

**STANFORD UNIVERSITY****Taxable Bonds Series 2019****\$121,000,000 3.089% Bonds due May 1, 2029 Issue price: 100.00%**CUSIP No.[†]
85440K AB0ISIN No.[†]
US85440KAB08Common Code[‡]
197254653

The Stanford University Taxable Bonds Series 2019 (the “Bonds”) will be issued pursuant to the terms of an Indenture of Trust, dated as of March 1, 2019 (the “Indenture”), by and between The Board of Trustees of the Leland Stanford Junior University (the “University”) and The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”). The University plans to use the proceeds of the Bonds for general corporate purposes, including without limitation, financing and refinancing capital projects. See “PLAN OF FINANCE” and “ESTIMATED SOURCES AND USES OF PROCEEDS” herein.

The Bonds will be dated their date of delivery, will be issued in fully registered form in denominations of \$1,000 and any integral multiple thereof and, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company (“DTC”). DTC will act as securities depository for the Bonds. Purchases of the Bonds will be made through the book-entry facilities of DTC, and purchasers will not receive physical certificates (except under certain circumstances as described in the Indenture) representing their ownership interests in the Bonds.

Interest on the Bonds will be payable on May 1 and November 1 of each year, commencing on November 1, 2019. So long as the Bonds are held by DTC, the principal, Redemption Price or Make-Whole Redemption Price (each as defined herein) of and interest on the Bonds will be payable by wire transfer to DTC, which in turn is required to remit such principal, Redemption Price or Make-Whole Redemption Price and interest to the DTC Participants for subsequent disbursement to the Beneficial Owners of the Bonds, as more fully described in “BOOK-ENTRY SYSTEM” and Appendix D – “DTC BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES.”

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

Interest on and profit, if any, on the sale of the Bonds are not excludable from gross income for federal, state or local income tax purposes. See “CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS” herein.

The Bonds constitute unsecured general obligations of the University. The University has other unsecured general obligations outstanding. Moreover, the University 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 the applicable terms of the Bonds or any other considerations. Investors must read the entire Offering Memorandum to obtain information essential to the making of an informed investment decision.

The Bonds are offered by the Underwriters, when, as and if issued by the University and accepted by the Underwriters, subject to the approval of legality by Ropes & Gray LLP, counsel to the University. In addition, certain other legal matters will be passed upon for the University by Debra Zumwalt, General Counsel to the University, and for the Underwriters by their counsel, Hawkins Delafield & Wood LLP. It is expected that the Bonds will be available for delivery to DTC on or about March 28, 2019.

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

Dated: March 21, 2019

[†] CUSIP is a registered trademark of the American Bankers Association. CUSIP and ISIN data herein is provided by CUSIP Global Services (CGS), which is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP and ISIN numbers have been assigned by an independent company not affiliated with the University and are included solely for the convenience of the registered owners of the Bonds. Neither the University nor the Underwriters are responsible for the selection or uses of these CUSIP and ISIN numbers, and no representation is made as to their correctness on the Bonds or as included herein.

[‡] The Common Codes are provided herein by Euroclear Bank S.A./N.V. Common Codes are provided for convenience of reference only. Neither the University nor the Underwriters are responsible for the selection or uses of these Common Codes, and no representation is made as to their correctness on the Bonds or as included herein.

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**INFORMATION CONCERNING OFFERING RESTRICTIONS
IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES**

REFERENCES IN THIS SECTION TO THE “ISSUER” MEAN THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR 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 PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA (“EEA”)

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA (“EEA”). 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”); OR (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE 2002/92/EC (AS AMENDED, THE “INSURANCE MEDIATION DIRECTIVE”), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II; OR (III) NOT A QUALIFIED INVESTOR AS DEFINED IN DIRECTIVE 2003/71/EC (AS AMENDED, THE “PROSPECTUS DIRECTIVE”). 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 HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE EEA MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

THIS OFFERING MEMORANDUM HAS BEEN PREPARED ON THE BASIS THAT ALL OFFERS OF THE BONDS TO ANY PERSON THAT IS LOCATED WITHIN A MEMBER STATE OF THE EEA WILL BE MADE PURSUANT TO AN EXEMPTION UNDER ARTICLE 3(2) OF THE PROSPECTUS DIRECTIVE, AS IMPLEMENTED IN MEMBER STATES OF THE EEA, FROM THE REQUIREMENT TO PRODUCE A PROSPECTUS FOR OFFERS OF THE BONDS. ACCORDINGLY, ANY PERSON MAKING OR INTENDING TO MAKE ANY OFFER IN THE EEA OF THE BONDS SHOULD ONLY DO SO IN CIRCUMSTANCES IN WHICH NO OBLIGATION ARISES FOR THE ISSUER OR ANY OF THE UNDERWRITERS TO PROVIDE A PROSPECTUS FOR SUCH OFFER. NEITHER THE ISSUER NOR THE UNDERWRITERS HAVE AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF BONDS THROUGH ANY FINANCIAL INTERMEDIARY, OTHER THAN OFFERS MADE BY THE UNDERWRITERS, WHICH CONSTITUTE THE FINAL PLACEMENT OF THE BONDS CONTEMPLATED IN THIS OFFERING MEMORANDUM.

IN RELATION TO EACH MEMBER STATE OF THE EEA THAT HAS IMPLEMENTED THE PROSPECTUS DIRECTIVE (EACH, A “RELEVANT MEMBER STATE”), WITH EFFECT FROM AND INCLUDING THE DATE ON WHICH THE PROSPECTUS DIRECTIVE IS IMPLEMENTED IN THAT RELEVANT MEMBER STATE, THE OFFER OF ANY BONDS WHICH IS THE SUBJECT OF THE OFFERING CONTEMPLATED BY THIS OFFERING MEMORANDUM IS NOT BEING MADE AND WILL NOT BE MADE TO THE PUBLIC IN THAT RELEVANT MEMBER STATE, OTHER THAN: (A) TO ANY LEGAL ENTITY WHICH IS A “QUALIFIED INVESTOR” AS SUCH TERM IS DEFINED IN THE PROSPECTUS DIRECTIVE; (B) TO FEWER THAN 150 NATURAL OR LEGAL PERSONS (OTHER THAN “QUALIFIED INVESTORS” AS SUCH TERM IS DEFINED IN THE PROSPECTUS DIRECTIVE), SUBJECT TO OBTAINING THE PRIOR CONSENT OF THE RELEVANT UNDERWRITER OR THE ISSUER FOR ANY SUCH OFFER OR (C) IN ANY OTHER CIRCUMSTANCES FALLING WITHIN ARTICLE 3(2) OF THE PROSPECTUS DIRECTIVE; PROVIDED THAT NO SUCH OFFER OF THE BONDS SHALL

REQUIRE THE ISSUER OR ANY UNDERWRITER TO PUBLISH A PROSPECTUS PURSUANT TO ARTICLE 3(1) OF THE PROSPECTUS DIRECTIVE OR A SUPPLEMENT TO A PROSPECTUS PURSUANT TO ARTICLE 16 OF THE PROSPECTUS DIRECTIVE.

FOR THE PURPOSES OF THIS PROVISION, THE EXPRESSION AN “OFFER OF SECURITIES TO THE PUBLIC” IN RELATION TO THE BONDS IN ANY RELEVANT MEMBER STATE MEANS THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE BONDS TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE THE BONDS, AS THE SAME MAY BE VARIED IN THAT RELEVANT MEMBER STATE BY ANY MEASURE IMPLEMENTING THE PROSPECTUS DIRECTIVE IN THAT RELEVANT MEMBER STATE.

EACH SUBSCRIBER FOR OR PURCHASER OF THE BONDS IN THE OFFERING LOCATED WITHIN A RELEVANT MEMBER STATE WILL BE DEEMED TO HAVE REPRESENTED, ACKNOWLEDGED AND AGREED THAT IT IS A “QUALIFIED INVESTOR” WITHIN THE MEANING OF ARTICLE 2(1)(E) OF THE PROSPECTUS DIRECTIVE. THE ISSUER AND EACH UNDERWRITER AND OTHERS WILL RELY ON THE TRUTH AND ACCURACY OF THE FOREGOING REPRESENTATION, ACKNOWLEDGEMENT AND AGREEMENT.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

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 OUTSIDE OF THE UNITED KINGDOM (II) 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”), (III) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A) TO (D) OF THE FINANCIAL PROMOTION ORDER OR (IV) 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 BONDS 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. 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 HONG KONG

THE CONTENTS OF THIS OFFERING MEMORANDUM HAVE NOT BEEN REVIEWED BY ANY REGULATORY AUTHORITY IN HONG KONG. YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFER OF THE BONDS. IF YOU ARE IN ANY DOUBT ABOUT ANY OF THE CONTENTS OF THIS OFFERING MEMORANDUM, YOU SHOULD OBTAIN INDEPENDENT PROFESSIONAL ADVICE.

THIS OFFERING MEMORANDUM HAS NOT BEEN, AND WILL NOT BE, REGISTERED AS A PROSPECTUS (AS DEFINED IN THE COMPANIES (WINDING UP AND MISCELLANEOUS PROVISIONS) ORDINANCE (CHAPTER 32 OF THE LAWS OF HONG KONG) (THE "C(WUMP)O")) IN HONG KONG NOR HAS IT BEEN APPROVED BY THE SECURITIES AND FUTURES COMMISSION OF HONG KONG PURSUANT TO THE SECURITIES AND FUTURES ORDINANCE (CHAPTER 571 OF THE LAWS OF HONG KONG) ("SFO"). ACCORDINGLY, THE BONDS MAY NOT BE OFFERED OR SOLD IN HONG KONG BY MEANS OF THIS OFFERING MEMORANDUM OR ANY OTHER DOCUMENT, AND THIS OFFERING MEMORANDUM MUST NOT BE ISSUED, CIRCULATED OR DISTRIBUTED IN HONG KONG, OTHER THAN (A) TO 'PROFESSIONAL INVESTORS' AS DEFINED IN THE SFO AND ANY RULES MADE UNDER THE SFO OR (B) IN OTHER CIRCUMSTANCES WHICH DO NOT RESULT IN THE DOCUMENT BEING A "PROSPECTUS" AS DEFINED IN THE C(WUMP)O OR WHICH DO NOT CONSTITUTE AN OFFER TO THE PUBLIC WITHIN THE MEANING OF THE C(WUMP)O. IN ADDITION, NO PERSON MAY ISSUE OR HAVE IN ITS POSSESSION FOR THE PURPOSES OF ISSUE, WHETHER IN HONG KONG OR ELSEWHERE, ANY ADVERTISEMENT, INVITATION OR DOCUMENT RELATING TO THE BONDS, WHICH IS DIRECTED AT, OR THE CONTENTS OF WHICH ARE LIKELY TO BE ACCESSED OR READ BY, THE PUBLIC OF 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 (A) TO PERSONS OUTSIDE HONG KONG, (B) TO 'PROFESSIONAL INVESTORS' AS DEFINED IN THE SFO AND ANY RULES MADE UNDER THE SFO.

NOTICE TO PROSPECTIVE 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 UNDERWRITER CONFLICTS OF INTEREST IN CONNECTION WITH THIS OFFERING.

NOTICE TO PROSPECTIVE INVESTORS IN SWITZERLAND

THE BONDS MAY NOT BE PUBLICLY OFFERED IN SWITZERLAND AND WILL NOT BE LISTED ON THE SIX SWISS EXCHANGE (“SIX”) OR ON ANY OTHER STOCK EXCHANGE OR REGULATED TRADING FACILITY IN SWITZERLAND. THIS OFFERING MEMORANDUM HAS BEEN PREPARED WITHOUT REGARD TO THE DISCLOSURE STANDARDS FOR ISSUANCE PROSPECTUSES UNDER ART. 652A OR ART. 1156 OF THE SWISS CODE OF OBLIGATIONS OR THE DISCLOSURE STANDARDS FOR LISTING PROSPECTUSES UNDER ART. 27 FF. OF THE SIX LISTING RULES OR THE LISTING RULES OF ANY OTHER STOCK EXCHANGE OR REGULATED TRADING FACILITY IN SWITZERLAND. NEITHER THIS OFFERING MEMORANDUM NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE BONDS OR THE OFFERING MAY BE PUBLICLY DISTRIBUTED OR OTHERWISE MADE PUBLICLY AVAILABLE IN SWITZERLAND.

NONE OF THIS OFFERING MEMORANDUM OR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE OFFERING, THE ISSUER OR THE BONDS HAVE BEEN OR WILL BE FILED WITH OR APPROVED BY ANY SWISS REGULATORY AUTHORITY. IN PARTICULAR, THIS OFFERING MEMORANDUM WILL NOT BE FILED WITH, AND THE OFFER OF THE BONDS WILL NOT BE SUPERVISED BY, THE SWISS FINANCIAL MARKET SUPERVISORY AUTHORITY (“FINMA”), AND THE OFFER OF BONDS HAS NOT BEEN AND WILL NOT BE AUTHORIZED UNDER THE SWISS FEDERAL ACT ON COLLECTIVE INVESTMENT SCHEMES (“CISA”). ACCORDINGLY, INVESTORS DO NOT HAVE THE BENEFIT OF THE SPECIFIC INVESTOR PROTECTION PROVIDED UNDER THE CISA.

NOTICE TO PROSPECTIVE INVESTORS IN TAIWAN

EACH UNDERWRITER HAS REPRESENTED AND AGREED THAT THE BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED WITH THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN AND/OR OTHER REGULATORY AUTHORITY OF TAIWAN PURSUANT TO RELEVANT SECURITIES LAWS AND REGULATIONS AND MAY NOT BE SOLD, ISSUED OR OFFERED WITHIN TAIWAN THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES THAT CONSTITUTE AN OFFER WITHIN THE MEANING OF THE SECURITIES AND EXCHANGE ACT OF TAIWAN OR RELEVANT LAWS AND REGULATIONS THAT REQUIRES A REGISTRATION, FILING OR APPROVAL OF THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN AND/OR OTHER REGULATORY AUTHORITY OF TAIWAN. NO PERSON OR ENTITY IN TAIWAN HAS BEEN AUTHORIZED TO OFFER, SELL, GIVE ADVICE REGARDING OR OTHERWISE INTERMEDIATE THE OFFERING AND SALE OF THE BONDS IN TAIWAN.

NOTICE TO PROSPECTIVE INVESTORS IN JAPAN

THE BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT OF JAPAN (ACT NO. 25 OF 1948, AS AMENDED, THE “FIEA”). NEITHER THE BONDS NOR ANY INTEREST THEREIN MAY BE OFFERED OR SOLD, DIRECTLY OR INDIRECTLY, IN JAPAN OR TO, OR FOR THE BENEFIT OF, ANY RESIDENT OF JAPAN (AS DEFINED UNDER ITEM 5, PARAGRAPH 1, ARTICLE 6 OF THE FOREIGN EXCHANGE AND FOREIGN TRADE ACT (ACT NO. 228 OF 1949, AS AMENDED)), OR TO OTHERS FOR RE-OFFERING 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, AND OTHERWISE IN COMPLIANCE WITH, THE FIEA AND ANY OTHER APPLICABLE LAWS, REGULATIONS AND MINISTERIAL GUIDELINES OF JAPAN.

THE PRIMARY OFFERING OF THE BONDS AND THE SOLICITATION OF AN OFFER FOR ACQUISITION THEREOF HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER PARAGRAPH 1, ARTICLE 4 OF THE FIEA. AS IT IS A PRIMARY OFFERING, IN JAPAN, THE BONDS MAY ONLY BE OFFERED, SOLD, RESOLD OR OTHERWISE TRANSFERRED, DIRECTLY OR INDIRECTLY TO, OR FOR THE BENEFIT OF CERTAIN QUALIFIED INSTITUTIONAL INVESTORS AS DEFINED IN THE FIEA (“QIIs”) IN RELIANCE ON THE QIIs-ONLY PRIVATE PLACEMENT EXEMPTION AS SET FORTH IN ITEM 2(I), PARAGRAPH 3, ARTICLE 2 OF THE FIEA. A QII WHO PURCHASED OR OTHERWISE OBTAINED THE BONDS CANNOT RESELL OR OTHERWISE TRANSFER THE BONDS IN JAPAN TO ANY PERSON EXCEPT ANOTHER QII.

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INTRODUCTION	1
Purpose of the Bonds	1
The University	1
The Bonds	1
Security for the Bonds	1
PLAN OF FINANCE	2
ESTIMATED SOURCES AND USES OF PROCEEDS	3
THE BONDS	3
Description of the Bonds	3
Redemption	4
Notice of Redemption	5
Effect of Redemption	6
Selection of Bonds for Redemption	6
Cancellation of Bonds	6
BOOK-ENTRY SYSTEM	6
SECURITY FOR THE BONDS	7
General	7
Indenture Fund	8
ENFORCEABILITY OF REMEDIES	8
CERTAIN INVESTMENT CONSIDERATIONS	8
CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS	10
Certain U.S. Federal Income Tax Consequences to U.S. Holders	12
Certain U.S. Federal Income Tax Consequences to Non-U.S. Holders	13
FATCA Withholding	15
ERISA AND OTHER BENEFIT PLAN CONSIDERATIONS	15
UNDERWRITING	17
CERTAIN RELATIONSHIPS	17
ANNUAL REPORTS	18
REGULATORY MATTERS AND LITIGATION	18
APPROVAL OF LEGALITY	18
INDEPENDENT ACCOUNTANTS	18
RATINGS	18
MISCELLANEOUS	19
STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF FINANCIAL RESULTS)	APPENDIX A
SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE	APPENDIX B
PROPOSED FORM OF OPINION OF COUNSEL TO THE UNIVERSITY	APPENDIX C
DTC BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES	APPENDIX D

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GENERAL INFORMATION

This Offering Memorandum does not constitute an offer to sell the Bonds in any jurisdiction in which or to any person to whom it is unlawful to make such an offer. No dealer, salesperson or other person has been authorized by J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC (collectively, the “Underwriters”) or the University to give any information or to make any representations, other than those contained herein, in connection with the offering of the Bonds and, if given or made, such information or representations must not be relied upon.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the Bonds, or determined that this Offering Memorandum is accurate or complete. Any representation to the contrary is a criminal offense. The Bonds have not been and will not be registered under the Securities Act of 1933, as amended (the “Securities Act”), and are being issued in reliance on an exemption under Section 3(a)(4) of the Securities Act. The Bonds are not exempt in every jurisdiction in the United States; the securities laws of some jurisdictions (the “blue sky laws”) may require a filing and a fee or other actions to secure the exemption of the Bonds 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 University 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 University 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 none of this Offering Memorandum or 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 University 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 University since the date hereof.

FORWARD-LOOKING STATEMENTS

Certain statements included or incorporated by reference in this Offering Memorandum constitute “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, Section 21E of the United States Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act. Such statements are generally identifiable by the terminology used such as “plan,” “expect,” “estimate,” “budget,” “intend,” “projection” or other similar words. Such forward-looking statements include, but are not limited to, certain statements contained in the information in Appendix A – “STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF FINANCIAL RESULTS).” A number of important factors, including factors affecting the University’s financial condition and factors that are otherwise unrelated thereto, could cause actual results to differ materially from those stated in such forward-looking statements. THE UNIVERSITY DOES NOT PLAN TO ISSUE ANY UPDATES OR REVISIONS TO ANY FORWARD-LOOKING

STATEMENTS IF OR WHEN ITS EXPECTATIONS CHANGE, OR EVENTS, CONDITIONS OR CIRCUMSTANCES ON WHICH SUCH STATEMENTS ARE BASED OCCUR. See “CERTAIN INVESTMENT CONSIDERATIONS” herein.

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

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

SUMMARY OF THE OFFERING

Issuer	The Board of Trustees of the Leland Stanford Junior University
Securities Offered	\$121,000,000 3.089% Taxable Bonds due May 1, 2029
Interest Payment Dates	May 1 and November 1 of each year, commencing on November 1, 2019
Redemption	The Bonds are subject to optional redemption (i) prior to the Par Call Date, at the Make-Whole Redemption Price, and (ii) on or after the Par Call Date, at the Redemption Price, all as discussed more fully herein. See “THE BONDS – Redemption” herein.
Issuance and Settlement Date	March 28, 2019
Authorized Denominations	\$1,000 and any integral multiple thereof
Form and Depository	The Bonds will be delivered solely in book-entry form through the facilities of DTC.
Use of Proceeds	The University plans to use the proceeds of this offering for general corporate purposes, including without limitation, financing and refinancing capital projects. See “PLAN OF FINANCE” and “ESTIMATED SOURCES AND USES OF PROCEEDS” herein.
Ratings	Moody’s: Aaa S&P: AAA Fitch: AAA

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OFFERING MEMORANDUM

Relating to

\$121,000,000

STANFORD UNIVERSITY TAXABLE BONDS SERIES 2019

INTRODUCTION

The purpose of this Offering Memorandum, which includes the cover page, the table of contents and appendices, is to provide certain information concerning the sale and delivery by The Board of Trustees of the Leland Stanford Junior University (the “University”) of its \$121,000,000 aggregate principal amount of Stanford University Taxable Bonds Series 2019 (the “Bonds”). This Introduction contains only a brief summary of certain of the terms of the Bonds being offered and a brief description of the Offering Memorandum. All statements contained in this Introduction are qualified in their entirety by reference to the entire Offering Memorandum.

Purpose of the Bonds

The University plans to use the proceeds of the Bonds for general corporate purposes, including without limitation, financing and refinancing capital projects. See “PLAN OF FINANCE” and “ESTIMATED SOURCES AND USES OF PROCEEDS” herein.

The University

Founded in 1885, the University is one of a select group of universities that has achieved eminence in both undergraduate and graduate education and in a broad range of academic disciplines. It is internationally recognized for the quality of its teaching and research, its distinguished faculty and its outstanding student body.

For additional information concerning the University, see Appendix A – “STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF FINANCIAL RESULTS).”

The Bonds

The Bonds are being issued pursuant to an Indenture of Trust, dated as of March 1, 2019 (the “Indenture”), by and between the University and The Bank of New York Mellon Trust Company, N.A., as trustee (the “Trustee”). 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 University will pay the Trustee a sum equal to the amount payable on such Payment Date as principal of or interest on the Bonds. See “THE BONDS” herein.

Security for the Bonds

The Bonds constitute unsecured general obligations of the University. The University has other unsecured general obligations outstanding. Moreover, the University 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.

