may be necessary to evidence such discharge and satisfaction, and the Trustee shall pay over, transfer, assign or deliver to the Institution all moneys or securities or other property held by it pursuant to this Indenture which are not required for the payment or redemption of Bonds not theretofore surrendered for such payment or redemption.

Section 10.02. 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 Section 10.03) to pay or redeem any Outstanding Bond (whether upon or prior to its maturity or the redemption date of such Bond), 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 or 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 Section 10.04; provided however, that, if such Bond is to be redeemed prior to maturity, such Bond shall be deemed to have been paid within the meaning and with the effect expressed in this Section 10.02 if, (i) notice of such redemption shall have been given as in Article IV provided or provision satisfactory to the Trustee shall have been made for the giving of such notice, (ii) the Institution shall deliver to the Trustee a report of a firm of certified public accountants confirming the arithmetical accuracy of the computations showing the cash or Investment Securities, the principal of and interest on which, together with cash, if any, deposited at the same time will be sufficient to pay when due, the principal or Redemption Price, if applicable, and interest due or to become due on such Bonds, on and prior to the redemption date or maturity date thereof, as the case may be, and (iii) the Institution shall deliver to the Trustee an Opinion of Counsel to the effect that upon provision for the payment of the principal or Redemption Price, if applicable, of, and interest due or to become due on such Bonds, the pledge of the Indenture Fund and other moneys and securities hereunder and the grant of all rights to the Holders of such Bonds hereunder shall be discharged and satisfied.

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.

Section 10.04. Payment of Bonds After Discharge of Indenture. Notwithstanding any provisions of this Indenture, any moneys held by the Trustee in trust for the payment of the principal or 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 State under then applicable Connecticut law) after such principal, 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 this Indenture upon receipt of an indemnification agreement acceptable to the Institution and the Trustee indemnifying 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.

MISCELLANEOUS

Section 11.02. Limitation of Rights to Parties and Bondholders. Nothing in this 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 this Indenture or any covenant, condition or provision therein or herein 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.

Section 11.03. Waiver of Notice. Whenever in this Indenture the giving of notice by mail or otherwise is required, the giving of such notice may be waived in writing by the Person entitled to receive such notice and in any such case the giving or receipt of such notice shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

Section 11.05. Severability of Invalid Provisions. If any one or more of the provisions contained in this Indenture or in the Bonds shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions contained in this Indenture and such invalidity, illegality or unenforceability shall not affect any other provision of this Indenture, and this Indenture shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein.

Section 11.07. Evidence of Rights of Bondholders.

(a) Any request, consent or other instrument required or permitted by this 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.

(b) 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.

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

(d) 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.

Section 11.09. Money Held for Particular Bonds. The money held by the Trustee for the payment of the interest, principal or Redemption Price due on any date with respect to particular Bonds (or portions of Bonds in the case of Bonds redeemed in part only) shall, on and after such date and pending such payment, be set aside on its books and held uninvested in trust by it for the Holders of the Bonds entitled thereto, subject, however, to the provisions of Section 10.04.

Section 11.11. Waiver of Personal Liability. No member, trustee, officer, agent or employee of the Institution shall be individually or personally liable for the payment of the principal or 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 hereunder; but nothing herein contained shall relieve any such member, officer, agent or employee from the performance of any official duty provided by law or by this Indenture.

Section 11.13. Governing Law; Venue. This Indenture shall be construed in accordance with and governed by the laws of the State. This Indenture shall be enforceable in the State, and any action arising hereunder shall (unless waived by the Institution) be filed and maintained in the State.

Section 11.15. 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. The Trustee may, in its discretion, include in any redemption notice a statement to the effect that the CUSIP numbers on the Bonds have been assigned by an independent service and are included in such notice solely for the convenience of the Holders and that neither the Trustee nor the Institution shall be liable for any inaccuracies in such numbers.

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