Miscellaneous

Included in this Offering Memorandum are descriptions of the University, the Bonds and the Indenture. All references herein to the Indenture and other documents relating to the Bonds are qualified in their entirety by reference to such documents, and the description herein of the Bonds is qualified in its entirety by reference to the terms thereof and the information regarding the Bonds included in the Indenture. All descriptions are further qualified in their entirety by reference to laws relating to or affecting the enforcement of creditors' rights. The agreements of the University with the holders 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 holders of the Bonds. Insofar as any statements are made in this Offering Memorandum involving matters of opinion, regardless of whether expressly so stated, they are intended merely as such and not as representations of fact. The information and expressions of opinion herein speak only as of their date and are subject to change without notice. The delivery of this Offering Memorandum, any sale made hereunder or any future use of this Offering Memorandum shall not, under any circumstances, create any implication that there has been no change in the affairs of the University.

Additional information regarding this Offering Memorandum and copies of the documents referred to herein may be obtained by contacting the Office of the Treasurer, Stanford University at <https://treasurer.stanford.edu/> or on-line at <http://bondholder-information.stanford.edu/home.html>. The information on the University's website is not a part of this Offering Memorandum.

PLAN OF FINANCE

The University plans to use the proceeds of the Bonds for general corporate purposes, including without limitation, financing and refinancing capital projects. See "ESTIMATED SOURCES AND USES OF PROCEEDS" herein.

On or about April 4, 2019, the University will cause the California Educational Facilities Authority to issue its \$441,830,000 Revenue Bonds (Stanford University) Series V-1, for the purpose of financing or refinancing certain capital projects of the University.

ESTIMATED SOURCES AND USES OF PROCEEDS

The University plans to use the proceeds of the Bonds for the purposes described under “PLAN OF FINANCE” herein. The estimated sources and uses of the proceeds of the Bonds are shown below.

SOURCES:

Principal Amount of Bonds	\$121,000,000
University Contribution.....	<u>452,900</u>
Total Sources of Funds.....	<u>\$121,452,900</u>

USES:

Finance or Refinance Projects	\$121,000,000
Costs of Issuance ⁽¹⁾	<u>452,900</u>
Total Uses of Funds.....	<u>\$121,452,900</u>

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- ⁽¹⁾ Costs of issuance will be paid out of the University’s contribution and includes fees of the Rating Agencies, the Trustee and Counsel to the University and the Underwriters’ compensation, as well as certain other costs incurred in connection with the issuance and delivery of the Bonds.

THE BONDS

Description of the Bonds

The Bonds will bear interest at the rates and will mature on the dates (subject to prior redemption) as set forth on the cover page of this Offering Memorandum. Interest on the Bonds will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

The Bonds will be delivered in the form of fully registered Bonds in denominations of \$1,000 and any integral multiple thereof. The Bonds will be registered initially in the name of “Cede & Co.,” as nominee of DTC and will be evidenced by one Bond in the principal amount 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 Appendix B – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE” attached hereto.

The principal, Redemption Price or Make-Whole 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.

An “Interest Payment Date” for the Bonds will occur on May 1 and November 1 of each year commencing on November 1, 2019. Interest on the Bonds will be payable from the later of (i) the date of original issuance of the Bonds 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 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 on the applicable Interest Payment Date by first class mail to such holder at its address as it appears on such registration books, or, upon the written request of any holder of at least \$1,000,000 in aggregate principal amount of Bonds, submitted to the Trustee at least one (1) Business Day prior to the Record Date, by wire transfer in immediately available funds to an account within the United States designated by such holder in such written request. Notwithstanding the foregoing, as long as Cede & Co. is the holder of all or part of

the Bonds in book-entry form, such principal, Redemption Price or Make-Whole Redemption Price and interest payments will be made to Cede & Co. by wire transfer in immediately available funds.

Redemption

Optional Redemption at Par

On or after the applicable Par Call Date, the Bonds will be subject to optional redemption prior to maturity, in whole or in part, at the direction of the University (and, if in part, in Authorized Denominations and on a pro rata basis, subject to the provisions described below under “Selection of Bonds for Redemption”), on any Business Day, as directed by the University, at the Redemption Price. “Redemption Price” means 100% of the principal amount of the Bonds to be redeemed plus accrued and unpaid interest on such Bonds to, but excluding, the redemption date. “Par Call Date” means February 1, 2029 (three months prior to the maturity date of the Bonds).

Optional Redemption at Make-Whole Redemption Price

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

“Make-Whole Redemption Price” means the greater of (i) 100% of the principal amount of the Bonds to be redeemed or (ii) the sum of the present values of the remaining scheduled payments of principal and interest to the maturity 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 date on which such 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 ten (10) basis points, plus, in each case, accrued and unpaid interest on such Bonds to, but excluding, the redemption date.

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

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

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

“Designated Investment Banker” means a Primary Treasury Dealer appointed by the University.

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

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

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

Notice of Redemption

Notice of redemption will be sent by the Trustee by first class mail or using Electronic Means, not less than seven (7) days (or, if longer, the minimum number of days necessary to comply with the operational requirements of DTC or its nominee then in effect), nor more than sixty (60) days prior to the redemption date, to the respective holders of any Bonds designated for redemption at their addresses appearing on the registration books of the Trustee. If the Bonds are no longer held by DTC, its nominee or a 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 University. Each notice of redemption shall state the date of such notice, the date of issue of the Bonds, the redemption date, the method for determining the Redemption Price or Make-Whole Redemption Price, the place or places of redemption (including the name and appropriate address or addresses of the Trustee), the maturity, the CUSIP number (if any), any conditions to the redemption 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 or Make-Whole 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, 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 University, 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 University may instruct the Trustee to provide conditional notice of redemption, which may be conditioned upon the receipt of moneys or any other event.

Effect of Redemption

Moneys for payment of the Redemption Price or Make-Whole Redemption Price of the Bonds (or portion thereof called for redemption) will be held by the Trustee, and if the conditions specified in the notice of redemption (if any) have been satisfied, shall be paid by the Trustee on the date fixed for redemption designated in such notice. The Bonds (or portion thereof) so called for redemption shall become due and payable at the Redemption Price or the Make-Whole Redemption Price, as applicable, interest on the Bonds so called for redemption shall cease to accrue, such Bonds (or portion thereof) will cease to be entitled to any benefit or security under the Indenture and the holders of such Bonds will have no rights in respect thereof except to receive payment of such Redemption Price or Make-Whole Redemption Price, as applicable, from funds held by the Trustee for such payment.

Selection of Bonds for Redemption

If the Bonds are registered in book-entry only form and so long as DTC or its nominee or a successor securities depository is the sole registered owner of the Bonds, if less than all of the Bonds are called for redemption, the particular Bonds or portions thereof to be redeemed will be selected on a pro rata pass-through distribution of principal basis in accordance with the customary procedures and operational arrangements of DTC (or its nominee or successor) then in effect, but, if such operational arrangements do not allow for redemption on a pro rata pass-through distribution of principal basis, the Bonds will be selected for redemption, in accordance with the customary procedures of DTC, by lot.

It is the University's intent that redemption allocations made by DTC be made on a pro rata pass-through distribution of principal basis as described above. However, the University can provide no 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 (a) the numerator is equal to the amount due to the respective bondholders on a payment date, and (b) the denominator is equal to the total original par amount of the respective Bonds.

If the Bonds are no longer registered in book-entry-only form, each owner will receive an amount of Bonds equal to the original face amount then beneficially held by that owner, registered in such investor's name. Thereafter, any redemption of less than all of the Bonds 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.

Cancellation of Bonds

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

BOOK-ENTRY SYSTEM

DTC will act as securities depository for the Bonds. The Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. Individual purchases of the Bonds will be made in book-entry form only. Principal of, interest on and the Redemption Price or Make-Whole Redemption Price of the Bonds will be payable by the Trustee directly to DTC, as the registered owner of the Bonds. Upon receipt of payments of principal, interest and the Redemption Price or Make-Whole Redemption Price,

DTC is to remit such payments to the DTC Participants for subsequent disbursement to the Beneficial Owners (as defined in Appendix D) of the Bonds. One fully registered Bond certificate will be issued for the Bonds, and will be deposited with DTC. Purchasers will not receive certificates representing the Bonds purchased by them. Beneficial interests in the Bonds may be held through DTC, Clearstream Banking, S.A or Euroclear Bank S.A./N.V., directly as a participant or indirectly through organizations that are participants in such system. See Appendix D – “DTC BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES.”

NONE OF THE UNIVERSITY, THE TRUSTEE AND THE UNDERWRITERS WILL HAVE ANY RESPONSIBILITY OR OBLIGATIONS TO DTC PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE PAYMENTS TO OR THE PROVIDING OF NOTICE FOR DTC PARTICIPANTS, INDIRECT PARTICIPANTS OR BENEFICIAL OWNERS.

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

SECURITY FOR THE BONDS

General

The Indenture provides that, on or before 11:00 a.m. (Pacific time) on each Payment Date, the University will pay the Trustee a sum equal to the amount payable on such Payment Date as principal of and interest on the Bonds, less the amounts, if any, in the Bond Fund (described below) and available therefor. In addition, the Indenture provides that each such payment made (together with other available amounts, if any, in the Bond Fund) will 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 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 University is required to pay such deficiency to the Trustee.

The Bonds constitute unsecured general obligations of the University. The Bonds are not secured by a reserve fund, mortgage lien or security interest on or in any funds or other assets of the University, although certain funds and accounts are held from time to time by the Trustee for the benefit of the holders of the Bonds under the Indenture. Pursuant to the Indenture, proceeds of the Bonds will be held by the University, rather than the Trustee, until expended, and may be commingled with general funds of the University. In addition, as described above, the University 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. Proceeds of the Bonds held by the University 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 financial covenants limiting the ability of the University to incur indebtedness or encumber or dispose of its property or any other similar covenants. Further, the University is not required by the Indenture to produce revenues at any specified level or to obtain any insurance with respect to its property or operations.

The University has other unsecured general obligations outstanding. See Appendix A – “STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF

FINANCIAL RESULTS).” Moreover, the University 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.

Indenture Fund

Under the Indenture, the Trustee has established a master fund for the sole benefit of the Bondholders referred to as the “Indenture Fund,” containing the Bond Fund and the Redemption Fund and each of the funds and accounts contained therein. The Trustee will deposit all payments (excluding income or profit from investments) received from the University into the Indenture Fund. The University has pledged, assigned and transferred the Indenture Fund and all amounts held therein to the Trustee for the benefit of the Bondholders to secure the full payment of the principal, the Redemption Price or Make-Whole Redemption Price of and interest on the Bonds in accordance with the terms and the provisions of the Indenture. The Indenture Fund and all amounts on deposit therein will constitute collateral security to secure the full payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds in accordance with the terms and provisions of the Indenture. Due to the timing of payments by the University to the Trustee, in general there is not expected to be any money in the Indenture Fund except for a brief period of time on the dates on which payments of principal, Redemption Price or Make-Whole Redemption Price of or interest on the Bonds are made.

For information on other funds and accounts established by the Indenture, see Appendix B – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE” attached hereto.

ENFORCEABILITY OF REMEDIES

The remedies available to the Trustee or the holders of the Bonds upon an Event of Default under the Indenture are in many respects dependent upon judicial actions which are often subject to discretion and delay, and such remedies may not be readily available or may be limited. In particular, under the United States Bankruptcy Code, a bankruptcy case may be filed by or against the University or by or against any of its affiliates. In general, the filing of any such petition operates as a stay against enforcement of the terms of the agreements to which the bankrupt entity is a party and, in the bankruptcy process, executory contracts such as the Indenture may be subject to assumption or rejection by the bankrupt party. In the event of any such rejection, the non-rejecting party or its assigns may become an unsecured claimant of the rejecting party. The various legal opinions to be delivered concurrently with the Bonds (including the opinions of counsel to the University) will be qualified, as to the enforceability of the various legal instruments, by limitations imposed by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally and by general principles of equity applied in the exercise of judicial discretion.

CERTAIN INVESTMENT CONSIDERATIONS

The following are certain investment considerations that have been identified by the University and should be carefully considered by prospective purchasers of the Bonds. The following list should not be considered to be exhaustive. Investors should read the Offering Memorandum in its entirety. Inclusion of certain factors below is not intended to signify that there are no other investment considerations or risks attendant to the Bonds. See Appendix A – “STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF FINANCIAL RESULTS)” for additional information about the University.

The University’s stature in the educational community and its consolidated revenues, expenses, assets and liabilities may be affected by events, developments and conditions relating generally to, among other things, the ability of the University to (a) conduct educational and research activities of the types and

quality required to maintain its stature, (b) generate sufficient revenues, while controlling expenses, to fund adequately the cost of these activities, (c) attract faculty, staff and management necessary to conduct these activities, (d) attract a student body of commensurate quality and (e) build and maintain the facilities necessary to conduct these activities.

Success in these areas depends upon the ability of the University and its management to respond to substantial challenges in a rapidly changing environment. For example:

(i) Volatility and dislocations in the global financial markets and other economic factors may reduce the value of the University's investment portfolio, impact investment returns, increase liabilities associated with investments, reduce investment income distributable from the endowment and other expendable funds for operations, affect the ability of donors to pledge resources or meet their pledge obligations, increase demand for financial aid, and increase interest costs on the University's debt. See Notes 6, 7, 8, 10, 11 and 12 to the consolidated financial statements of the University for the years ended and as of August 31, 2018 and 2017 included in Part II of Appendix A hereto.

(ii) Liquidity constraints may impact the University's ability to fund its commitments for operating expenses, construction, capital calls and possible tenders of variable rate debt.

(iii) The Federal Government may reduce levels of sponsored research funding and reimbursement for administrative overhead and infrastructure.

(iv) Legislation and regulation by governmental authorities may affect the tax-exempt status of, and associated tax benefits accorded to, educational institutions such as the University, impose constraints or mandates on tuition levels and endowment payout, or impose significant new compliance requirements with associated costs.

(v) Counties or municipalities in which the University operates may constrain additional facility and infrastructure expansion, or impose significant costs.

(vi) The ability to recruit and retain faculty, graduate students, postdoctoral scholars and staff may be impaired by the high regional cost of living and the limited availability of affordable housing within reasonable commuting distance.

The preservation and growth of the University's endowment are affected not only by the factors noted above but by discretionary changes in the annual payout to operations from endowment earnings, transfers of expendable funds and other distributions, all of which are subject to changes in policies and practices made by the Board of Trustees and University management.

In addition to the challenges noted above, a variety of risks, uncertainties and other factors may affect the financial strength and stature of the University. By its nature, the University is an open environment, potentially vulnerable to disruption of operations, injury and damage notwithstanding its security and public safety programs. It is subject to governmental regulations and mandates, investigations and enforcement actions and private litigation, and may incur substantial costs of compliance, defense, sanctions, penalties and reputational harm for violation of applicable laws. The University self-insures for the first \$1 million to \$2 million of liability claims, but certain types of claims may not be covered by insurance policies.

The University is a large landowner and lessor and as such is subject to numerous environmental laws and regulations; it routinely stores, uses and produces hazardous substances in its operations; it houses thousands of students, faculty and others; it maintains confidential personal information and protected health information, including electronically, subject to information security and privacy laws. The

University self-insures the first \$1,500,000 of property losses per occurrence resulting from fire and other hazards, including terrorism, and carries limited property insurance for losses exceeding this amount. In addition, the University carries limited insurance for damage to facilities sustained from flooding and minimal insurance for damage to facilities due to seismic events. The University is located in a region that is subject to significant seismic activity. In the event of a significant seismic event, the University could suffer substantial damage to its facilities and disruption of its operations.

Because the financial results of the University are reported on a consolidated basis with those of its hospital affiliates (the “Hospitals”), these consolidated financial results will be affected by the financial results of the Hospitals. The Hospitals’ financial results, in turn, will be affected not only by the factors set forth above but specifically by demand for the medical services they provide, the amounts of third-party payments received, limitations on and inadequate governmental reimbursements for medical services and graduate medical education, increasing costs of providing indigent care, escalating costs of personnel and equipment and inpatient capacity constraints that limit the Hospitals’ ability to absorb increased costs through greater volume. In addition, industry trends, adverse legislative and regulatory developments such as state or federal adoption of a single-payor reimbursement system, and government enforcement actions could also negatively impact the Hospitals’ results. Among other things, due in part to the Patient Protection and Affordable Care Act (the “ACA”) enacted in 2010, the United States health care system has experienced significant changes in recent years affecting the delivery of health care services, the financing of health care costs, reimbursement of health care providers and the legal obligations of health insurers, providers, employers and consumers. These changes are ongoing, continue to be challenged in various venues and could have adverse financial impacts on the Hospitals. Legislative and regulatory actions to repeal, postpone and replace elements of the ACA or other components of the United States health care system create unpredictability for the strategic and business planning efforts of health care providers, which creates additional risks.

For a discussion of certain financial challenges facing the University, see Appendix A – “STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF FINANCIAL RESULTS) – PART I – GENERAL INFORMATION ABOUT STANFORD UNIVERSITY – Capital Improvement Programs,” “– Hospitals,” “– Investments” and “– Liquidity,” and “– PART II, STANFORD UNIVERSITY’S FY2018 ANNUAL FINANCIAL REPORT – Management’s Discussion and Analysis – Looking Forward” attached hereto.

The events, developments and conditions described above are, or may be, of a magnitude such that they could have a material adverse effect on the financial results and condition of the University.

CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS

The following discussion summarizes certain U.S. federal income tax considerations generally applicable to holders of the Bonds. The discussion below is based upon current provisions of the Internal Revenue Code of 1986, as amended (the “Code”), current final, temporary and proposed Treasury regulations, judicial authority and current administrative rulings and pronouncements of the Internal Revenue Service (the “IRS”). There can be no assurance that the IRS will not take a contrary view, and no ruling from the IRS has been, or is expected to be, sought on the issues discussed herein. Legislative, judicial, or administrative changes or interpretations (including as a result of tax reform in the United States) may occur that could alter or modify the statements and conclusions set forth herein. Any such changes or interpretations may or may not be retroactive and could adversely affect the tax consequences discussed below.

The summary is not a complete analysis or description of all potential U.S. federal tax considerations that may be relevant to, or of the actual tax effect that any of the matters described herein will have on, particular holders of Bonds and does not address U.S. federal gift or estate tax consequences,

alternative minimum tax consequences or foreign, state, local or other tax consequences. This summary does not purport to address special classes of taxpayers (such as S corporations, mutual funds, insurance companies, banks and other financial institutions, small business investment companies, regulated investment companies, real estate mortgage investment conduits, real estate investment trusts, grantor trusts, former citizens of the United States, U.S. Holders (as defined below) whose functional currency is not the U.S. dollar, broker-dealers, traders in securities and tax-exempt organizations) that are subject to special treatment under the federal income tax laws, or persons that hold Bonds as part of a hedge against currency risk, or that are part of a hedge, straddle, conversion, constructive ownership, constructive sale or other risk reduction or integrated transaction. This summary also does not address the tax consequences to a holder of Bonds held through a partnership or other pass-through entity treated as a partnership for U.S. federal income tax purposes. In addition, 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 Bonds are sold to the public for cash), and it does not address the tax consequences to holders that purchase the Bonds after their original issuance. This discussion further assumes that the Bonds will be held by holders as capital assets within the meaning of Section 1221 of the Code.

As used herein, the term “U.S. Holder” means a beneficial owner of Bonds that is (i) an individual citizen or resident of the United States for U.S. federal income tax purposes, (ii) a corporation (or other entity classified as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or any state thereof or the District of Columbia, (iii) an estate, the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source, or (iv) a trust if (a) a U.S. court can exercise primary supervision over the administration of such trust and one or more United States persons (within the meaning of the Code) have the authority to control all of the substantial decisions of such trust or (b) the trust has made a valid election under applicable Treasury regulations to be treated as a United States person (within the meaning of the Code). As used herein, the term “Non-U.S. Holder” means a beneficial owner of Bonds that is not a U.S. Holder.

If the liability of the University in respect of a Bond ceases as a result of an election by the University to pay and discharge the indebtedness on such Bond by depositing with the Trustee sufficient cash and/or obligations to pay or redeem and discharge the indebtedness on such Bond (a “legal defeasance”), under current tax law a holder will be deemed to have sold or exchanged such Bond. In the event of such a legal defeasance, a holder generally will recognize gain or loss on the deemed exchange of the Bond. Ownership of the Bond after a deemed sale or exchange as a result of a legal defeasance may have tax consequences different than those described in this “Certain U.S. Federal Income Tax Considerations” section and each holder should consult its own tax advisor regarding the consequences to such holder of a legal defeasance of a Bond.

In certain circumstances, the University may be obligated to pay amounts in excess of the stated interest or principal on the Bonds and/or to prepay or redeem all or a portion of the Bonds. The obligation to make such payments may implicate the provisions of U.S. Treasury regulations relating to “contingent payment debt instruments” in which case the timing and amount of income inclusions and the character of income recognized may be different from the consequences discussed herein. According to the applicable U.S. Treasury regulations, certain contingencies will not cause a debt instrument to be treated as a contingent payment debt instrument if such contingencies in the aggregate, as of the date of issuance, are either “remote” or “incidental” or if certain other rules apply. Although the matter is not free from doubt, the University believes and intends to take the position if required that either such contingencies should be treated as remote and/or incidental or that the rules on “contingent payment debt instruments” otherwise would not be applicable. The position that the Bonds are not contingent payment debt instruments is binding on a holder unless such holder discloses its contrary position in the manner required by applicable U.S. Treasury regulations. The University’s position is not, however, binding on the IRS, and if the IRS were to successfully challenge this position, a holder subject to U.S. federal income taxation might be

required to accrue interest income on the Bonds at a rate higher than the stated interest rate and to treat as ordinary interest income (rather than as capital gain) any gain realized on the taxable disposition of a Bond.

BECAUSE INDIVIDUAL CIRCUMSTANCES MAY DIFFER, PROSPECTIVE HOLDERS OF THE BONDS ARE STRONGLY URGED TO CONSULT THEIR OWN TAX ADVISORS WITH RESPECT TO THEIR PARTICULAR TAX SITUATIONS AND AS TO ANY FEDERAL, FOREIGN, STATE, LOCAL, ESTATE OR OTHER TAX CONSIDERATIONS (INCLUDING ANY POSSIBLE CHANGES IN TAX LAW) AFFECTING THE PURCHASE, HOLDING AND DISPOSITION OF THE BONDS.

Certain U.S. Federal Income Tax Consequences to U.S. Holders

This section describes certain U.S. federal income tax consequences to U.S. Holders. Non-U.S. Holders should see the discussion under the heading “Certain U.S. Federal Income Tax Consequences to Non-U.S. Holders” for a discussion of certain tax consequences applicable to Non-U.S. Holders.

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

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 “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 U.S. 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 or. U.S. Holders of OID Bonds will be required to include OID in income for U.S. federal income tax purposes as it accrues, in accordance with a constant yield method based on a compounding of interest (which may be before 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.

If a Bond is issued at a price greater than the principal amount payable at maturity, a U.S. Holder generally will be considered to have purchased the Bond at a premium, and generally may elect to amortize the premium as an offset to interest income otherwise required to be included in respect of the Bond during a taxable year, using a constant-yield method, over the remaining term of the Bond. If a U.S. Holder makes the election to amortize the premium, it generally will apply to all debt instruments held by such U.S. Holder at the time of the election, as well as any debt instruments that are subsequently acquired by such U.S. Holder. In addition, a U.S. Holder may not revoke the election to amortize the premium without the consent of the IRS. If such U.S. Holder elects to amortize the premium, such U.S. Holder will be required to reduce its tax basis in the Bond by the amount of the premium amortized during the holding period of the U.S. Holder. If such U.S. Holder does not elect to amortize premium, the amount of premium will be included in its tax basis in the Bond. Therefore, if a U.S. Holder does not elect to amortize premium and holds the Bond to maturity, the premium will decrease the amount of gain or increase the amount of loss otherwise recognized on the disposition of such Bond. Special rules for determining the amount of amortizable bond premium attributable to a debt instrument may be applicable if the debt instrument may be optionally redeemed. These rules are complex and prospective purchasers of the Bonds are urged to consult their own tax advisors regarding the application of the amortizable bond premium rules to their particular situation.

Disposition of the Bonds. Unless a nonrecognition provision of the Code applies, the sale, exchange, redemption (including pursuant to an offer by the University) or other disposition of a Bond, will be a taxable event for U.S. federal income tax purposes. In such event, in general, a U.S. Holder of Bonds will recognize gain or loss equal to the difference between (i) the amount of cash plus the fair market value of property received (except to the extent attributable to accrued but unpaid interest on the Bonds that qualifies as qualified stated interest which will be taxed in the manner described above under “Interest”) and (ii) the U.S. Holder’s adjusted tax basis in the Bonds. A U.S. Holder’s adjusted tax basis in a Bond generally will equal the purchase price paid by the U.S. Holder increased by any original issue discount included in income and decreased by the amount of payments (other than qualified stated interest), received and amortizable bond premium taken with respect to Bond. Any such gain or loss generally will be long-term capital gain or loss, provided the Bonds have been held for more than one year at the time of the disposition. The deductibility of capital losses is subject to limitations.

Medicare Tax. An additional 3.8% tax will be imposed on the net investment income (which includes interest, original issue discount and gains from a disposition of a Bond) of certain individuals, trusts and estates. Prospective investors in the Bonds should consult their tax advisors regarding the possible applicability of this tax to an investment in the Bonds.

Information Reporting and Backup Withholding. Payments of interest and principal on the Bonds will be generally subject to IRS information reporting. In addition, under Section 3406 of the Code and applicable Treasury Regulations, a non-corporate U.S. Holder of the Bonds may be subject to backup withholding at the current rate of 28% (subject to future adjustment) with respect to “reportable payments,” which include interest paid on the Bonds and the gross proceeds of a sale, exchange, redemption or retirement of the Bonds. The applicable payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a taxpayer identification number (“TIN”) to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a “notified payee underreporting” described in Section 3406(c) of the Code or (iv) 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.

Backup withholding is not an additional tax. Amounts withheld under the backup withholding rules may be refunded or credited against the U.S. Holder’s federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

Certain U.S. Federal Income Tax Consequences to Non-U.S. Holders

This section describes certain U.S. federal income tax consequences to Non-U.S. Holders. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to non-U.S. Holders in light of their particular circumstances. For example, special rules may apply to a non-U.S. Holder that is a “controlled foreign corporation” or a “passive foreign investment company,” and, accordingly, non-U.S. Holders should consult their own tax advisors to determine the effect of U.S. federal, state, local and non-U.S. tax laws, as well as tax treaties, with respect to an investment in the Bonds.

Interest. If, under the Code, interest on the Bonds is “effectively connected with the conduct of a trade or business within the United States” by a Non-U.S. Holder, such interest will be subject to U.S. federal income tax in a similar manner as if the Bonds were held by a U.S. Holder, as described above, and in the case of Non-U.S. Holders that are corporations may be subject to U.S. branch profits tax at a rate of up to 30%, unless an applicable tax treaty provides otherwise. Such Non-U.S. Holder will not be subject to withholding taxes, however, if it provides a properly executed Form W-8ECI (subject to the discussion below concerning FATCA withholding).

Interest on the Bonds held by other Non-U.S. Holders may be subject to withholding taxes of up to 30% of each payment made to the Non-U.S. Holders unless the “portfolio interest” exemption applies (subject to the discussion below concerning backup withholding and FATCA withholding). In general, interest paid on the Bonds to a Non-U.S. Holder will qualify for the portfolio interest exemption, and thus will not be subject to U.S. federal withholding tax, if (i) such Non-U.S. Holder is not a “controlled foreign corporation” (within the meaning of Section 957 of the Code) related, directly or indirectly, to the University; (ii) the Non-U.S. Holder is not actually or constructively a “10-percent shareholder” of the University under Section 871(h) of the Code; (iii) the Non-U.S. Holder is not a bank receiving interest described in Section 881(c)(3)(A) of the Code; (iv) the interest is not effectively connected with the conduct of a trade or business by the Non-U.S. Holder in the United States under Section 871(b) or Section 882 of the Code; and (v) either (a) the Non-U.S. Holder who is the beneficial owner of the Bonds provides a statement signed by such person under penalties of perjury, on valid IRS Form W-8BEN or W-8BEN-E (or successor form), certifying that such owner is not a U.S. Holder and providing such owner’s name and address or (b) a securities clearing organization, bank or other financial institution that holds the Bonds on behalf of such Non-U.S. Holder in the ordinary course of its trade or business certifies under penalties of perjury that such an IRS Form W-8BEN or W-8BEN-E (or a successor form) has been received from the beneficial owner and furnishes a copy thereof, and otherwise complies with applicable IRS requirements. Foreign trusts and their beneficiaries are subject to special rules, and such persons should consult their own tax advisors regarding the certification requirements.

If a Non-U.S. Holder does not qualify for, or does not claim, the benefit of the portfolio interest exemption, the Non-U.S. Holder will be subject to a 30% withholding tax on interest payments on the Bonds. A Non-U.S. Holder may be able to reduce or eliminate withholding tax under an applicable income tax treaty between the Non-U.S. Holder’s country of residence and the United States. Non-U.S. Holders are urged to consult their own tax advisors regarding their eligibility for treaty benefits. The required information for claiming treaty benefits is generally submitted on Form W-8BEN or W-8BEN-E (or successor form). In addition, a Non-U.S. Holder may under certain circumstances be required to obtain a U.S. taxpayer identification number.

Disposition of the Bonds. Subject to the discussion below concerning backup withholding, a Non-U.S. Holder will generally not be subject to U.S. federal income tax or withholding tax on gain recognized on a sale, exchange, redemption, retirement, or other disposition of a Bond. (Such gain does not include proceeds attributable to accrued but unpaid interest on the Bonds, which will be treated as interest.) A Non-U.S. Holder may be subject to U.S. federal income tax on such gain if: (i) the Non-U.S. Holder is a nonresident alien individual who was present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met under Section 871(a)(2) of the Code; or (ii) the gain is effectively connected with the conduct of a U.S. trade or business, as provided by applicable U.S. tax rules (in which case the U.S. branch profits tax may also apply), unless an applicable tax treaty provides otherwise.

Information Reporting and Backup Withholding. Certain payors must report annually to the IRS and to each Non-U.S. Holder on information returns any interest that is subject to U.S. withholding taxes or that is exempt from U.S. withholding taxes pursuant to an income tax treaty or certain provisions of the Code. Copies of these information returns may also be made available under the provisions of a specific tax treaty or agreement with the tax authorities of the country in which the Non-U.S. Holder resides.

A Non-U.S. Holder generally will not be subject to backup withholding with respect to payments of interest on the Bonds as long as the Non-U.S. Holder (i) has furnished to the applicable payor, a valid IRS Form W-8BEN or W-8BEN-E (or successor form) certifying, under penalties of perjury, its status as a non-U.S. person, (ii) has furnished to the applicable payor, other documentation upon which it may rely to treat the payments as made to a non-U.S. person in accordance with Treasury regulations, or (iii) otherwise

establishes an exemption from backup withholding. A Non-U.S. Holder may be subject to information reporting and/or backup withholding on a sale of the Bonds through the United States office of a broker and may be subject to information reporting (but generally not backup withholding) on a sale of the Bonds through a foreign office of a broker that has certain connections to the United States, unless the Non-U.S. Holder provides the certification described above or otherwise establishes an exemption. Non-U.S. Holders should consult their own tax advisors regarding their qualification for exemption from backup withholding and the procedure for obtaining such an exemption.

Backup withholding is not an additional tax. Amounts withheld under the backup withholding rules may be refunded or credited against the Non-U.S. Holder's U.S. federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

FATCA Withholding

Certain withholding rules imposed under Section 1471 through 1474 of the Code (otherwise known as the "Foreign Account Tax Compliance Act" or "FATCA") generally impose a 30% U.S. withholding tax on payments of interest on the Bonds made to non-U.S. financial institutions and certain other non-U.S. financial entities (whether such financial institutions or nonfinancial entities are beneficial owners or intermediaries), unless they satisfy certain due diligence and information reporting requirements. An intergovernmental agreement between the United States and the holder's jurisdiction may modify these requirements. While withholding under FATCA would also have applied to payments of gross proceeds from the sale or other disposition of the Bonds on or after January 1, 2019, recently proposed U.S. Treasury regulations eliminate FATCA withholding on payments of gross proceeds entirely. Although these recent Treasury regulations are not final, they can be relied upon until final U.S. Treasury regulations are issued. Prospective holders are encouraged to consult with their own tax advisors regarding the implications of this legislation and the applicable regulations on their investment in a Bond.

THE FOREGOING SUMMARY IS INCLUDED HEREIN FOR GENERAL INFORMATION ONLY AND DOES NOT DISCUSS ALL ASPECTS OF U.S. FEDERAL INCOME TAXATION THAT MAY BE RELEVANT TO A PARTICULAR HOLDER OF BONDS IN LIGHT OF THE HOLDER'S PARTICULAR CIRCUMSTANCES AND INCOME TAX SITUATION. PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR OWN TAX ADVISORS AS TO ANY TAX CONSEQUENCES TO THEM FROM THE PURCHASE, OWNERSHIP AND DISPOSITION OF BONDS, INCLUDING THE APPLICATION AND EFFECT OF STATE, LOCAL, FOREIGN AND OTHER TAX LAWS.

ERISA AND OTHER BENEFIT PLAN CONSIDERATIONS

The Employee Retirement Income Security Act of 1974, as amended ("ERISA"), imposes certain fiduciary obligations and prohibited transaction restrictions on employee pension and welfare benefit plans subject to ERISA ("ERISA Plans") and the fiduciaries of such plans. Section 4975 of the Code imposes similar prohibited transaction restrictions on 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, other than governmental and church plans as defined herein ("Qualified Retirement Plans"), and on Individual Retirement Accounts/Annuities ("IRAs") described in Section 408(a) and 408(b) of the Code and certain other tax favored accounts (collectively, "Tax-Favored Plans"). Certain employee benefit plans, such as governmental plans (as defined in Section 3(32) of ERISA), and, if no election has been made under Section 410(d) of the Code, church plans (as defined in Section 3(33) of ERISA), are not subject to ERISA or Section 4975 of the Code, but may be subject to state, federal, non-US, or other laws or regulations that are similar to Title I of ERISA or Section 4975 of the Code ("Similar Law").

Under ERISA and the Code, any person who exercises any discretionary authority or control over the administration of an ERISA Plan or Tax-Favored Plan and entities whose underlying assets include plan

assets by reason of ERISA Plans or Tax-Favored Plans investing in such entities (collectively, “Benefit Plans”) or the management or disposition of the assets of a Benefit Plan, or who renders investment advice for a fee or other compensation to an ERISA Plan, is generally considered to be a fiduciary of the Benefit Plan. In considering an investment in the Bonds of a portion of the assets of any Benefit Plan, a fiduciary should determine, particularly in light of the risks and lack of liquidity inherent in an investment in the Bonds, whether the investment is in accordance with the documents and instruments governing the Benefit Plan and the applicable provisions of ERISA, the Code or any similar law relating to a fiduciary’s duties to the Benefit Plan (including, without limitation, the prudence, diversification, delegation of control and prohibited transaction provisions of ERISA, the Code and any other applicable similar laws).

In addition to the imposition of general fiduciary obligations under ERISA, Section 406 of ERISA and Section 4975 of the Code prohibit a broad range of transactions involving assets of Benefit Plans and persons who have certain specified relationships to the Benefit Plans (“Parties in Interest” or “Disqualified Persons”), unless a statutory or administrative exemption is available. Certain Parties in Interest or Disqualified Persons that participate in a prohibited transaction may be subject to a penalty or an excise tax imposed pursuant to Section 502(i) of ERISA or Section 4975 of the Code unless a statutory or administrative exemption is available.

Certain transactions involving the purchase, holding or transfer of the Bonds might be deemed to constitute prohibited transactions under ERISA or the Code if assets of the University were deemed to be assets of a Benefit Plan. Under final regulations issued by the United States Department of Labor, as modified by ERISA (the “Plan Assets Regulation”), the assets of the University would be treated as plan assets of a Benefit Plan for the purposes of ERISA and the Code only if the Benefit Plan acquires an “equity interest” in the University and none of the exceptions contained in the Plan Assets Regulation is applicable. An equity interest is defined under the Plan Assets Regulation 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. While it is not intended or expected that the Bonds will be equity interests, fiduciaries with respect to Benefit Plans should consult their own advisors as to whether the Bonds are treated as debt for purposes of the Plan Assets Regulation. However, without regard to whether the Bonds are treated as an equity interest for such purposes, the acquisition or holding of Bonds by or on behalf of a Benefit Plan could be considered to give rise to a prohibited transaction if the University or the Trustee, or any of their respective affiliates, is or becomes a Party in Interest or a Disqualified Person with respect to such Benefit Plan. In such case, certain exemptions from the prohibited transaction rules could be applicable depending on the type and circumstances of the plan fiduciary making the decision to acquire a Bond.

Each purchaser and transferee, by its purchase or acceptance of the Bonds, shall be deemed to have represented and covenanted, that either (A) it is not acquiring the Bonds for or on behalf of any Tax-Favored Plan or (B) the purchase and holding of the Bonds for or on behalf of a Tax-Favored Plan or foreign plan, governmental plan or church plan subject to Similar Law will not constitute a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code, or in the case of a foreign plan, governmental plan or church plan that is subject to Similar Law, a violation of such Similar Law.

Any ERISA Plan fiduciary considering whether to purchase Bonds on behalf of a Benefit Plan should consult with its counsel regarding the applicability of the fiduciary responsibility and prohibited transaction provisions of ERISA and the Code to such investment and the availability of any of the exemptions referred to above. Persons responsible for investing the assets of Tax-Favored Plans (other than ERISA Plans) or plans that subject to Similar Law should seek similar counsel with respect to the prohibited transaction provisions of the Code and the applicability of any Similar Law.

Nothing set forth in this Offering Memorandum constitutes a recommendation that any person take or refrain from taking any course of action within the meaning of U.S. Department of Labor regulation §2510.3-21(b)(1).

UNDERWRITING

The University has entered into a purchase contract (the “Purchase Contract”) with the Underwriters listed on the cover hereof for whom J.P. Morgan Securities LLC is acting as representative, and the Underwriters have agreed to purchase the Bonds from the University at a purchase price of \$121,000,000, representing the par amount of the Bonds. The Underwriters’ compensation is \$267,339.99, which will be paid by the University from its own funds on the date of issuance of the Bonds. The Purchase Contract provides that the Underwriters will purchase not less than all of the Bonds. The Underwriters’ obligation to make such purchase is subject to certain terms and conditions set forth in the Purchase Contract, including the approval of certain legal matters by counsel and certain other conditions.

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

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, lending, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. Under certain circumstances, the Underwriters and their respective affiliates may have certain creditor and/or other rights against the University and its affiliates in connection with such activities. In addition, certain of the Underwriters and their respective affiliates have provided, and may in the future provide, a variety of these services to the University and to persons and entities with relationships with the University, 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, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the University (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the University. 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, each of CS&Co. and LPL may purchase Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Bonds that such firm sells.

CERTAIN RELATIONSHIPS

Gene T. Sykes, Managing Director of Goldman Sachs & Co. LLC, is a member of the University’s Board of Trustees. The University believes that the participation of Goldman Sachs & Co. LLC in this offering is on terms no less favorable than could be obtained from other parties.

ANNUAL REPORTS

The University routinely posts its annual report containing financial information on its website (<http://bondholder-information.stanford.edu/financials/index.html>). The information contained in the University's website is not a part of this Offering Memorandum and is not incorporated by reference herein.

REGULATORY MATTERS AND LITIGATION

There is no litigation pending concerning the validity of the Bonds. The University is, however, a party to certain other litigation which is described in "Regulatory Matters and Litigation" in Appendix A.

APPROVAL OF LEGALITY

Legal matters incident to the validity of the Bonds and certain other matters are subject to the opinion of Ropes & Gray LLP, counsel to the University. The proposed form of opinion of counsel to the University relating to the validity of the Bonds and certain other matters is attached hereto as Appendix C. In addition, certain other legal matters will be passed upon for the University by the General Counsel to the University, and for the Underwriters by their counsel, Hawkins Delafield & Wood LLP. None of the firms named above undertakes any responsibility to holders of the Bonds for the accuracy, completeness or fairness of this Offering Memorandum.

INDEPENDENT ACCOUNTANTS

The consolidated financial statements as of August 31, 2018 and 2017 and for each of the two years in the period ended August 31, 2018, included in Part II of Appendix A of this Offering Memorandum, have been audited by PricewaterhouseCoopers LLP, independent accountants, as stated in their report appearing herein.

RATINGS

The Bonds have been given an "Aaa" rating by Moody's Investors Service, Inc. ("Moody's"), an "AAA" rating by S&P Global Ratings ("S&P"), and an "AAA" rating by Fitch Ratings, Inc. ("Fitch"). An explanation of the significance of the ratings given can be obtained from Moody's at 7 World Trade Center at 250 Greenwich Street, New York, New York, 10007, from S&P at 55 Water Street, New York, New York 10041 and from Fitch at 33 Whitehall Street, New York, New York, 10004. Such ratings reflect only the views of Moody's, S&P and Fitch, respectively, and there is no assurance that any of the ratings, if received, will continue for any given period of time or that any of the ratings will not be lowered or withdrawn entirely if, in the judgment of Moody's, S&P or Fitch, circumstances so warrant. None of the University or the Underwriters have undertaken any responsibility either to bring to the attention of the holders of the Bonds any proposed change in or withdrawal of the ratings received or to oppose any such proposed revision. Any such change in or withdrawal of the ratings received could have an adverse effect on the market price of the Bonds.

MISCELLANEOUS

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

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

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

THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

March 21, 2019

By: /s/ Karen L. Kearney
Treasurer

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APPENDIX A

STANFORD UNIVERSITY (INCLUDING FINANCIAL STATEMENTS AND DISCUSSION OF FINANCIAL RESULTS)

Part I of this Appendix A contains general information with respect to The Leland Stanford Junior University (“Stanford” or the “University”). Part II consists of portions of the University’s Annual Financial Report for the fiscal years ended August 31, 2018 and 2017 (the “University’s FY2018 Annual Financial Report”), which includes management’s discussion and analysis, selected financial and other data, the report of independent auditors, and the University’s consolidated financial statements for the years ended and as of August 31, 2018 and 2017 (the “University’s FY2018 Audited Financial Statements”). Financial information presented in Part I of this Appendix A with respect to the University relates solely to the University; financial information regarding the University and its affiliates is stated both separately and on a consolidated basis in the University’s FY2018 Audited Financial Statements.

PART I

GENERAL INFORMATION ABOUT STANFORD UNIVERSITY

Founded in 1885, The Leland Stanford Junior University is one of a select group of universities that has achieved eminence in both undergraduate and graduate education and in a broad range of academic disciplines. It is internationally recognized for the quality of its teaching and research, its distinguished faculty and its outstanding student body.

Academic and Research Programs

Stanford is a major research and teaching university offering a wide range of undergraduate, graduate and professional degree programs. The Schools of Earth, Energy & Environmental Sciences, Engineering, and Humanities and Sciences (which includes the core humanities, fine arts, languages and literature, the social sciences, mathematics, and the natural sciences) offer undergraduate and graduate degree programs. The Schools of Business, Education, Law and Medicine offer graduate and professional degree programs. Undergraduate students have access to a wide variety of undergraduate majors and to classes and research opportunities in all seven Schools. Degree programs are offered by departments and through interdepartmental programs involving multiple departments in one or more Schools. The University, its Schools and its academic programs hold appropriate accreditations.

Stanford’s research enterprise extends throughout the University. Multidisciplinary research is conducted in the Schools, independent laboratories, institutes and research centers which engage faculty and students from across the University. The SLAC National Accelerator Laboratory operates advanced X-ray facilities and conducts research in materials, energy, structural biology and particle physics. Extensive library and archival resources are available through the Stanford University Libraries and the Hoover Institution on War, Revolution and Peace.

Governance and Management

Board of Trustees. Stanford is a trust with corporate powers under the laws of the State of California. The Internal Revenue Service has determined the University to be a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code. Under the provisions of the founding grant of Senator Leland Stanford and Jane Lathrop Stanford and related organizational documents of the University (the “Founding Grant”), the Board of Trustees (the “Board”) is custodian of the endowment and all the properties of the University. The Board administers the invested funds, and has the ultimate

authority over the annual budget and policies for operation and control of the University. The powers and duties of the Board of Trustees derive from a combination of the Founding Grant, amendments to the Founding Grant, and legislation and court decrees specific to Stanford. In addition, the Board operates under its own bylaws and a series of resolutions on major policy. The Board conducts its business through standing committees, currently consisting of the Committees on Audit, Compliance and Risk; Development; Finance; Land and Buildings; Student, Alumni and External Affairs; and Trusteeship. The Board consists of a minimum of 25 and a maximum of 38 Trustees, including the President of the University as a Trustee *ex officio* and with vote.

The following table lists the members of the Board of Trustees as of March 1, 2019.

Jeffrey S. Raikes (<i>Chair</i>)	Christy O. MacLear
Felix J. Baker	Kenneth E. Olivier
Mary T. Barra	Carrie W. Penner
Bret E. Comolli	Ruth M. Porat
RoAnn Costin	Laurene Powell Jobs
Michelle R. Clayman	Mindy B. Rogers
Dipanjan Deb	Victoria B. Rogers
Henry A. Fernandez	Kavitark Ram Shriram
Angela S. Filo	Ronald P. Spogli
Sakurako D. Fisher	Srinija Srinivasan
Bradley A. Geier	Jeffrey E. Stone
James D. Halper	Gene T. Sykes
Ronald B. Johnson	Marc Tessier-Lavigne
Marc E. Jones	Jerry Yang
Tonia G. Karr	Charles D. Young
Carol C. Lam	

Administration. The Founding Grant prescribes that the Board of Trustees appoints the President of the University. The Board of Trustees delegates the responsibility to the President to prescribe the duties of professors and teachers, to set the course of study and the mode and manner of teaching and to exercise all other necessary powers relating to the educational, research, financial and business affairs of the University, including the operation of the physical plant. The President appoints, subject to confirmation by the Board, the Provost and the other Officers of the University. The Stanford Management Company is the operating division of the University responsible for the management of the University's investment assets.

The following table sets forth in summary form certain members of the principal administration of the University as of March 1, 2019.

University Officers

Marc Tessier-Lavigne
President

Jon Denney*
Vice President for Development

Persis Drell
Provost

Harry Elam
Vice President for the Arts

Farnaz Khadem**
Vice President for Communications

Randall S. Livingston
*Vice President for Business Affairs,
Chief Financial Officer and University Liaison for
Stanford Medicine*

William J. Madia
*Vice President for SLAC National Accelerator
Laboratory*

Robert C. Reidy
*Vice President for Land, Buildings
and Real Estate*

Martin W. Shell
Vice President and Chief External Relations Officer

Howard E. Wolf
*Vice President for Alumni Affairs
and President, Stanford Alumni Association*

Elizabeth Zacharias
Vice President for Human Resources

Debra L. Zumwalt
Vice President and General Counsel

University Executive Cabinet

Harry Elam
*Senior Vice Provost for Education,
Vice Provost for Undergraduate Education*

Thomas Gilligan
*Director, Hoover Institution on War,
Revolution and Peace*

Stephan Graham
*Dean, School of Earth, Energy &
Environmental Sciences*

Patricia J. Gumpert
Vice Provost for Graduate Education

Chi-Chang Kao
Director, SLAC National Accelerator Laboratory

Jon Levin
Dean, Graduate School of Business

M. Elizabeth Magill***
Dean, School of Law

Lloyd Minor
Dean, School of Medicine

Kathryn Ann “Kam” Moler
Vice Provost and Dean of Research

Debra Satz
Dean, School of Humanities and Sciences

Daniel Schwartz
Dean, Graduate School of Education

Jennifer Widom
Dean, School of Engineering

Stanford Management Company

Robert F. Wallace
Chief Executive Officer

* Effective April 2019

** Effective March 11, 2019

*** Effective April 1, 2019, Jenny S. Martinez will succeed M. Elizabeth Magill as Dean, School of Law

Faculty and Staff

For the 2018 fall quarter, the Stanford professoriate had 2,241 members. Of those, 53% hold tenure, and more than 99% hold the highest degrees in their respective fields. The Academic Council comprises the main body of the faculty. Of its 1,682 members, 1,536 are tenure-line faculty, and 146 are non-tenure line faculty such as Senior Fellows and those holding teaching, research, clinical or performance titles. The student-Academic Council ratio (including only matriculated undergraduate and graduate students) is approximately 9.8 to 1.

As of August 31, 2018, the University, including the SLAC National Accelerator Laboratory, employed 14,792 non-academic staff members. Of these employees, 1,223 were represented by the Service Employees International Union, and 25 were police officers represented by the Stanford Deputy Sheriffs' Association. Contracts between the University and those unions expire on August 31, 2019 and July 31, 2020, respectively.

Students

For the 2018 fall quarter, the University enrolled 7,083 undergraduate and 9,437 graduate students. During academic year 2017-2018, 1,754 bachelor degrees and 3,440 advanced degrees were conferred. The following table provides a summary for the last five academic years of undergraduate and graduate applications, admissions and enrollment.

Academic Year	Undergraduate ⁽¹⁾⁽²⁾			Graduate ⁽²⁾		
	Applications	Admissions	Enrollment	Applications	Admissions	Enrollment
2014-15	43,931	2,178	1,707	43,992	4,399	2,625
2015-16	44,520	2,160	1,735	44,437	4,318	2,656
2016-17	45,956	2,160	1,778	45,564	4,530	2,701
2017-18	46,307	2,116	1,730	45,907	4,157	2,696
2018-19	49,804	2,098	1,721	46,889	4,181	2,635

(1) Includes both freshman and transfer students.

(2) Fall only.

Tuition, Fees and Financial Aid

Stanford is committed to a policy of “need-blind” admission for eligible U.S. citizens and permanent resident undergraduate students. In general, eligible Stanford undergraduates receive other financial assistance in the form of government and private scholarships and grants, student employment and low-interest student loans.

The following table provides a summary of Stanford's undergraduate tuition, average room and board expenses and average financial aid per undergraduate student for the academic years 2013-14 through 2018-19.

Academic Year	Tuition	Room and Board	Total	Average Financial Aid ⁽¹⁾	Average Financial Aid + Athletic Aid
2013-14	\$42,690	\$13,166	\$55,856	\$18,444	\$21,487
2014-15	44,184	13,631	57,815	19,009	21,981
2015-16	45,729	14,107	59,836	19,676	23,016
2016-17	47,331	14,601	61,932	21,698	24,986
2017-18	48,987	15,112	64,009	22,143	25,557
2018-19	50,703	15,763	66,466	n/a	n/a

⁽¹⁾ Stanford-funded scholarship aid awarded on the basis of financial need divided by the average number of undergraduate students enrolled in the fall, winter and spring quarters.

Graduate student financial aid is awarded based on academic merit and the availability of funds and consists of fellowships, stipends, and trainee/assistantships. Stanford also provides a gift funded institutional loan program. Student loan receivables, net of allowances for doubtful accounts, were \$60.3 million and \$70.9 million as of August 31, 2018 and 2017, respectively.

The Stanford Campus and Other Real Property

Stanford's campus consists of 8,180 acres of land owned by the University near Palo Alto, California, much of which was given to the University under the Founding Grant on the condition that the lands subject to the grant may not be sold. The campus includes land located in six different municipalities. In addition to the lands utilized for educational, research, athletics, patient care and related purposes, a portion of Stanford lands are leaseholds related to commercial, residential, agriculture and other developments that provide rental income as part of the University's investment portfolio. Much of the University's other land remains undeveloped and is used primarily for agricultural purposes.

Stanford also owns real property elsewhere. Some of this property has been acquired for expansion or relocation of academic programs and administrative functions, including approximately 35 acres in Redwood City, California. The University also owns facilities for use in study programs in Pacific Grove, California, the District of Columbia and Berlin, Germany.

Capital Improvement Programs

The University makes a significant investment in its facilities for teaching, research and related activities. The University's Capital Budget and three-year Capital Plan are based on a projection of major capital projects that the University will pursue in support of the academic mission. The fiscal year 2019 Capital Budget approved by the Board of Trustees is \$1.2 billion and represents the anticipated capital expenditures in the first year of the rolling three-year Capital Plan. The fiscal year 2019-2021 Capital Plan includes projects with estimated total costs of nearly \$4.1 billion, and represents one of the largest capital programs in Stanford's history. Estimated funding sources for projects under the current Capital Plan consist of \$2.0 billion in debt, \$1.4 billion in reserves and other funds, \$644.5 million in gifts, and \$107.9 million of resources to be identified in the course of annual capital planning. Additional debt will be required to bridge timing differences between project expenditures and the receipt of gifts. The Capital Budget and the Capital Plan are both subject to change based on funding availability, budget affordability and University priorities.

In 2000, the Santa Clara County Board of Supervisors approved a General Use Permit (the "2000 GUP") and the Stanford University Community Plan (the "Community Plan"), updating and extending the General Use Permit and plan previously in force since 1989. These documents govern the use and

development of University lands within the County. Any change to either document is subject to the approval of the Santa Clara County Board of Supervisors. The 2000 GUP permits Stanford to develop 2,035,000 square feet of new academic facilities and 4,468 new housing units for students, faculty and staff. The 2000 GUP contains a number of significant restrictions and conditions upon which such developments are contingent. Through August 31, 2018, projects using approximately 1,826,000 gross square feet of the GUP allotment had been completed or were under construction and approximately 2,400 housing units have been added, with another 2,020 net new units under construction.

In anticipation of completing the academic space and housing authorized by the 2000 GUP and Community Plan, the University filed an application in November 2016 for an updated General Use Permit to guide campus planning over the next two decades. The approval process, which includes community discussions and feedback, an environmental impact report and public hearings, is expected to conclude in Summer 2019. The University's application for an updated General Use Permit includes a development request for 2,275,000 square feet of academic facilities and 3,150 housing units/student beds, with construction expected to be completed by 2035.

Hospitals

The University is the sole member of Stanford Health Care ("SHC") and Lucile Salter Packard Children's Hospital at Stanford ("LPCH") (collectively, the "Hospitals"). SHC and LPCH are each separate not-for-profit public benefit corporations operating the adult and pediatric hospitals and clinics, respectively, which together with the University's School of Medicine and its clinical faculty, comprise and are known in the marketplace as Stanford Medicine. Each Hospital corporation has its own management with responsibility for its own financial reporting (see Stanford University's FY2018 Annual Financial Report included as Part II of this Appendix A under the caption "Management Responsibility for Financial Statements"). Management of each Hospital reports to the chief executive officer of that Hospital, and the chief executive officer reports to the board of directors appointed for that Hospital. Management of the Hospitals does not report to management of the University. Each Hospital has its own separate liabilities, including bond debt obligations. The University and the Hospitals are not obligated to pay the debt of each other, and the University and the Hospitals receive separate bond ratings from the rating agencies.

The Hospitals have undertaken major capital projects to rebuild and expand their principal facilities in Palo Alto. LPCH opened a majority of its new expanded facilities in FY2018 and SHC's new facility is currently scheduled to be completed in late 2019. The estimated cost is approximately \$2.1 billion for SHC, as noted in Part II of this Appendix A. The cost of LPCH's project, originally estimated to be approximately \$1.2 billion, as noted in Part II of this Appendix A, is expected to be approximately \$1.4 billion because of cost increases related to changes in technology, change orders, and revisions to original budgeted amounts, among other factors. SHC and LPCH have sufficient funds to complete the projects including operating surpluses, gifts, proceeds from bond issues in 2012, 2015, 2016 and 2018 and may in the future include lines of credit. (See also "Certain Investment Considerations" in the forepart of this Offering Memorandum.)

Regulatory Matters and Litigation

The University is subject to various suits, audits, investigations and other legal proceedings in the course of its operations. The University's ultimate liability, if any, for these legal proceedings is not determinable at present. However, no proceedings are pending or threatened that, in management's opinion, would be likely to have a material adverse effect on the University's financial position, including the following two matters which have received broad public attention.

College Admissions. The University is a defendant in a private lawsuit filed on March 13, 2019 derived from an alleged college admissions bribery scheme affecting several universities. The scheme is the subject of federal charges brought against a number of individuals, including a former University sailing coach, by the U.S. Department of Justice (“DOJ”). The DOJ has advised the University that the DOJ considers the University to be a victim of the alleged scheme. The University has been fully cooperating with the DOJ in the matter. The private suit asserts various damages claims based on alleged negligence and other theories of liability. The University considers these allegations, and possible future claims against the University similar in nature, to be without merit. The University will vigorously defend against all such claims.

Title IX. The University is among over 100 colleges and universities under investigation or monitoring by the Office for Civil Rights, Department of Education (“OCR”), relating to Title IX concerns. As is its practice when a university is under review, OCR looks not only at the matters that are the subject of the complaints, but also at all reports of sexual harassment and sexual violence for the past three academic years. On April 6, 2018, Stanford entered into a Resolution Agreement and on April 10, 2018, OCR issued its letter of findings from the investigation. OCR made no finding that laws were violated in the handling of any individual student matters.

OCR’s investigation raised concerns about some omissions and errors in the University’s policies and determined that some provisions in the University’s policies did not comply with Title IX. Stanford committed in the Resolution Agreement to make certain policy changes, give training on those changes, and meet with two of the student complainants to discuss Title IX issues and these changes. Stanford is now implementing the commitments it made. This process may take several years, and OCR will continue to monitor Stanford’s compliance with the Resolution Agreement until all commitments have been completed and approved by OCR.

One responding student disciplined by the University after a sexual assault claim and who filed a claim with OCR (since dismissed by OCR) later filed two related actions against the University. The first is a writ petition filed in state court alleging that he did not receive due process during the University’s disciplinary proceedings and seeking to compel the University to reverse the disciplinary findings against him. Stanford prevailed at trial on the writ petition, and the responding student has filed a notice of appeal. The second is a complaint filed in federal court alleging gender discrimination by the University and seeking money damages, which is pending.

The University believes it is reasonably possible that other students may bring claims against the University under Title IX. The University intends to vigorously defend against all such claims, including the pending claims, and believes that the ultimate cost of all such claims will not be material to the University on a consolidated financial basis.

Investments

At August 31, 2018, the University held investments with a fair value of approximately \$34.5 billion. The following table summarizes the fair value of the University’s investments for each of the past five fiscal years. The table below should be read in conjunction with the University’s FY2018 Audited Financial Statements and prior years’ financial statements.

STANFORD UNIVERSITY
INVESTMENTS
Years Ended August 31
(in thousands of dollars)

	2018	2017	2016	2015	2014
Total Investments	\$34,517,436	\$33,297,493	\$29,085,787	\$28,766,240	\$27,828,590
Less: Permanently Restricted Investments	<u>7,418,610</u>	<u>7,082,379</u>	<u>6,703,622</u>	<u>6,281,590</u>	<u>6,037,754</u>
Unrestricted and Temporarily Restricted Investments	<u>\$27,098,826</u>	<u>\$26,215,114</u>	<u>\$22,382,165</u>	<u>\$22,484,650</u>	<u>\$21,790,836</u>

Liquidity

Management monitors the University's cash, cash equivalents and investments to maintain adequate liquidity to cover its outstanding commitments. The University has significant contractual commitments outstanding to limited partnership and other investment vehicles and major construction projects (see discussion under the caption "Capital Improvement Programs" above and in Note 6, "Investments," and Note 18, "Commitments and Contingencies," to the University's FY2018 Audited Financial Statements included in Part II of this Appendix A).

PART II

STANFORD UNIVERSITY'S FY2018 ANNUAL FINANCIAL REPORT

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MANAGEMENT'S DISCUSSION AND ANALYSIS

CONSOLIDATED FINANCIAL HIGHLIGHTS

Stanford's FY18 consolidated financial results were solid, providing essential financial resources to advance our education, research and clinical care missions. Stanford includes the University, Stanford Health Care (SHC) and Lucile Salter Packard Children's Hospital at Stanford (LPCH) and their respective controlled affiliates. On a consolidated basis, operating revenues exceeded expenses by \$472 million, compared to \$448 million in FY17. Net assets increased \$2.7 billion to end the year at \$43.2 billion. The University's endowment was \$26.5 billion at August 31, 2018. Stanford achieved these results through the generosity of its donors, solid investment performance and continued growth in health care services.

Despite these positive results, FY18 was not without its challenges. Bay Area housing affordability issues persisted, creating challenges in recruiting faculty and staff, and driving up Stanford's costs. The Federal Tax Cuts and Jobs Act was passed, imposing significant new taxes on Stanford beginning in FY19. The multi-billion Renewal Project to rebuild SHC and expand LPCH's facilities continued throughout the year. LPCH opened the majority of its new state-of-the-art children's hospital facilities in December 2017, more than doubling its square footage. However, transition issues related to these new facilities negatively impacted LPCH's FY18 operating results.

Under the leadership of President Marc Tessier-Lavigne and Provost Persis Drell, the University is in the midst of a Long Range Planning effort for which the vision was communicated in April. A number of design teams are now working on implementation of each of the plan initiatives. In parallel, the medical center leadership has been working on a Stanford Medicine Integrated Strategic Plan for which the vision was communicated in January.

Below are highlights of Stanford's FY18 financial results.

Generous Donor Support

The University's Office of Development reported \$1.1 billion in gifts benefiting the University, SHC and LPCH. This amount, which includes \$49 million and \$50 million in support of SHC and LPCH, respectively, represents contributions from more than 72,000 donors. These results reflect our donors' ongoing commitment to Stanford's mission.

Philanthropic support is vital to our continued efforts in making a Stanford education more affordable, improving the quality and breadth of our academic programs, and building 21st century facilities for research and clinical care. Most gifts are designated by donors for specific programs and purposes.

Investment Performance

Consolidated investments at August 31, 2018 were \$37.8 billion, compared to \$35.8 billion at August 31, 2017. Consolidated investment returns in FY18 were \$3.3 billion, resulting primarily from returns in the Merged Pool (MP), which is the University's primary investment vehicle, and income-generating properties on Stanford's lands. Investment income provides substantial funding for education, including student financial aid, faculty salaries, and research programs, among other needs.

Health Care Services

Health care services have grown at a five-year compound annual rate of 12% and represent 56% of consolidated revenues in FY18. To support this growth, the Renewal Project is underway at both Hospitals to assure adequate capacity and provide modern state-of-the-art facilities. During FY18, LPCH opened the majority of its new expanded facilities and expects to complete remaining components in FY19. SHC’s new hospital is scheduled to open in late 2019.

Stanford Medicine continues to focus on “Precision Health: Predict, Prevent, Cure, Precisely” as a unifying theme across the School of Medicine, SHC and LPCH.

See further discussion in the sections for *Stanford Health Care* and *Lucile Salter Packard Children’s Hospital at Stanford*.

The sections below provide additional details about the financial position, financial results and operations of the University, SHC and LPCH individually.

UNIVERSITY

FY18 net assets increased 6% to \$36.9 billion compared to \$34.7 billion in the prior year. The endowment grew by \$1.7 billion after distributing \$1.2 billion to support operations, ending the year at \$26.5 billion.

UNIVERSITY OPERATING RESULTS

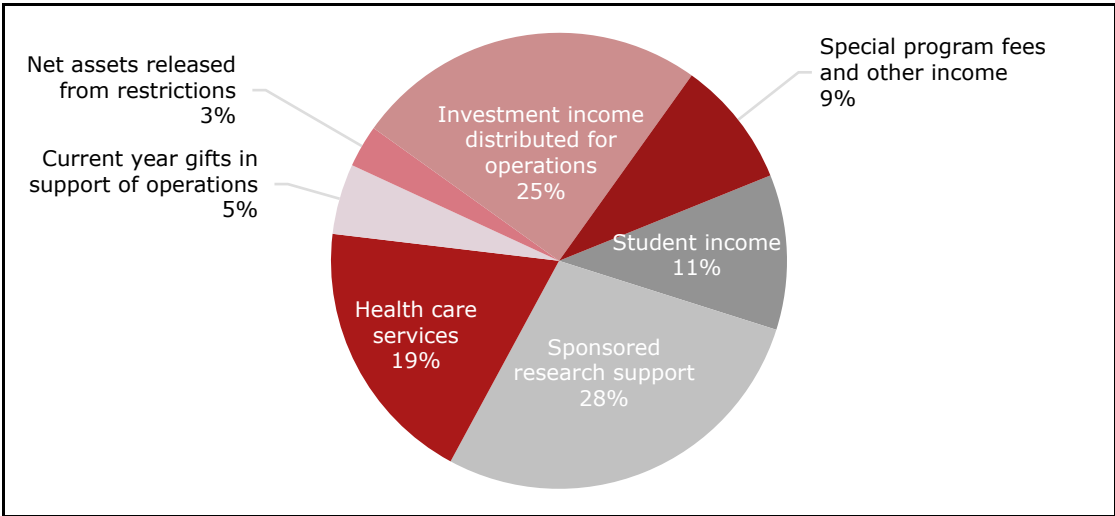
The University's *Statements of Activities* include results from both operating and non-operating activities. Operating activities include the revenues earned and expenses incurred in the current year to support the University’s core activities of teaching, research, and patient care.

The University ended the year with a surplus from operating activities of \$198 million, down \$30 million from the FY17 surplus of \$227 million. In FY18, operating expenses increased \$292 million, outpacing the operating revenue increase of \$263 million.

UNIVERSITY OPERATING REVENUES

FY18 operating revenues of \$5.9 billion were derived from a variety of sources, as shown in Figure 1.

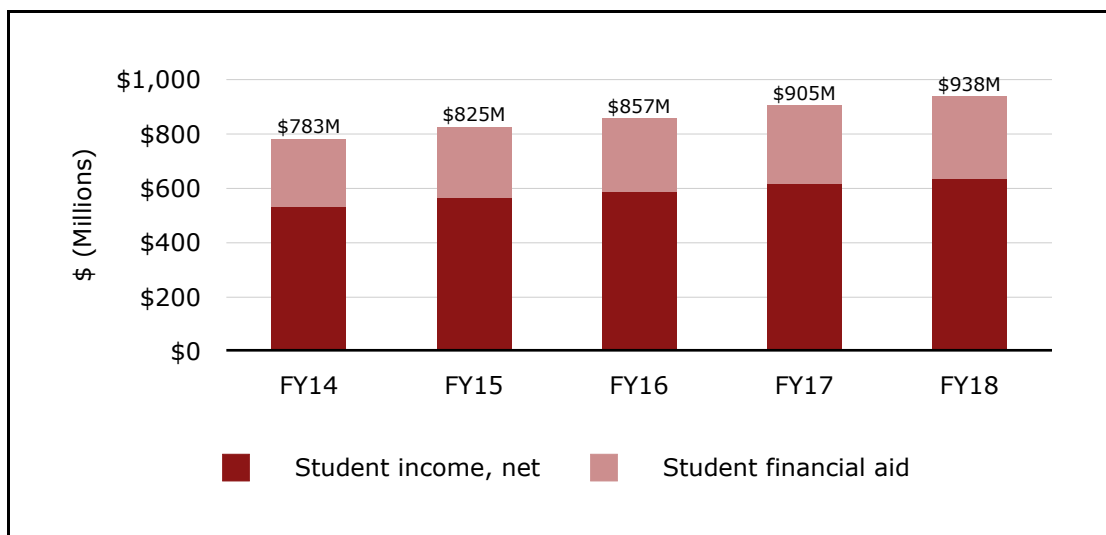
FIGURE 1
UNIVERSITY OPERATING REVENUES



Student Income

Total student income, which represents 11% of University operating revenues, increased 3% to \$635 million in FY18. Total student income includes tuition and fees from undergraduate and graduate programs and room and board, offset by financial aid in the form of scholarship and fellowship grants that cover a portion of tuition, living and other costs.

FIGURE 2
UNIVERSITY STUDENT INCOME AND FINANCIAL AID



Student Tuition

Revenues from student tuition and fees before the deduction for student financial aid increased by 3.5% to \$743 million in FY18 primarily as a result of undergraduate and graduate tuition rate increases of 3.5%. Also contributing to this result was a slightly higher graduate student enrollment; undergraduate enrollment remained flat.

Student Room and Board

Revenues from room and board increased 5% to \$195 million in FY18 due to an increase in undergraduate room and board rates of 3.5%, graduate room and board rates of 4.75%, and a slight increase in housing capacity due to the completion of the Schwab Residential Center which was offline for renovation during a significant part of FY17. Construction is progressing on the Escondido Village Graduate Residences project which will increase capacity to house more graduate students on campus. The residences are scheduled to be complete by the fall of 2020, adding over 2,000 net new beds. See the *Capital Projects* section.

Student Financial Aid and Other Graduate Support

One of the University's highest priorities is to remain affordable and accessible to all admitted students, regardless of their financial circumstances. The University's admissions process for undergraduate students from the United States is need-blind, which means that students are admitted without consideration of their ability to pay.

Since 2000, the University has continued to enhance its financial aid programs for both its undergraduate and graduate students.

- Currently, families of undergraduate students from the U.S. with incomes below \$125,000 and assets typical of that income level receive at least enough scholarship to cover the cost of tuition. Those with incomes below \$65,000 and typical assets receive enough scholarship assistance to cover tuition, room and board, and other expenses. In FY18, 47% of undergraduates were awarded need-based financial aid from Stanford.

- Graduate student financial aid and other support is awarded based on financial need, academic merit and the availability of funds. In FY18, 79% of graduate students received some form of financial support.

The University provides financial assistance to students in the form of scholarships, fellowships, and stipends, some small student loan programs, as well as teaching and research assistantships. Total student financial aid and other graduate support for FY18 and FY17 is presented in the following table:

(\$ in millions)	FY18	FY17
Student Financial Aid (<i>offsets student income</i>)		
Undergraduate	\$ 185	\$ 174
Graduate	118	113
Total Student Financial Aid	303	287
Other Graduate Support (<i>included in operating expenses</i>)		
Stipends	111	106
Assistantships (research and teaching)	116	110
Allowance for tuition (for assistantship recipients)	92	87
Total Other Graduate Support	319	303
Total Student Financial Aid and other Graduate Support	\$ 622	\$ 590

Total student financial aid and other graduate support increased by over 5%, exceeding the increase in tuition. FY18 undergraduate aid and graduate fellowships of \$303 million represent an increase of 5.6% over the prior year and are included in "Student Financial Aid", offsetting "Student Income" in the University's *Statements of Activities*. For FY18, the University also provided other graduate student support in the form of stipends of \$111 million, and teaching and research assistantships and related allowances for tuition of \$208 million. These amounts are included in operating expenses.

During FY18, sources of the total \$622 million of student financial aid and graduate support included approximately \$300 million in payout from endowment funds and expendable gifts restricted for student aid, \$207 million from unrestricted University funds and \$115 million from grants and contracts.

Sponsored Research Support

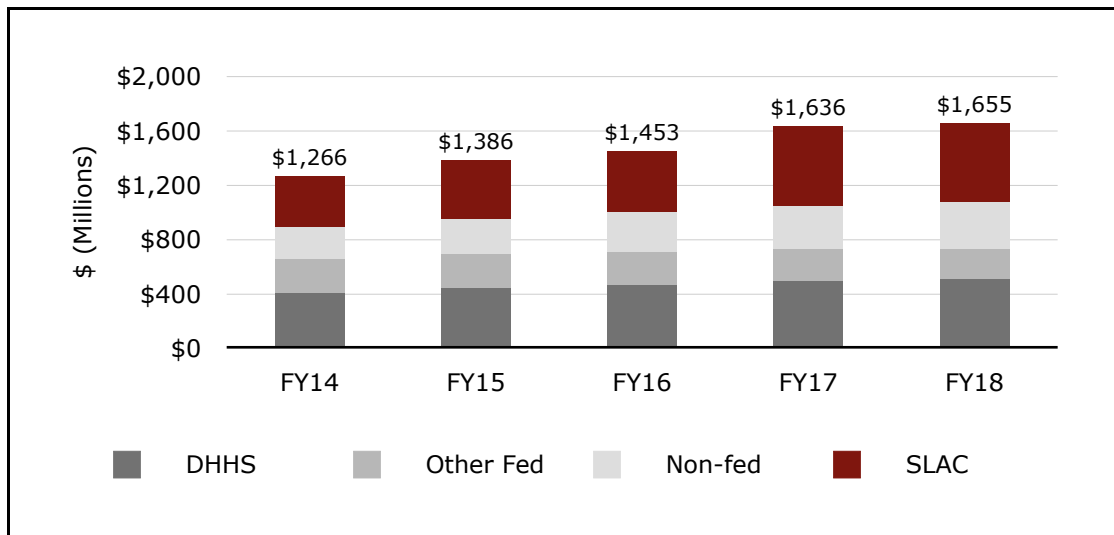
FY18 sponsored research support, including the SLAC National Accelerator Laboratory (SLAC), increased \$19 million to \$1.7 billion compared to FY17 revenues. Sponsored research support is the largest source of operating revenue, representing 28% of total revenues.

Sponsored Research Support - University

FY18 sponsored research support for the University (excluding SLAC) increased \$24 million or 2% to \$1.1 billion. This comprises \$802 million of direct costs and \$274 million of indirect costs. Approximately 68% of the University's sponsored research support (excluding SLAC) is received directly or indirectly from the federal government.

The Department of Health and Human Services (DHHS) provided support of \$511 million in FY18 compared to \$496 million in the prior year, primarily through the National Institutes of Health (NIH). Stanford is one of the top ten recipients of NIH funding. Most of these funds support research within the University's SOM.

FIGURE 3
UNIVERSITY SPONSORED RESEARCH SUPPORT



In addition to payment for the direct costs of performing research, the University receives an amount from sponsors for facilities and administrative costs, known as indirect costs. Recovery of facilities and administrative costs associated with federally sponsored awards is recorded at rates negotiated with the University's cognizant federal agency, the Office of Naval Research. For FY18, the total amount of federal and non-federal indirect cost recovery increased by 3% to \$274 million.

Sponsored Research Support - SLAC

The U.S. Department of Energy (DOE) provides substantially all of SLAC's sponsored research support. In FY18, SLAC's sponsored research support was \$580 million, comprised of \$296 million for operations and \$284 million for construction of new facilities and instruments. Included in new facilities was \$211 million for the Linac Coherent Light Source (LCLS) II project expected to be completed in 2022. LCLS II is a major upgrade to increase the power and capacity of LCLS, the X-ray free-electron laser that became operational in October 2009.

In FY18, a new facility for cryogenic electron microscopy (Cryo-EM) opened at SLAC. Built and operated in partnership with the University, it is equipped with four state-of-the-art scientific instruments. Cryo-EM is a groundbreaking technology that has given scientists unprecedented views of the inner workings of the cell.

Health Care Services

FY18 health care services revenue represented 19% of University operating revenues, increasing \$66 million (6%) to \$1.1 billion resulting from growth in the Hospitals' clinical programs.

The SOM faculty serve as physicians for the Hospitals. More than 90% of the University's health care revenue is received from SHC and LPCH through inter-entity funds flow agreements which pass a portion of the hospitals' clinical service revenues to the University based on clinician productivity. Additional payments are made for medical direction, programmatic development, and department overhead costs. These inter-entity revenues are eliminated in consolidation. The remaining \$41 million in health care services revenue is for services provided to other health care systems, including the Santa Clara Valley Medical Center and other adult and pediatric outreach clinics.

The results of operations and financial position for SHC and LPCH are discussed in more detail in the *Stanford Health Care* and *Lucile Salter Packard Children's Hospital at Stanford* sections.

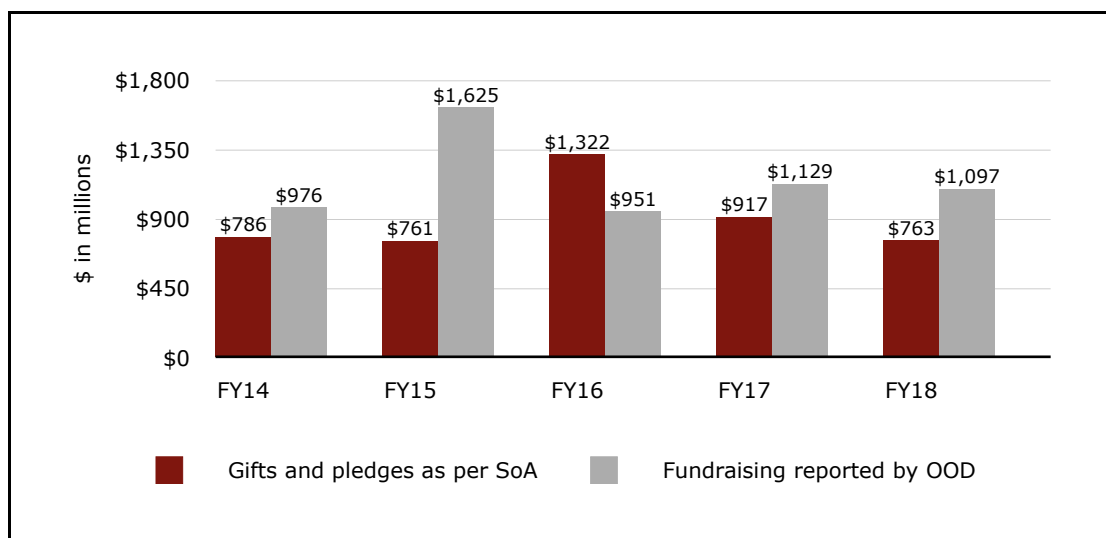
THE UNIVERSITY'S GIFTS AND PLEDGES

Gifts from the University's donors are a key source of funding for the University's current operations as well as capital projects and new endowments. The majority of the University's gifts and pledges are restricted by donors for specific purposes. The University has both legal and fiduciary obligations to use the funds according to the donor's restrictions, which guide how they are reported in the financial statements. In FY18, current year gifts in support of operations were \$279 million, and were recorded in the operating section of the University's *Statements of Activities*. In addition, gifts and pledges of \$484 million were recorded in the non-operating section of the University's *Statements of Activities*, bringing the FY18 total University gifts and pledges recorded in the University's financial statements to \$763 million, down \$154 million from FY17.

The University's Office of Development (OOD) fundraising results include certain gifts that are not recognized as contributions in the University's financial statements. Grants from foundations and corporations are reflected as sponsored research support revenue rather than gifts and pledges. Donations of art collections are not recorded on the University's financial statements. Gifts raised on behalf of SHC and LPCH are reflected in the hospitals' financial statements. In addition, the University's *Statements of Activities* recognizes pledges as revenue when the pledges are made by donors, while OOD includes them in the fundraising results when the pledge payments are received.

In FY18, OOD reported gifts benefiting the University, SHC and LPCH of \$1.1 billion. Figure 4 reflects the gifts and pledges in the University's *Statements of Activities* as well as the fundraising results reported by OOD over the past 5 years.

FIGURE 4
GIFTS AND PLEDGES: STATEMENT OF ACTIVITIES
VS. FUNDRAISING RESULTS REPORTED BY OOD



Total Investment Income Distributed for Operations

The University distributes investment income for use in operations according to policies approved by the Board of Trustees (BOT or "Board"). Total investment income distributed for operations was \$1.5 billion in FY18, \$1.2 billion of which was distributed from the University's endowment with the remainder from the Expendable Funds Pool (EFP) and other sources. Investment income distributed for operations represented 25% of University operating revenues in FY18, the University's second highest source of revenue. Through the combination of investment strategy and payout policy, the University strives to provide a reasonably consistent payout from endowment to support current operations, while preserving the purchasing power of the endowment for the future.

Endowment Income Distributed for Operations

Endowment income distributed for operations (also referred to as endowment payout) increased 6% to \$1.2 billion in FY18. This amount includes payout from the University's MP based on a Board approved formula, and endowment income received from sources not included in the MP, including real estate income from the University's endowed lands. As shown in Figure 5, annual payout to operations from the endowment continues to be a significant source of operating revenue for the University, covering approximately 22% of operating expenses in FY18.

As shown in Figure 6, 79% of the endowment payout is restricted as to purpose, and provided funding for instruction and research activities (28%), student aid (23%), faculty salaries and support (20%), and libraries (2%). Unrestricted endowment payout is also used to support these activities in addition to other critical strategic priorities.

FIGURE 5
UNIVERSITY ENDOWMENT PAYOUT

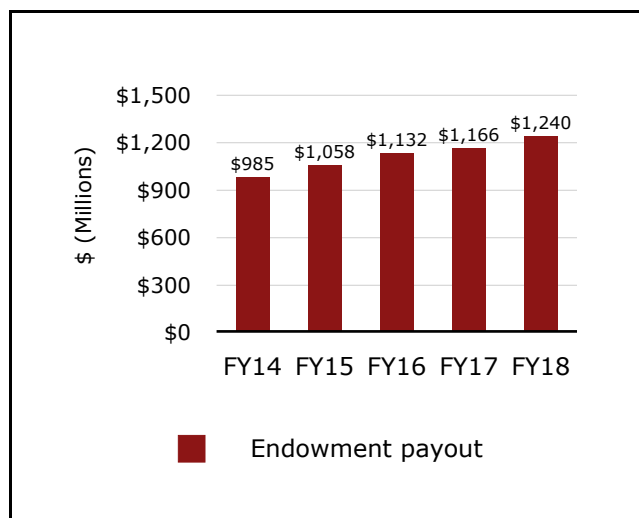
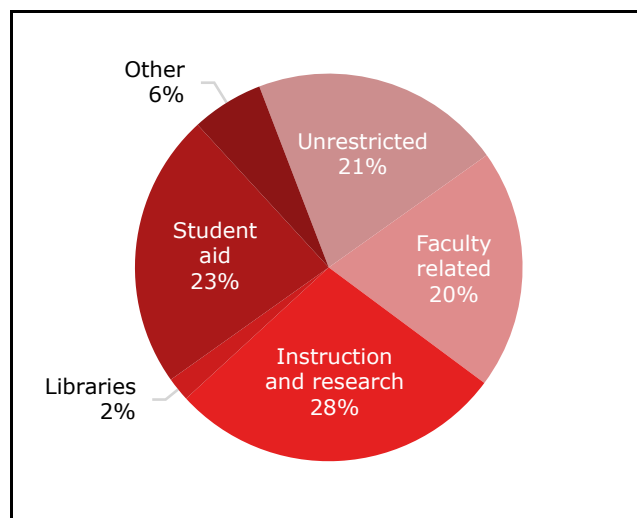


FIGURE 6
UNIVERSITY ENDOWMENT PAYOUT BY PURPOSE



Expendable Funds Pool and Other Investment Income Distributed for Operations

The EFP and Endowment Income Funds Pool (EIFP) are the principal investment vehicles for the University's expendable funds. The amount distributed for operations from these funds was \$254 million in FY18, compared to \$143 million in FY17. See *Note 7* to the FY18 *Consolidated Financial Statements*.

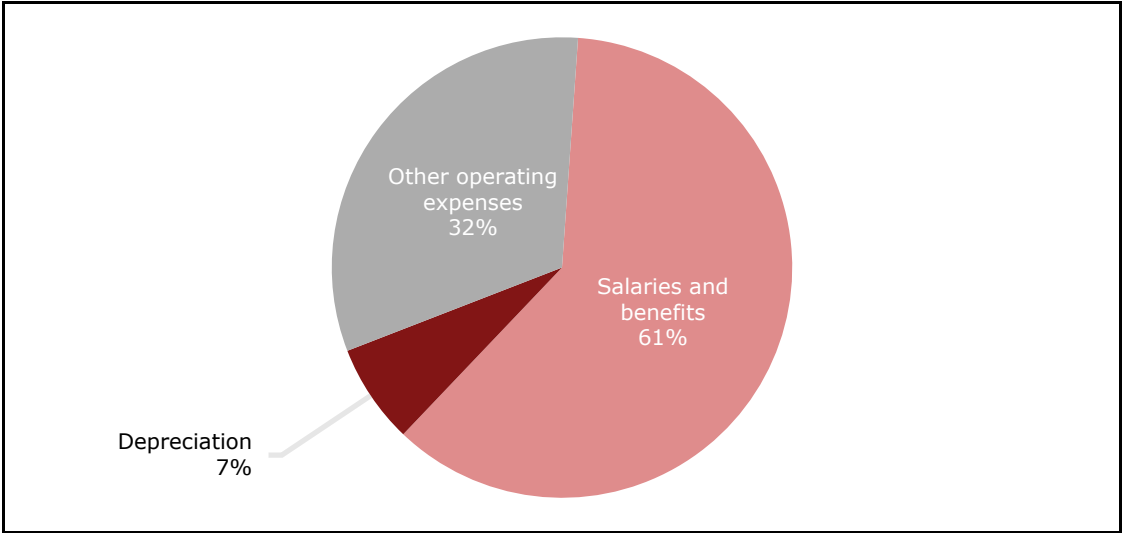
The EFP policy provides a variable payout to operations primarily based on prior year EFP investment returns. Payout on the EFP in FY18 was \$102 million more than the prior year due to higher EFP investment returns in FY17 compared to FY16.

The EIFP holds previously distributed but unspent endowment payout. These amounts are held, for instance, until there is adequate funding to support a program or professorship, or until a faculty member is hired. These amounts are invested in highly liquid instruments in order to preserve the principal balance and ensure availability of funds to support activities. Earnings on these investments are fully distributed to the University fund holders. See the *University Investment Pools and Liquidity Management* section.

UNIVERSITY OPERATING EXPENSES

Total expenses increased \$292 million, or 5%, to \$5.7 billion in FY18. As shown in Figure 7, salaries and benefits comprised 61% of the University’s total expenses; depreciation expense was 7% and other operating expenses represented 32%.

FIGURE 7
UNIVERSITY OPERATING EXPENSES



Salaries and benefits increased 6% in FY18 to \$3.5 billion. The increase resulted from a combination of factors including annual salary increases for faculty and staff and continued growth in headcount, notably in clinical programs at the SOM.

Depreciation expense increased by 4% to \$380 million in FY18 from \$365 million in FY17. The increase resulted from buildings recently placed in service as described in the *Capital Projects* section below.

Other operating expenses increased by 5% to \$1.8 billion in FY18. The increase resulted from a number of factors including an increase in interest expense from the \$750 million FY17 bond issuance, insurance expense and professional costs related to system improvements.

UNIVERSITY FINANCIAL POSITION

Total University assets increased \$2.1 billion in FY18 to end the year at \$44.0 billion. Total University liabilities decreased \$110 million to \$7.2 billion, and net assets increased \$2.2 billion to \$36.9 billion.

Cash and Cash Equivalents

At August 31, 2018, the University's cash and cash equivalents (as defined in *Note 1* to the FY18 *Consolidated Financial Statements*) increased by \$5 million to \$266 million.

THE UNIVERSITY'S INVESTMENT POOLS AND LIQUIDITY MANAGEMENT

The University's investments are held in various investment pools or in specific investments with varying levels of liquidity. The University closely monitors liquidity required to meet its operating needs and contractual commitments.

As discussed further in *Note 11*, Endowments, the University classifies a substantial portion of its financial resources as endowment, which includes board-designated funds functioning as endowment (FFE) in addition to temporarily and permanently restricted endowment funds.

The Merged Pool (MP) (see *Note 7*) is the primary investment pool in which the endowment and other long-term funds are invested. The MP maintains sufficient liquidity to distribute the annual budgeted endowment payout in support of University operating expenditures, and to meet unfunded commitments associated with certain alternative investments (see *Note 6*). It is not the intention of the University to utilize board-designated endowment or other unrestricted reserves invested for the long-term for unplanned operating commitments; however, amounts could be made available from these sources if necessary, except from those underlying investments with lock-up provisions as discussed in *Note 6*.

The majority of Stanford's cash and other liquid investments are accumulated and managed in a short-term investment pool (STIP). The primary objective of this pool is to preserve the principal value of the portfolio while meeting the liquidity needs of the University.

The EFP and EIFP are the principal investment vehicles for the University's expendable funds. A substantial portion of the EFP is cross-invested in the MP with the remainder being invested in the STIP and Intermediate Pool (IPool). The entire balance of the EIFP is invested in the STIP.

In FY17, the University created the IPool. The IPool was established to invest funds with the objective of achieving greater liquidity than the MP and higher returns than the STIP.

To meet short-term operating needs, cash is managed by matching the timing of cash inflows and outflows as closely as possible. Back-up borrowing facilities of \$425 million and a \$500 million taxable commercial paper program, if not drawn for capital improvements, are also available.

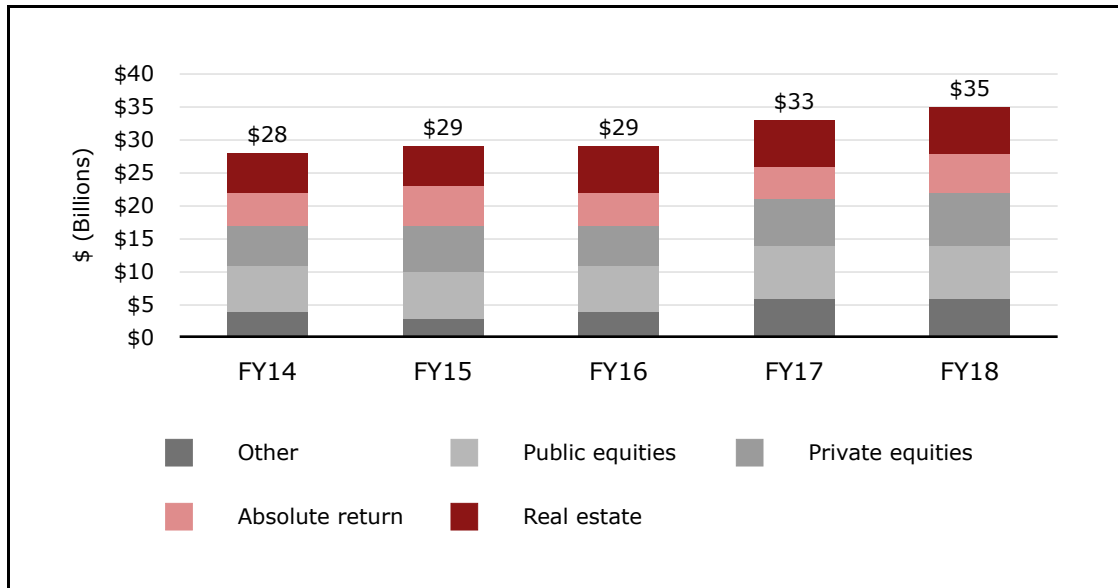
Assets Limited as to Use

Assets limited as to use primarily consist of the University's non-qualified deferred compensation plan under IRC 457(b) offered to a select group of highly compensated employees. Assets are held by custodians on behalf of the University and are restricted for payments to participants and beneficiaries. At August 31, 2018, total assets held by the University were \$165 million. A corresponding liability is included in "deferred income and other obligations." The FY17 balance of \$194 million represented proceeds from tax-exempt bonds that were spent on eligible capital projects during FY18.

Investments

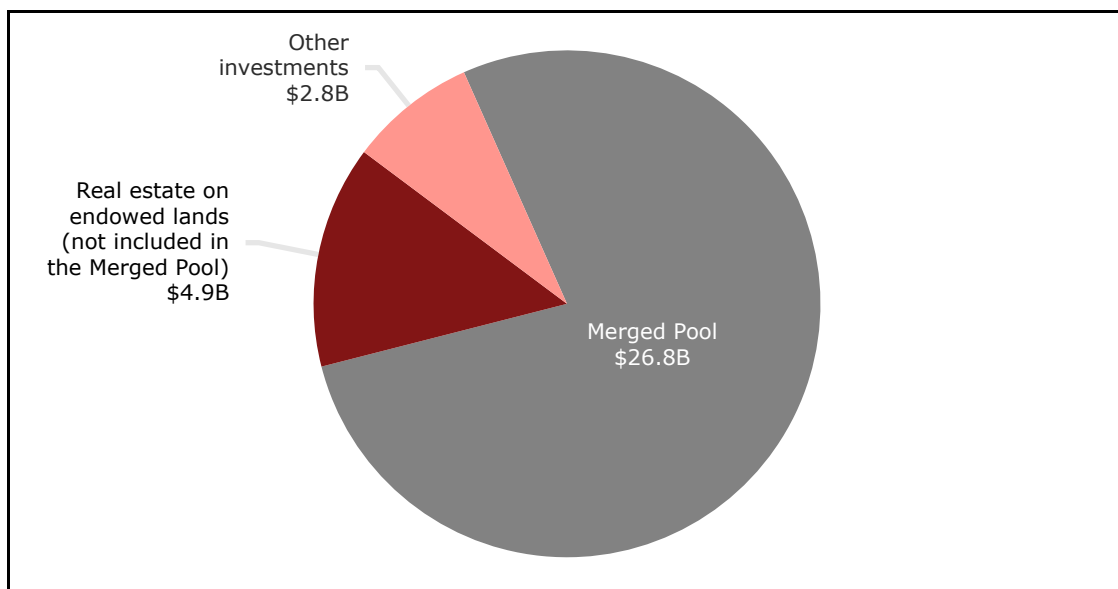
At August 31, 2018, University investments totaled \$34.5 billion. Investments by asset class are shown in Figure 8.

FIGURE 8
UNIVERSITY INVESTMENTS BY ASSET CLASS



There are three primary categories of investments as shown in Figure 9: the MP, real estate investments on endowed lands, and other specific investments.

FIGURE 9
UNIVERSITY INVESTMENT BY CATEGORY



Investments in MP

As shown in Figure 9, the majority of the University's endowment assets are invested in the MP, as well as a majority of the EFP and capital reserves from SHC and LPCH. The MP, totaling \$26.8 billion at August 31, 2018, is a diversified portfolio of actively managed public and private equity, absolute return, natural resources and real estate assets. The MP is managed by the Stanford Management Company (SMC), a division of the University with oversight by a Board of Directors appointed by the University's BOT. The portfolio is designed to optimize long-term returns, create consistent annual payouts to support the University's operations and preserve purchasing power for future generations of Stanford students and scholars.

Real Estate on Endowed Lands

A portion of Stanford's 8,180 acres, including the Stanford Research Park and Stanford Shopping Center, is designated for the production of income by the BOT. As of August 31, 2018, \$5.7 billion of real estate investments (including \$811 million in the MP) are located on these lands. In FY18, these properties (including MP real estate) generated \$144 million in income, net of expenses, and appreciated in value by \$337 million. These lands have been developed for various uses, including research, medical and commercial offices, hotels, retail properties and a regional shopping center. The University further diversifies this portfolio by employing a variety of financial structures, including ground leases, direct leases and participation arrangements. In recent years, the value of these properties has benefited from strong dynamics in the regional market including rising investor demand for real estate; high office, hotel and apartment occupancy rates; increased office rents; and strong retail sales.

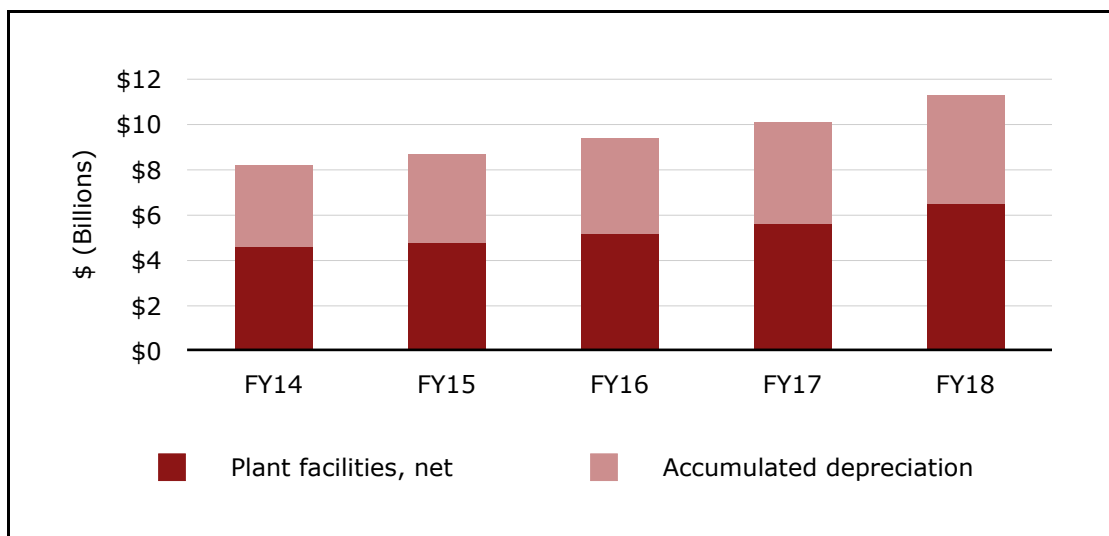
Other Specific Investments

The remaining \$2.8 billion of investments consists of the IPool, a portion of the STIP, and other specific investments.

Capital Projects

The University continues to make significant investments in its physical facilities, driven by the academic priorities for teaching, research, and related activities, and the initiatives of the administrative and auxiliary units that support the academic mission. During FY18, the University invested \$1.2 billion in capital projects, bringing gross plant facilities (before accumulated depreciation) to \$11.3 billion. Plant facilities, net of accumulated depreciation, increased \$884 million to \$6.5 billion, as shown in Figure 10.

FIGURE 10
PLANT FACILITIES AND ACCUMULATED DEPRECIATION



The University completed several significant projects in FY18, as it continues to invest in its academic infrastructure to facilitate teaching and research. The Anne T. and Robert M. Bass Biology Research Building is a new laboratory research facility designed to support the University's biochemistry and computational research initiative. The David and Joan Traitel Building at the Hoover Institution provides added capacity in both office and conferencing facilities to meet its demand for public policy research and education. Finally, the Denning House is a new building dedicated to the Knight-Hennessy scholars program, the international graduate level scholars program which commenced in September 2018.

Construction continued on almost 200 projects, including the following academic projects with budgets greater than \$100 million.

- The new Stanford ChEM-H (Chemistry, Engineering and Medicine for Human Health) and Neurosciences Institute complex will house two interdisciplinary research institutes designed to bring faculty from many disciplines together to stimulate novel interactions.
- The Center for Academic Medicine 1 (CAM 1) will consolidate office space for clinical faculty, computational researchers, departmental administration and leadership.
- The BioMedical Innovations Building 1 will replace aging structures and house a mix of disciplines, research labs and leading edge translational studies.
- Phase I of Stanford in Redwood City's off-site administrative campus is underway and is expected to be completed with occupancy in 2019. Approximately 2,700 staff will relocate to this site in order to preserve core campus space for the University's highest academic priorities.

Over one-third of the University's FY18 capital expenditures were focused on student, faculty and staff housing to address the acute shortage of affordable housing in the region. The Escondido Village Graduate Residences (EV) project, currently under construction, will address the critical need for additional graduate student housing on campus. With occupancy targeted for fall 2020, EV will add over 2,000 new beds raising the percentage of graduate students housed to approximately 75% from just over 50% today.

Stanford's Housing Acquisition Initiative is expanding the University's supply of faculty and staff housing by acquiring land and residential units proximate to, or within easy transit of, campus. University Terrace, located just off the main campus on 17 acres at the edge of the Stanford Research Park, will provide a 180-home faculty community that includes single-family homes and condominiums. University Terrace is a critical part of Stanford's efforts to expand housing options amid a challenging local market.

Debt

The University's debt policy governs the amount and type of debt Stanford may incur and is designed to preserve debt capacity, financial flexibility and access to capital markets at competitive rates. A combination of fixed and variable rate debt of varying maturities is used to fund academic facilities, residential housing and dining facilities, real estate investment projects, faculty and staff mortgage loans and other infrastructure projects.

The University has \$425 million of unsecured revolving credit facilities, of which \$75.9 million was drawn down as of August 31, 2018. The University also has taxable and tax-exempt commercial paper authorized borrowing capacity of \$500 million and \$300 million, respectively. Tax-exempt commercial paper of \$130 million was outstanding at August 31, 2018.

Total debt decreased \$120 million in FY18. In August 2018, the University exercised an early make whole call redemption of \$262 million of the taxable Series 2009A bonds due in 2019. The remaining \$138 million of Series 2009A bonds was fully paid down in November 2018. The University's short and long-term debt is rated in the highest categories, which were affirmed by S&P Global Ratings in June 2018 and by Moody's Investors Service and Fitch Ratings in March 2017.

Net Assets

The University's net assets are classified as unrestricted, temporarily restricted or permanently restricted. See *Note 1* to the FY18 *Consolidated Financial Statements*. As previously noted, FY18 net assets increased 6% to \$36.9 billion compared to \$34.7 billion in the prior year. The increase of \$2.2 billion resulted from investment gains of \$1.5 billion, non-operating gifts and pledges, of \$484 million and operating income of \$198 million.

TAX REFORM

The Tax Cuts and Jobs Act (TCJA) was signed into law on December 22, 2017. It contains a number of provisions which will add considerable financial and administrative costs to Stanford, the exact magnitude of which will not be fully known until more detailed regulations and guidance are issued. Under the TCJA, effective September 1, 2018, the University is subject to a 1.4% excise tax on its net investment income as defined under the Internal Revenue Code which, among other things, includes net investment income of certain related entities such as the Hospitals. Under a special "stepped-up basis rule" the IRS has allowed universities to use the investment's fair market value at the end of 2017 as its basis for determining tax on any resulting gain from the sale of the investment. Based on our interpretation of the law and available guidance, the University has assessed deferred tax obligations arising from the excise tax and has determined that there is no obligation at August 31, 2018.

In addition, effective September 1, 2018, the University and Hospitals are subject to a 21% excise tax on annual compensation in excess of one million dollars paid to certain covered employees.

Effective January 1, 2018, the University and Hospitals are subject to a 21% income tax on certain expenses incurred in connection with providing qualified transportation benefits to employees. Management of the University and Hospitals has determined that the amount of current income tax payable at August 31, 2018 and income tax expense for the period then ended is not material.

THE UNIVERSITY'S ENDOWMENT

The University's endowment is a collection of gift funds and reserves invested to generate income to support the University's teaching and research missions. At August 31, 2018, the endowment totaled \$26.5 billion (See Figure 11) and represented approximately 72% of the University's net assets. The endowment, which includes the University's endowed lands, is comprised of pure endowment funds, term endowment funds and funds functioning as endowment. Many of these funds are designated by donors for specific purposes including scholarships, fellowships, professorships or other academic initiatives.

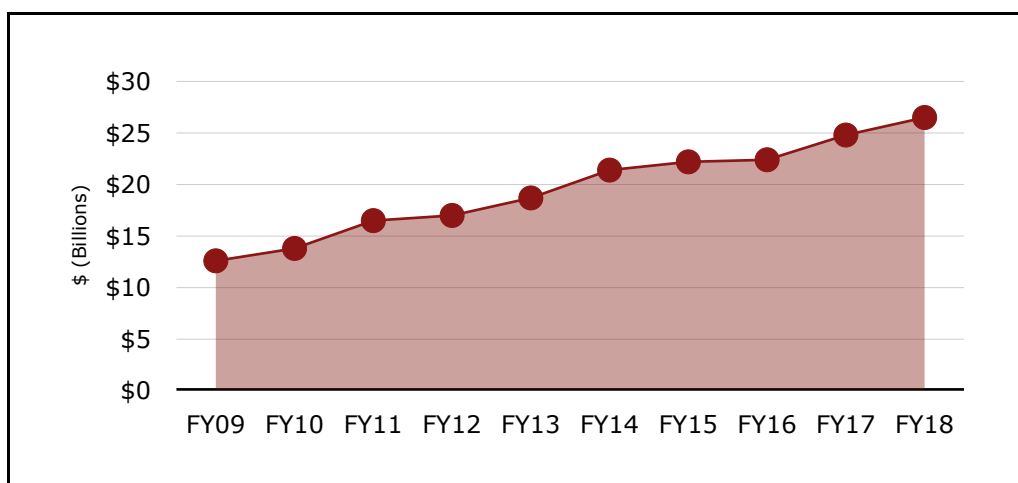
The University's endowment is crucial to providing funding for education and research programs, including increasing the amount spent on student financial aid. As discussed in the *Student Financial Aid and Other Graduate Support* section, a significant portion of the \$622 million of student financial aid and graduate support comes from endowment payout.

Through a combination of investment strategy and payout policy, the University strives to provide a reasonably consistent payout from endowment to support operations, while preserving the purchasing power of the endowment, adjusted for cost inflation, so that the endowment can continue to support the University in perpetuity. The endowment payout as a percentage of the beginning endowment value was 5.0% for FY18 and 5.2% for FY17.

The Board is responsible for determining endowment payout with the aim of balancing current and future needs of the University. For the majority of endowment invested in the MP, the target payout rate is 5.5%. The actual payout amount is determined by applying a smoothing rule designed to mitigate the impact of short-term market volatility. In situations when the payout rate reaches 6% or drops below 4%, the Board has the authority to override the smoothing rule and set the payout rate directly. For endowment invested in real estate on Stanford endowed lands, all of the net lease income is paid out to operations each year.

The University's endowment provides funding annually for a wide variety of important purposes. See the *Total Investment Income Distributed for Operations* section for more information.

FIGURE 11
UNIVERSITY ENDOWMENT



HOSPITALS

The financial results and financial position of Stanford Health Care (SHC) and Lucile Salter Packard Children's Hospital at Stanford (LPCH) and their controlled affiliates, are included in the FY18 *Consolidated Financial Statements*.

In FY11, Stanford received local government approval for a Renewal Project to rebuild SHC and expand LPCH's principal facilities. During FY18, LPCH opened the majority of its new expanded facilities and expects to complete the remaining components of the project in FY19. SHC's new hospital is scheduled to open in late 2019. These improvements are designated to add inpatient capacity in modern, technologically-advanced and patient-centered facilities, and meet state-mandated earthquake safety standards. The total estimated cost is approximately \$2.1 billion for SHC and \$1.4 billion for LPCH. Management of each hospital believes that sources of funding are adequate to cover remaining costs.

To improve and expand their services, the Hospitals have established community-based ambulatory clinic organizations — SHC's University HealthCare Alliance (UHA) and LPCH's Packard Children's Health Alliance (PCHA) — that support Stanford Medicine's mission to deliver quality care to the community and conduct research and education. Working collaboratively with their respective hospitals and the SOM faculty, these organizations have acquired general and multi-specialty practices to form a network of coordinated care throughout the Bay Area.

SHC and LPCH continue to participate in the California Hospital Quality Assurance Fee (QAF) Program and the Hospital Fee Program (HFP). These programs are designed to provide supplemental payments to certain hospitals and support the State's effort to maintain health care coverage for children.

The discussion below provides additional detail about SHC's and LPCH's consolidated operations and financial results as derived from their separate consolidated financial statements.

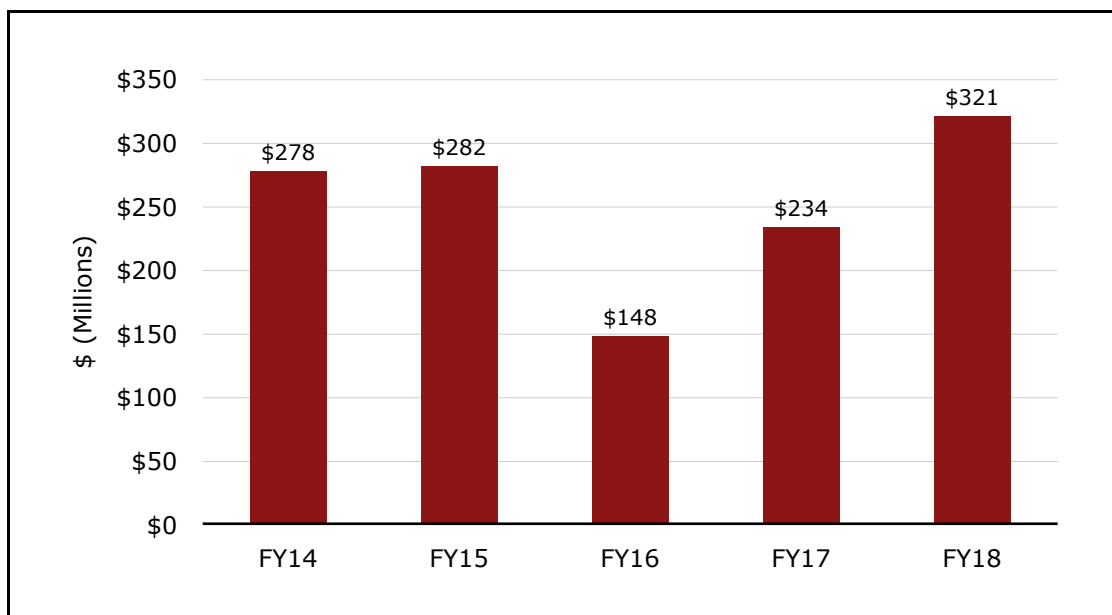
STANFORD HEALTH CARE

Stanford Health Care ("SHC") achieved favorable operating performance in FY18. SHC's FY18 financial results reflect the consolidation of SHC and its subsidiaries.

SHC FINANCIAL HIGHLIGHTS

Net assets increased \$457 million to end the year at \$4.0 billion. Operating revenues exceeded operating expenses by \$321 million, or 7%, compared to \$234 million in FY17. The FY18 operating margin increased primarily due to increased outpatient volume and management's cost saving initiatives. FY18 results include community benefits of \$1.0 billion in charity care, and Medi-Cal and Medicare uncompensated care. These community benefits represent a 0.5% increase from the prior year.

FIGURE 12
SHC OPERATING MARGIN



SHC OPERATING RESULTS

SHC's *Consolidated Statements of Operations and Changes in Net Assets* include results from both operating and non-operating changes in the net assets of SHC. Operating activities include the revenues earned and expenses incurred in the current year to support SHC's vision of healing humanity through science and compassion, one patient at a time. During FY18, SHC recorded revenues and expenses from the Hospital Fee Program ("HFP") totaling \$90 million and \$77 million, respectively. The figures discussed throughout this document include these amounts. FY18 operating revenues increased 10% compared to an increase in operating expenses of 9% during the same period. Revenues grew more than expenses mainly due to continued focus on strategic growth while implementing cost reductions. In addition, SHC continues to market two health plans: SHC Advantage, a Medicare health plan offered to Santa Clara and Alameda County residents, and SHC Alliance, a benefit plan that allows faculty and employees of Stanford University, SHC employees, and other employers access to the Stanford network of care.

Other changes in net assets are discussed in the *SHC Financial Position* section of this analysis.

SHC OPERATING REVENUES

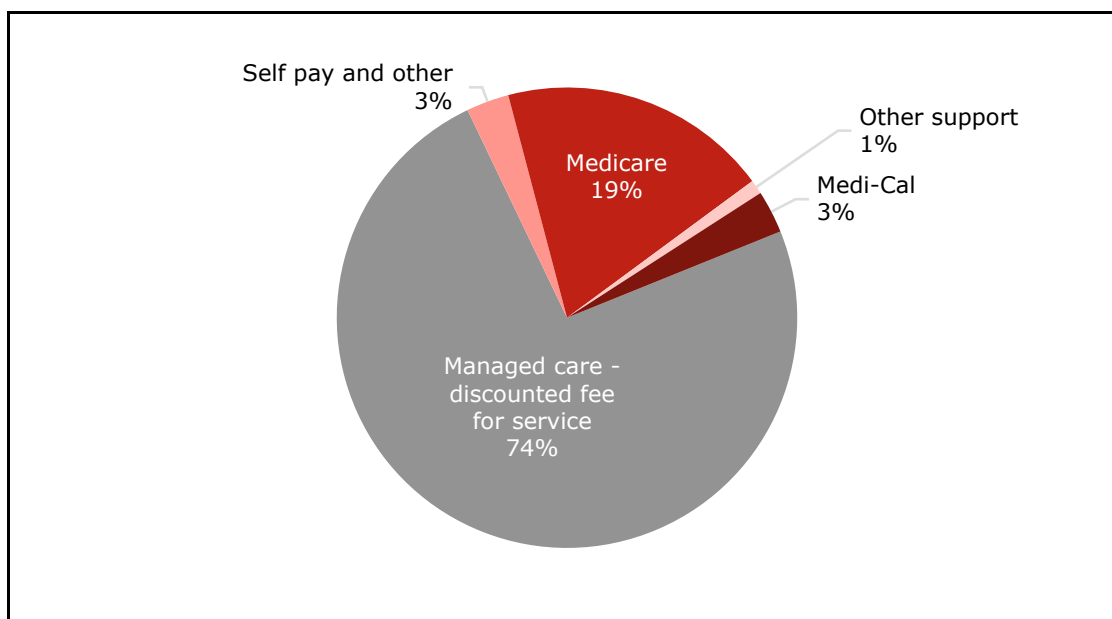
FY18 operating revenues were \$4.9 billion, reflecting a 10% increase over FY17.

Net Patient Service Revenue

FY18 net patient service revenue less doubtful accounts (including capitation / premium revenue) increased \$455 million, or 11%, from FY17 to \$4.8 billion and represented 97% of operating revenues. During FY18, SHC's net patient service revenue includes amounts received under the Hospital Fee Program (HFP) totaling \$90 million. Revenues under this program nearly doubled from FY17.

Patient service revenue net of contractual allowances (but before provision for doubtful accounts), by major payer is shown in Figure 13.

FIGURE 13
SHC NET PATIENT SERVICE REVENUE



Inpatient and outpatient, which represented 40% and 60% of net patient revenues (including capitation / premium revenue), respectively, grew significantly due to strong volume growth in multiple areas, such as operating rooms, pharmacy, imaging, cancer services and other ambulatory care services.

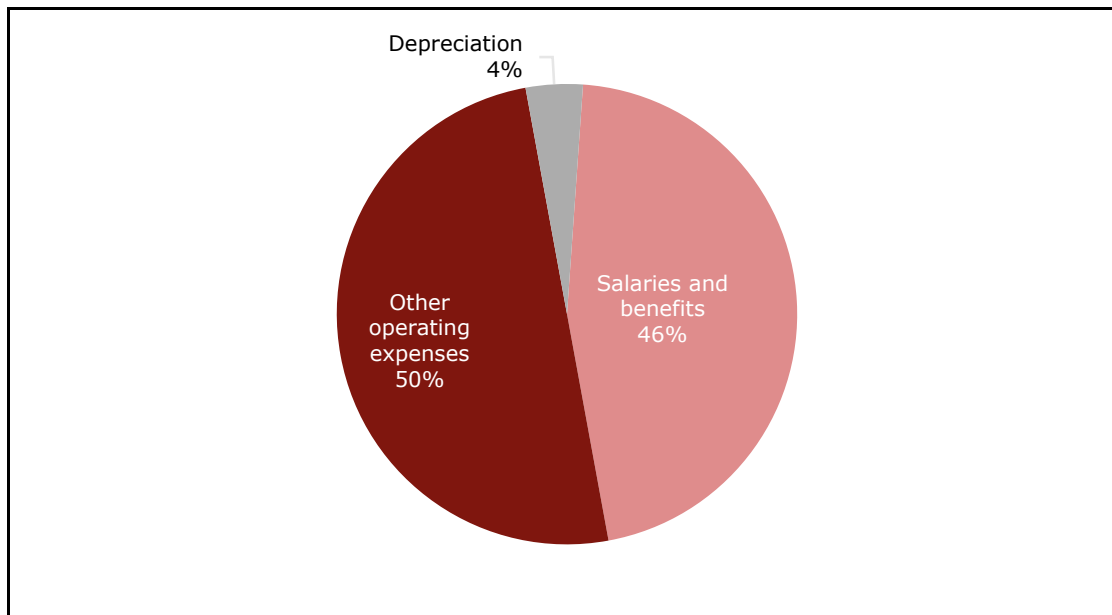
Other Operating Revenues

Other operating income, which includes revenues from various related entities and outreach clinical activities, increased 5% to \$136 million.

SHC OPERATING EXPENSES

Total expenses increased \$369 million, or 9%, to \$4.6 billion in FY18, which was primarily due to salaries and benefits, physician services, and supplies required to provide high quality patient care.

FIGURE 14
SHC OPERATING EXPENSES



As shown in Figure 14, salaries and benefits comprised 46% of SHC's total expenses, depreciation expense was 4%, and all other operating expenses represented 50%.

- Salaries and benefits increased 5% in FY18 to \$2.1 billion (inclusive of UHA and network growth). The increase resulted from expanded headcount to support current growth in patient volumes and future expansion (see the *Capital Projects* section below). The remaining increase was due to annual salary increases necessary to maintain SHC's position in the competitive market for healthcare professionals and higher benefit costs.
- Depreciation expense increased by 14% to \$177 million in FY18 from \$155 million in FY17. The increase resulted from buildings and equipment recently placed in service, additional asset retirement obligations on existing buildings and a full year of service for SHC's new facilities in Emeryville.
- Other operating expenses increased by 12% to \$2.3 billion for FY18 due to a number of factors, notably, increases in purchased services of 7% to \$1.2 billion related to payments to the University under its inter-entity agreement with the SOM. Supplies expense also increased by 14% to \$667 million in response to patient volume growth and inflation.

SHC FINANCIAL POSITION

SHC's *Consolidated Statements of Financial Position* reflect strong operating results and positive investment returns. Total SHC assets increased \$985 million in FY18 to end the year at \$7.2 billion. Total SHC liabilities increased \$529 million in FY18 due to the issuance of taxable debt of \$500 million, and ended the year at \$3.3 billion.

Unrestricted Cash and Investments

Unrestricted cash and investments increased to \$2.9 billion in FY18 from \$2.3 billion at the end of FY17.

Capital Projects

SHC continues to invest in facilities and systems required to remain at the forefront of medicine and to be the provider of choice for complex and network care in the communities it serves. During FY18, SHC invested \$475 million in capital projects, bringing property and equipment, net of accumulated depreciation, to \$3.3 billion, a \$410 million increase.

The majority of the FY18 spending was for the New Stanford Hospital (to meet State-mandated earthquake safety standards, and provide modern, technologically-advanced hospital facilities), additional asset retirement obligations and expansion of healthcare facilities in Redwood City.

Debt

Total debt was \$2.0 billion as of August 31, 2018, an increase of \$389 million over FY17. In December 2017, SHC refunded certain tax-exempt debt (\$454 million par) at a lower effective interest rate. In January 2018, SHC issued \$500 million of new taxable debt. At August 31, 2018, there was no balance outstanding on the revolver.

In December 2017, SHC's long-term ratings were affirmed by S&P Global Ratings, Moody's Investors Service and Fitch Ratings at AA-/Aa3/AA, respectively.

Net Assets

SHC's net assets are classified as unrestricted, temporarily restricted or permanently restricted. See *Note 1* to the *Consolidated Financial Statements*. Unrestricted net assets increased by \$411 million to end the year at \$3.3 billion. SHC's operating surplus of \$321 million and an increase of \$159 million on investments (majority from the University MP) were the major drivers. SHC also transferred \$98 million to the University to fund the Center for Academic Medicine 1 (CAM1) building and parking structure (part of renewed efforts on clinical enterprise) and academic grants. Temporarily restricted net assets increased by \$46 million to \$649 million in large part due to fundraising commitments for the New Stanford Hospital. Permanently restricted net assets increased slightly over FY17.

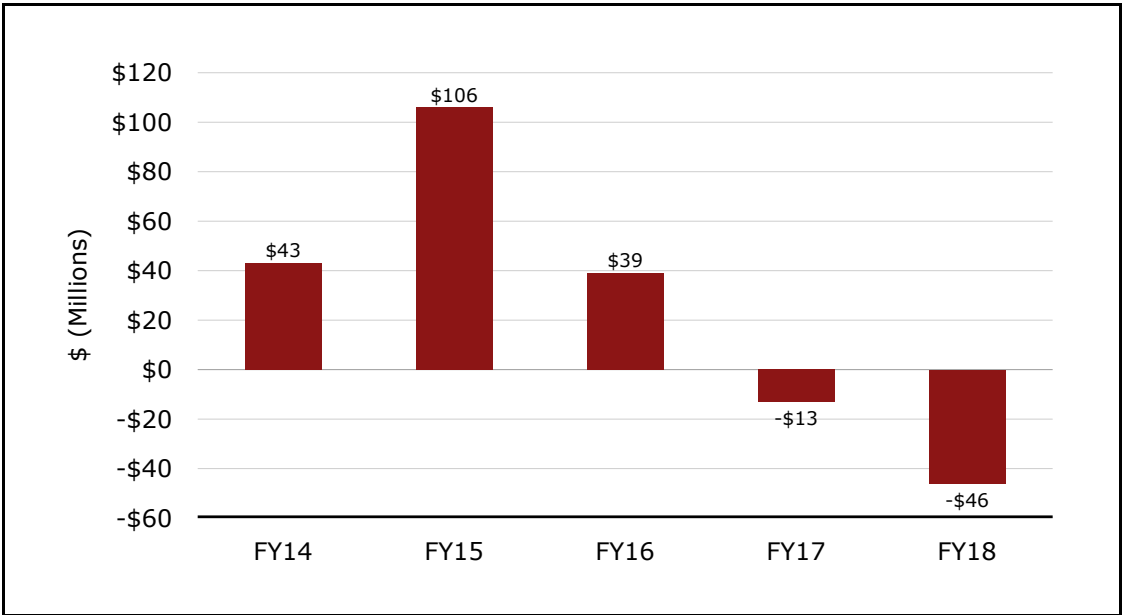
LUCILE SALTER PACKARD CHILDREN’S HOSPITAL AT STANFORD

The financial results reflect the consolidation of LPCH and its subsidiaries.

LPCH FINANCIAL HIGHLIGHTS

In FY18, LPCH opened a new hospital expansion, more than doubling its hospital square footage, and adding six new operating rooms and seven new interventional units (comprising LPCH's portion of the Renewal Project). Net assets at August 31, 2018 were \$2.4 billion, reflecting an increase of \$23 million over FY17. However, operating revenues were lower than operating expenses by \$46 million in FY18, compared to a loss of \$13 million in FY17. In FY18, inpatient volumes increased given the new clinical capacity, but did not increase enough to cover the increased costs of supporting the new space. Operating results experienced pressure from an increase of 12% in operating expenses over FY17 primarily related to higher personnel costs, physician payments to the University’s SOM, non-capitalizable one-time costs related to bringing the Renewal Project live and additional facilities costs related to the increased square footage, such as utilities, housekeeping and engineering. Figure 15 shows the change in net assets from operating activities, or operating margin, over the past five years.

FIGURE 15
LPCH OPERATING MARGIN



LPCH OPERATING RESULTS

The loss from operations was \$46 million in FY18, as compared to \$13 million in FY17.

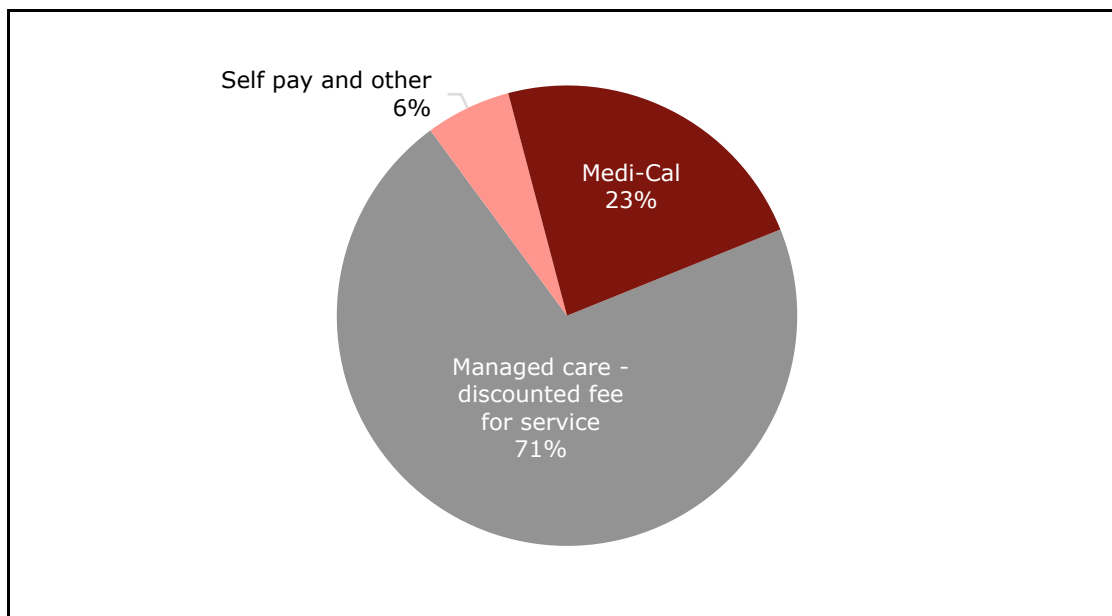
LPCH OPERATING REVENUES

FY18 operating revenues increased \$151 million, or 10%, compared to the prior year.

Net Patient Service Revenue

Net patient service revenue increased \$162 million from the prior year, mainly due to increases in inpatient days and outpatient visits and commercial managed care contract rates. This increase was also partially due to the California Hospital Quality Assurance Fee (QAF) Program and Hospital Fee program revenues of \$111 million in FY18 compared to \$41 million in FY17. Patient service revenue by major payer, net of contractual allowances (but before provision for doubtful accounts), is shown in Figure 16.

FIGURE 16
LPCH NET PATIENT SERVICE REVENUE



LPCH's community benefits, including services to patients under Medi-Cal and other publicly sponsored programs that reimburse at amounts less than the cost of services, were \$300 million in FY18 compared with \$240 million in FY17. These amounts also include investments LPCH makes in improving the health of children through a range of community-based programs.

Other Operating Revenues

LPCH's other operating revenues decreased \$10 million from the prior year, primarily due to decreases in earnings from certain investments.

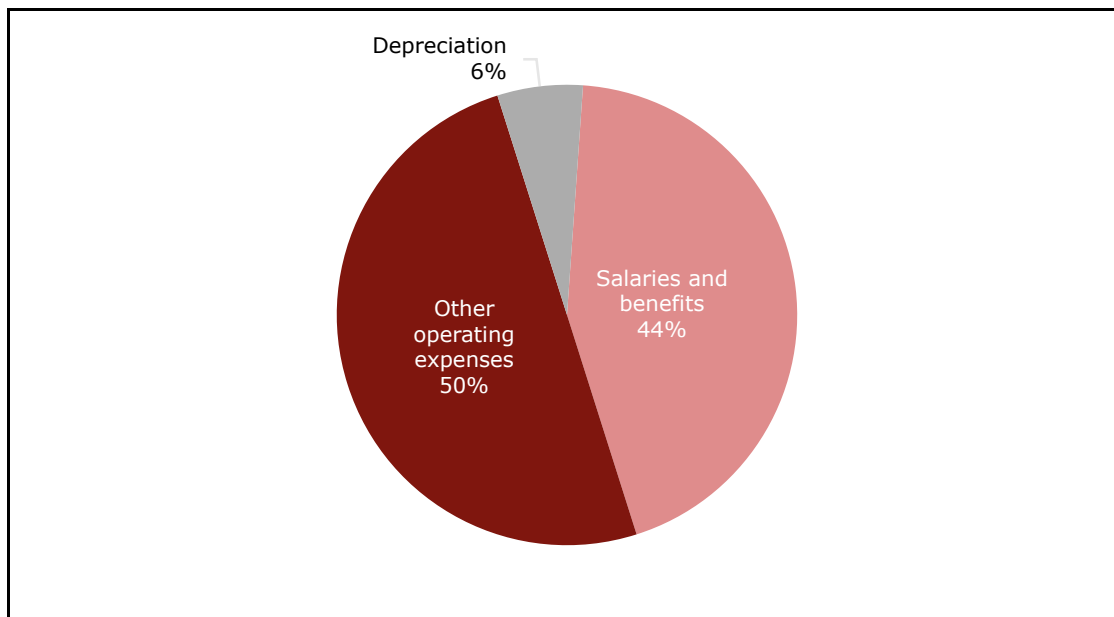
Net Assets Released from Restrictions

LPCH's net assets released from restrictions for use in operations was \$23 million in FY18 and \$24 million in FY17.

LPCH OPERATING EXPENSES

Operating expenses increased \$184 million, or 12%, compared to the prior year. This increase was mainly attributable to higher salaries and benefits due to the opening of the new hospital expansion in 2018 and higher annual salary rates needed to maintain a competitive market position. In addition, LPCH experienced increases in payments to the SOM for services provided by the physician faculty (included in other operating expenses).

FIGURE 17
LPCH OPERATING EXPENSES



As shown in Figure 17, salaries and benefits comprised 44% of LPCH's total expenses, depreciation expense was 6%, and all other operating expenses represented 50%.

LPCH FINANCIAL POSITION

Total assets increased by \$69 million, or 2%, driven by a combination of cash generated from operations, investment gains, and continued support from the donor community. These cash flows were used to fund the construction of the new hospital expansion.

Total liabilities increased by \$46 million, or 4%, primarily due to deferred revenue related to portions of the FY14-16 Managed Care provider fee program for which cash was received in advance of all necessary regulatory approvals. Revenue will be recognized when LPCH receives the final approvals.

Unrestricted Cash and Investments

Unrestricted cash and investments decreased by \$123 million, or 13%, mainly due to the cash outflows associated with the completion of the hospital expansion and operating rooms for LPCH's portion of the Renewal Project and purchase of a long-term lease of property adjacent to the hospital.

Capital Projects

LPCH's *Statements of Financial Position* reflects significant investments in the facilities and systems required to continue to provide the highest quality children's hospital services to the community it serves. The majority of the FY18 spending was for LPCH's portion of the Renewal Project, which represented \$216 million of the increase in property and equipment. Property and equipment, net of accumulated depreciation increased \$162 million to \$1.9 billion as of August 31, 2018.

Debt

Total debt, including the current portion, decreased by \$8 million, or 1% from the prior year due to principal payments on existing debt.

During FY17, S&P Global Ratings, Moody's Investor's Service and Fitch Ratings assigned ratings on the new debt of A+, A1, and AA-, respectively. In addition, the ratings agencies adjusted their previous ratings on the existing debt from AA-, Aa3, and AA to A+, A1, and AA-, respectively, with a stable outlook. In November of 2018, S&P upheld its FY17 rating and outlook and Moody's upheld its FY17 rating, but adjusted the outlook from stable to negative.

Net Assets

Total net assets increased by \$23 million, or 1%, from August 31, 2017 to August 31, 2018. Unrestricted net assets increased by \$328 million to end the year at \$1.9 billion. The increase was due to the transfer of net assets from temporarily restricted to unrestricted once the new hospital expansion went into service. Temporarily restricted net assets decreased by \$306 million to \$345 million in large part due to the aforementioned release from restrictions associated with the Renewal Project and other capital projects. Permanently restricted net assets increased \$1 million to \$228 million in FY18. The principal value of these assets must be invested in perpetuity to generate endowment income to be used only for the purposes designated by donors.

LOOKING FORWARD

Stanford enters FY19 with a strong financial foundation, a solid physical infrastructure and an engaged and dedicated community. The University's endowment is projected to generate over \$1.3 billion of payout in FY19, providing critical support to education and research programs and student financial aid. Our generous donor support comes from a wide and diverse base, reflecting continued commitment to our mission. New buildings and facilities that opened during the year continue to sustain the excellence of our academic programs and health care services. Planned capital projects will continue to strengthen this infrastructure during FY19 and beyond.

Economic factors in general, and the higher education landscape, however, remain challenging. Federal funding is constrained. The pressure to make higher education more affordable through increased levels of financial aid continues. The Tax Cuts and Jobs Act will divert critical resources from our academic and research activities. Investment markets appear to have entered a period of intense volatility after almost a decade of bull market returns. Given our dependence on investment income, this will likely pose challenges in the years ahead. As our global profile expands, we continue to feel the impact of political unrest, natural disasters and changing regulations throughout the world. And, at home, Stanford is significantly impacted by the local economy where Bay Area affordability and congestion issues impact retention and hiring of top talent. Addressing these numerous challenges is one of the key drivers for undertaking our Long Range Planning efforts.

Stanford Medicine's integrated plan recognizes Stanford's unique position as an academic medical center integrated with a research university and a network of care facilities. Both SHC and LPCH have struggled with inpatient capacity constraints in the past. The opening of new hospital facilities will provide cutting edge technology and additional space for patient care. However, opening this new space requires one-time transitional costs and results in a higher level of fixed expenses. Continuing focus on efficiency and effectiveness will be critical as care in the new spaces stabilizes. Additionally, potential changes in private and government healthcare reimbursement will likely put pressure on hospital margins. Stanford Medicine continues to develop innovative and cost conscious ways to deliver care including new programs in precision health and digital health.

We appreciate the confidence in our mission that is demonstrated by the generous support of our donors, alumni, faculty and staff. With a solid financial foundation and focused vision for the future, we are optimistic, yet realistic, about what lies ahead.



Randall S. Livingston
Vice President for Business Affairs
and Chief Financial Officer
Stanford University



M. Suzanne Calandra
Senior Associate Vice President for Finance
Stanford University



Linda Hoff
Chief Financial Officer
Stanford Health Care



Dana Haering
Chief Financial Officer
Lucile Salter Packard Children's Hospital
at Stanford

SELECTED FINANCIAL AND OTHER DATA

Fiscal Years Ended August 31

	2018	2017	2016	2015	2014
	(dollars in millions)				
CONSOLIDATED STATEMENT OF ACTIVITIES HIGHLIGHTS:					
Total operating revenues	\$ 11,311	\$10,504	\$ 9,797	\$ 9,051	\$ 7,924
Student income (A)	635	618	587	564	534
Sponsored research support	1,656	1,636	1,453	1,387	1,266
Health care services	6,302	5,682	5,264	4,744	3,942
Investment income distributed for operations	1,509	1,327	1,338	1,292	1,181
Total operating expenses	10,839	10,056	9,307	8,351	7,389
Change in net assets from operating activities	472	448	490	700	535
Other changes in net assets	2,181	3,156	947	1,034	3,582
Net change in total net assets	\$ 2,653	\$ 3,604	\$ 1,437	\$ 1,734	\$ 4,117
CONSOLIDATED STATEMENT OF FINANCIAL POSITION HIGHLIGHTS:					
Investments at fair value	\$ 37,784	\$35,842	\$31,332	\$ 31,399	\$ 30,464
Plant facilities, net of accumulated depreciation	11,678	10,223	9,000	7,797	6,832
Notes and bonds payable	6,662	6,401	5,402	5,125	5,139
Total assets	54,746	51,648	46,586	44,509	42,547
Total liabilities	11,519	11,074	9,616	8,976	8,748
Total net assets	43,227	40,574	36,970	35,533	33,799
UNIVERSITY STATEMENT OF FINANCIAL POSITION HIGHLIGHTS:					
Investments at fair value	\$ 34,517	\$33,297	\$29,086	\$ 28,766	\$ 27,829
Plant facilities, net of accumulated depreciation	6,508	5,623	5,169	4,796	4,559
Notes and bonds payable	3,834	3,954	3,271	3,085	3,265
Total assets	44,037	41,954	37,767	36,214	35,227
Total liabilities	7,153	7,263	6,048	5,780	6,006
Total net assets	36,884	34,691	31,719	30,434	29,221
OTHER FINANCIAL DATA AND METRICS:					
University endowment at year end	\$ 26,465	\$24,785	\$22,398	\$ 22,223	\$ 21,446
University endowment payout in support of operations	1,240	1,166	1,132	1,058	985
As a % of beginning of year University endowment	5.0%	5.2%	5.1%	4.9%	5.3%
As a % of University total expenses	21.9%	21.7%	23.0%	22.8%	24.8%
Total gifts as reported by the Office of Development (B)	1,097	1,129	951	1,625	976
STUDENTS:					
ENROLLMENT: (C)					
Undergraduate	7,083	7,056	7,032	6,994	7,018
Graduate	9,437	9,368	9,304	9,196	9,118
DEGREES CONFERRED:					
Bachelor degrees	1,754	1,669	1,744	1,671	1,651
Advanced degrees	3,440	3,429	3,370	3,286	3,292
FACULTY:					
Total Professoriate (C)	2,241	2,219	2,180	2,153	2,118
ANNUAL UNDERGRADUATE TUITION RATE (IN DOLLARS)	\$ 48,987	\$47,331	\$45,729	\$ 44,184	\$ 42,690

(A) Student income is reported net of financial aid in the Consolidated Statements of Activities.

(B) Includes University, SHC and LPCH gifts. The FY15 amount includes \$626 million in works of art and special collections which is included with other donations reported by the Office of Development. As stated in Note 1, Stanford does not capitalize works of art and special collections.

(C) Fall quarter immediately following fiscal year end.

MANAGEMENT RESPONSIBILITY FOR FINANCIAL STATEMENTS

The Leland Stanford Junior University ("Stanford University" or the "University") is the sole member of Stanford Health Care (SHC) and Lucile Salter Packard Children's Hospital at Stanford (LPCH). SHC and LPCH each have their own separate management with responsibility for their own financial reporting.

Management of the University, SHC and LPCH is each responsible for the integrity and reliability of their respective portions of these financial statements. The University oversees the process of consolidating SHC's and LPCH's information into the *Consolidated Financial Statements*. Management of each entity represents that, with respect to its financial information, the *Consolidated Financial Statements* in this annual report have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP").

In accumulating and controlling financial data, management of the University, SHC and LPCH maintains separate systems of internal control. Management of the respective entities believes that effective internal control has been designed, implemented and maintained to provide reasonable assurance that assets are protected and that transactions and events are recorded properly. All internal control systems, however, no matter how well designed, have inherent limitations and can provide only reasonable assurance that their objectives are met.

The accompanying *Consolidated Financial Statements* have been audited by the University's, SHC's and LPCH's independent auditor, PricewaterhouseCoopers LLP. Their report expresses an opinion as to whether the *Consolidated Financial Statements*, considered in their entirety, present fairly, in conformity with U.S. GAAP, the consolidated financial position and changes in net assets and cash flows. The independent auditor's opinion is based on audit procedures described in their report, which include considering internal control relevant to the preparation and fair presentation of the *Consolidated Financial Statements* in order to design audit procedures to provide reasonable assurance that the financial statements are free from material misstatement.

The Board of Trustees of the University and the separate Boards of Directors of SHC and LPCH, through their respective audit committees, comprised of trustees and directors not employed by the University, SHC or LPCH, are responsible for engaging the independent auditor and meeting with management, internal auditors and the independent auditor to independently assess whether each is carrying out its responsibility and to discuss auditing, internal control and financial reporting matters. Both the internal auditors and the independent auditor have full and free access to the respective audit committees. Both meet with the respective audit committees at least annually, with and without each other, and without the presence of management representatives.



Randall S. Livingston
Vice President for Business Affairs
and Chief Financial Officer
Stanford University



Linda Hoff
Chief Financial Officer
Stanford Health Care



M. Suzanne Calandra
Senior Associate Vice President for Finance
Stanford University



Dana Haering
Chief Financial Officer
Lucile Salter Packard Children's Hospital at Stanford



Report of Independent Auditors

To the Board of Trustees of the
Leland Stanford Junior University

We have audited the accompanying consolidated financial statements of the Leland Stanford Junior University and its subsidiaries ("Stanford"), which comprise the consolidated statements of financial position as of August 31, 2018 and 2017, and the related consolidated statements of activities and cash flows for the years then ended.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our 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 Stanford'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 Stanford'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 the Leland Stanford Junior University and its subsidiaries as of August 31, 2018 and 2017, and the changes in their net assets and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

A handwritten signature in cursive script, reading "PricewaterhouseCoopers LLP".

December 4, 2018

PricewaterhouseCoopers LLP, Three Embarcadero Center, San Francisco, CA 94111-4004
T: (415) 498 5000, F: (415) 498 7100, www.pwc.com/us

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

At August 31, 2018 and 2017 (in thousands of dollars)

Includes the separate legal entities of The Leland Stanford Junior University, Stanford Health Care and Lucile Salter Packard Children's Hospital at Stanford and other majority-owned or controlled entities of these organizations

	2018	2017
ASSETS		
Cash and cash equivalents	\$ 1,199,367	\$ 1,370,118
Assets limited as to use	165,429	285,606
Accounts receivable, net	1,298,945	1,269,998
Prepaid expenses and other assets	329,700	335,230
Pledges receivable, net	1,518,486	1,574,593
Student loans receivable, net	60,336	70,906
Faculty and staff mortgages and other loans receivable, net	712,161	677,545
Investments at fair value, including securities pledged or on loan of \$75,499 and \$341,412 for 2018 and 2017, respectively	37,783,592	35,841,611
Plant facilities, net of accumulated depreciation	11,678,286	10,222,737
Works of art and special collections	—	—
TOTAL ASSETS	\$ 54,746,302	\$ 51,648,344
LIABILITIES AND NET ASSETS		
LIABILITIES:		
Accounts payable and accrued expenses	\$ 2,291,677	\$ 2,091,027
Accrued pension and postretirement benefit obligations	604,592	702,375
Liabilities associated with investments	708,629	953,794
Deferred income and other obligations	1,212,519	871,729
Notes and bonds payable	6,661,644	6,401,342
U.S. government refundable loan funds	39,678	53,936
TOTAL LIABILITIES	11,518,739	11,074,203
NET ASSETS:		
Unrestricted	25,589,701	23,465,472
Temporarily restricted	9,701,287	9,528,279
Permanently restricted	7,936,575	7,580,390
TOTAL NET ASSETS	43,227,563	40,574,141
TOTAL LIABILITIES AND NET ASSETS	\$ 54,746,302	\$ 51,648,344

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

CONSOLIDATED STATEMENTS OF ACTIVITIES

For the years ended August 31, 2018 and 2017 (in thousands of dollars)

Includes the separate legal entities of The Leland Stanford Junior University, Stanford Health Care and Lucile Salter Packard Children's Hospital at Stanford and other majority-owned or controlled entities of these organizations

	2018	2017
UNRESTRICTED NET ASSETS		
OPERATING REVENUES:		
Student income:		
Undergraduate programs	\$ 368,383	\$ 356,871
Graduate programs	374,857	361,228
Room and board	195,225	186,565
Student financial aid	(303,445)	(286,851)
TOTAL STUDENT INCOME	635,020	617,813
Sponsored research support:		
Direct costs - University	801,534	786,866
Direct costs - SLAC National Accelerator Laboratory	580,314	584,635
Indirect costs	273,679	264,604
TOTAL SPONSORED RESEARCH SUPPORT	1,655,527	1,636,105
HEALTH CARE SERVICES , primarily net patient service revenue	6,302,278	5,681,865
CURRENT YEAR GIFTS IN SUPPORT OF OPERATIONS	283,112	330,350
Net assets released from restrictions:		
Payments received on pledges	142,632	122,980
Prior year gifts released from donor restrictions	55,943	72,807
TOTAL NET ASSETS RELEASED FROM RESTRICTIONS	198,575	195,787
Investment income distributed for operations:		
Endowment	1,254,315	1,182,432
Expendable funds pools and other investment income	254,492	144,138
TOTAL INVESTMENT INCOME DISTRIBUTED FOR OPERATIONS	1,508,807	1,326,570
SPECIAL PROGRAM FEES AND OTHER INCOME	728,076	715,889
TOTAL OPERATING REVENUES	11,311,395	10,504,379
OPERATING EXPENSES:		
Salaries and benefits	6,328,491	5,946,539
Depreciation	656,104	585,915
Other operating expenses	3,854,513	3,523,701
TOTAL OPERATING EXPENSES	10,839,108	10,056,155
CHANGE IN NET ASSETS FROM OPERATING ACTIVITIES	\$ 472,287	\$ 448,224

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

CONSOLIDATED STATEMENTS OF ACTIVITIES, Continued

For the years ended August 31, 2018 and 2017 (in thousands of dollars)

Includes the separate legal entities of The Leland Stanford Junior University, Stanford Health Care and Lucile Salter Packard Children's Hospital at Stanford and other majority-owned or controlled entities of these organizations

	2018	2017
UNRESTRICTED NET ASSETS (continued)		
CHANGE IN NET ASSETS FROM OPERATING ACTIVITIES	\$ 472,287	\$ 448,224
NON-OPERATING ACTIVITIES:		
Increase in reinvested gains	1,159,554	1,600,577
Donor advised funds, net	(6,489)	68,021
Current year gifts not included in operations	3,064	4,090
Capital and other gifts released from restrictions	515,799	110,649
Pension and other postemployment benefit related changes other than net periodic benefit expense	99,844	11,316
Transfer to permanently restricted net assets, net	(53,349)	(50,490)
Transfer to temporarily restricted net assets, net	(61,251)	(67,369)
Swap interest and change in value of swap agreements	56,211	96,212
Loss on extinguishment of debt	(47,613)	—
Contribution received in acquisition of LPFCH	—	109,794
Other	(13,828)	(1,974)
NET CHANGE IN UNRESTRICTED NET ASSETS	2,124,229	2,329,050
TEMPORARILY RESTRICTED NET ASSETS		
Gifts and pledges, net	335,677	387,575
Increase in reinvested gains	525,083	846,654
Change in value of split-interest agreements, net	11,195	10,073
Net assets released to operations	(218,239)	(218,351)
Capital and other gifts released to unrestricted net assets	(515,799)	(110,649)
Transfer from unrestricted net assets, net	61,251	67,369
Transfer from (to) permanently restricted net assets, net	(22,730)	1,811
Other	(3,430)	(2,153)
NET CHANGE IN TEMPORARILY RESTRICTED NET ASSETS	173,008	982,329
PERMANENTLY RESTRICTED NET ASSETS		
Gifts and pledges, net	239,617	242,898
Increase in reinvested gains	27,885	33,251
Change in value of split-interest agreements, net	12,920	(33,419)
Transfer from unrestricted net assets, net	53,349	50,490
Transfer from (to) temporarily restricted net assets, net	22,730	(1,811)
Other	(316)	1,125
NET CHANGE IN PERMANENTLY RESTRICTED NET ASSETS	356,185	292,534
NET CHANGE IN TOTAL NET ASSETS	2,653,422	3,603,913
Total net assets, beginning of year	40,574,141	36,970,228
TOTAL NET ASSETS, END OF YEAR	\$ 43,227,563	\$ 40,574,141

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

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended August 31, 2018 and 2017 (in thousands of dollars)

Includes the separate legal entities of The Leland Stanford Junior University, Stanford Health Care and Lucile Salter Packard Children's Hospital at Stanford and other majority-owned or controlled entities of these organizations

	2018	2017
CASH FLOW FROM OPERATING ACTIVITIES		
Change in net assets	\$ 2,653,422	\$ 3,603,913
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation	656,104	585,915
Amortization of bond premiums and discounts	(21,581)	(18,932)
Provision for doubtful accounts for health care services	63,097	84,661
Losses (gains) on disposal of plant facilities	4,350	(4,247)
Net gains on investments	(2,845,934)	(3,608,538)
Change in fair value of interest rate swaps	(74,093)	(99,223)
Change in split-interest agreements	44,979	132,367
Investment income for restricted purposes	(12,413)	(30,733)
Gifts restricted for long-term investments	(341,510)	(438,816)
Gifts of securities and properties	(31,093)	(89,611)
Contribution received in acquisition of LPFCH	—	(109,794)
Loss on extinguishment of debt	47,613	—
Other	34,049	13,986
Premiums received from bond issuance	76,138	29,069
Changes in operating assets and liabilities:		
Accounts receivable	(99,051)	(279,714)
Pledges receivable, net	(14,565)	79,553
Prepaid expenses and other assets	(31,394)	(15,265)
Accounts payable and accrued expenses	141,623	105,704
Accrued pension and postretirement benefit obligations	(97,783)	2,911
Deferred income and other obligations	112,186	214,351
NET CASH PROVIDED BY OPERATING ACTIVITIES	264,144	157,557
CASH FLOW FROM INVESTING ACTIVITIES		
Additions to plant facilities, net	(1,879,306)	(1,799,979)
Change in assets limited as to use	285,606	266,524
Student, faculty and other loans:		
New loans made	(121,949)	(132,076)
Principal collected	69,831	63,187
Purchases of investments	(12,655,132)	(19,707,814)
Sales and maturities of investments	13,429,380	19,449,776
Change associated with repurchase agreements	246,599	(410,116)
Swap settlement payments, net	(15,393)	—
Cash received in acquisition of LPFCH	—	13,290
NET CASH USED FOR INVESTING ACTIVITIES	(640,364)	(2,257,208)
CASH FLOW FROM FINANCING ACTIVITIES		
Gifts and reinvested income for restricted purposes	391,953	477,391
Proceeds from borrowing	1,247,671	1,264,385
Repayment of notes and bonds payable	(1,083,503)	(241,982)
Bond issuance costs and interest rate swaps	(6,783)	(4,390)
Contributions received for split-interest agreements	29,561	15,730
Payments made under split-interest agreements	(42,630)	(39,750)
Change in liabilities associated with investments	(342,969)	134,900
Other	12,169	(99)
NET CASH PROVIDED BY FINANCING ACTIVITIES	205,469	1,606,185
DECREASE IN CASH AND CASH EQUIVALENTS	(170,751)	(493,466)
Cash and cash equivalents, beginning of year	1,370,118	1,863,584
CASH AND CASH EQUIVALENTS, END OF YEAR	\$ 1,199,367	\$ 1,370,118
SUPPLEMENTAL DATA:		
Interest paid, net of capitalized interest	\$ 202,437	\$ 183,541
Cash collateral received under security lending agreements	\$ 77,137	\$ 348,783
Change in payables for plant facilities	\$ 197,208	\$ 36,946

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. Basis of Presentation and Significant Accounting Policies

BASIS OF PRESENTATION

The *Consolidated Financial Statements* include the accounts of The Leland Stanford Junior University ("Stanford University" or the "University"), Stanford Health Care (SHC), Lucile Salter Packard Children's Hospital at Stanford (LPCH) and other majority-owned or controlled entities of the University, SHC and LPCH. Collectively, all of these entities are referred to as "Stanford". All significant inter-entity transactions and balances have been eliminated in consolidation. Certain prior year amounts have been reclassified to conform to the current year's presentation. These reclassifications had no impact on total net assets or the change in total net assets.

University

The University is a private, not-for-profit educational institution, founded in 1885 by Senator Leland and Mrs. Jane Stanford in memory of their son, Leland Stanford Jr. A Board of Trustees (the "Board") governs the University. The University information presented in the *Consolidated Financial Statements* comprises all of the accounts of the University, including its institutes and research centers, and the Stanford Management Company.

SLAC National Accelerator Laboratory (SLAC) is a federally funded research and development center owned by the U.S. Department of Energy (DOE). The University manages and operates SLAC for the DOE under a management and operating contract; accordingly, the revenues and expenditures of SLAC are included in the *Consolidated Statements of Activities*, but SLAC's assets and liabilities are not included in the *Consolidated Statements of Financial Position*. SLAC employees are University employees and participate in the University's employee benefit programs. The University holds some receivables from the DOE substantially related to reimbursement for employee compensation and benefits.

Hospitals

SHC and LPCH (the "Hospitals") are California not-for-profit public benefit corporations, each governed by a separate Board of Directors. The University is the sole member of each of these entities. SHC and LPCH support the mission of medical education and clinical research of the University's School of Medicine (SOM). Collectively, the SOM and Hospitals comprise Stanford Medicine. SHC and LPCH operate two licensed acute care and specialty hospitals on the Stanford campus and numerous physician clinics on the campus, in community settings and in association with regional hospitals in the San Francisco Bay Area and elsewhere in California. The University has partnered with SHC and LPCH, respectively, to establish physician medical foundations to support Stanford Medicine's mission of delivering quality care to the community and conducting research and education.

Effective September 1, 2016, LPCH became the sole member of Lucile Packard Foundation for Children's Health (LPFCH). LPFCH's mission is to elevate the priority of children's health and increase the quality and accessibility of children's healthcare through leadership and direct investment. No consideration was paid as part of the transaction. The activities of LPFCH are included in LPCH's consolidated financial statements. For financial reporting purposes, during the year ended August 31, 2017, LPCH recognized a contribution for LPFCH's net assets of \$109.8 million in "non-operating activities" in the *Consolidated Statements of Activities*. LPCH also recorded assets acquired of \$277.9 million, including "pledges receivable" of \$123.2 million, and assumed liabilities of \$168.1 million.

TAX STATUS

The University, SHC and LPCH are exempt from federal and state income taxes to the extent provided by Section 501(c)(3) of the Internal Revenue Code and equivalent state provisions, except with regard to unrelated business income which is taxable at corporate income tax rates.

In accordance with the guidance on accounting for uncertainty in income taxes, management regularly evaluates its tax positions and does not believe the University, SHC or LPCH have any uncertain tax positions that require disclosure in or adjustment to the *Consolidated Financial Statements*. The University, SHC and LPCH are subject to routine audits by taxing jurisdictions. Management of each of the consolidated entities believes they are no longer subject to income tax examinations for fiscal years prior to August 31, 2014.

The Tax Cuts and Jobs Act (TCJA) was signed into law on December 22, 2017. Under the TCJA, the University is subject to a 1.4% excise tax on its net investment income as defined under the Internal Revenue Code which, among other things, includes net investment income of certain related entities such as the Hospitals. In addition, the University and Hospitals are both subject to a 21% excise tax on annual compensation in excess of one million dollars paid to certain covered employees. The tax is effective beginning fiscal year 2019. Based on management's interpretation of the law and available guidance, the University has assessed deferred tax obligations arising from the excise tax and has determined that there is no obligation at August 31, 2018.

The University and Hospitals are also subject to a 21% income tax on certain expenses incurred in connection with providing qualified transportation benefits to employees. The tax is effective as of January 1, 2018. Management of the University and Hospitals has determined that the amount of current income tax payable at August 31, 2018 and income tax expense for the period then ended is not material.

BASIS OF ACCOUNTING

The *Consolidated Financial Statements* are prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). These principles require management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the *Consolidated Financial Statements* and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

For financial reporting purposes, net assets and revenues, expenses, gains and losses are classified into one of three categories - unrestricted, temporarily restricted or permanently restricted.

Unrestricted Net Assets

Unrestricted net assets are expendable resources which are not subject to donor-imposed restrictions. Unrestricted net assets include funds designated for operations, net investment in plant facilities, certain investment and endowment gains and funds functioning as endowment. These net assets may be designated by Stanford for specific purposes under internal operating and administrative arrangements or be subject to contractual agreements with external parties. Donor-restricted contributions that relate to Stanford's core activities and are received and expended or deemed expended based on the nature of donors' restrictions are classified as unrestricted. All expenses are recorded as a reduction of unrestricted net assets.

The operating activities of Stanford include the revenues earned and expenses incurred in the current year to support teaching, research, and patient care. The non-operating activities of Stanford include increases in reinvested gains, current year gifts not included in operations, capital and other gifts released from restrictions, pension and other postemployment benefit related changes other than net periodic benefit expense, and certain other non-operating activities.

Transfers from unrestricted net assets to temporarily restricted net assets and permanently restricted net assets are primarily the result of donor redesignations or matching funds that are added to donor gift funds which then take on the same restrictions as the donor gift.

Temporarily Restricted Net Assets

Temporarily restricted net assets include gifts and pledges that are subject to donor-imposed restrictions that expire with the passage of time, payment of pledges or specific actions to be undertaken by Stanford, which are then released and reclassified to unrestricted net assets. In addition, appreciation and income on certain donor-restricted endowment funds are classified as temporarily restricted net assets until authorized for spending (see *Note 11*). Donor-restricted resources intended for capital projects are initially recorded as temporarily restricted and then released and reclassified as unrestricted net assets when the asset is placed in service. Also included in this category is Stanford's net equity in split-interest agreements that are expendable at maturity.

Permanently Restricted Net Assets

Permanently restricted net assets consist primarily of endowment, annuity and split-interest agreements which are subject to donor-imposed restrictions requiring that the principal be invested in perpetuity. Permanently restricted net assets may also include funds reclassified from other classes of net assets as a result of donor-imposed stipulations, Stanford's net equity in split-interest agreements that are not expendable at maturity and net assets which by donor stipulation must be made available in perpetuity for specific purposes.

CASH AND CASH EQUIVALENTS

Cash and cash equivalents included in the *Consolidated Statements of Financial Position* consist of U.S. Treasury bills, certificates of deposit, money market funds and all other short-term investments available for current operations with original maturities of 90 days or less at the time of purchase. These amounts are carried at amortized cost, which approximates fair value. Cash and cash equivalents that are held for investment purposes are classified as investments (see *Note 6*).

ASSETS LIMITED AS TO USE

At August 31, 2018, assets limited as to use consist of 457(b) non-qualified deferred compensation plan assets. The University custodians hold the assets under a grantor trust which requires that they be used to satisfy plan obligations to participants and beneficiaries unless the University becomes insolvent. The funds are primarily invested in mutual funds, at the participants' discretion, which are valued based on quoted market prices (and exchange rates, if applicable) on the last trading date of the principal market on or before August 31.

At August 31, 2017, assets limited as to use consisted of proceeds of tax-exempt bonds issued for the benefit of the University and trustee-held accounts holding proceeds of tax-exempt bonds issued for the benefit of SHC and LPCH. They were limited by the terms of indentures to use for qualified capital projects. These assets consisted of cash and cash equivalents and short-term investments, recorded at cost, which approximated fair value.

ACCOUNTS AND LOANS RECEIVABLE

Accounts and loans receivable are carried at cost, less an allowance for doubtful accounts.

PLEDGES RECEIVABLE

Unconditional promises to give are included in the *Consolidated Financial Statements* as pledges receivable and are classified as temporarily restricted or permanently restricted, depending upon donor stipulations. Pledges recognized on or after September 1, 2009 are recorded at an applicable risk-adjusted discount rate commensurate with the duration of the donor's payment plan. Pledges recognized in periods prior to September 1, 2009 were recorded at a discount based on the U.S. Treasury rate. Conditional promises, which depend on the occurrence of a specified future and uncertain event, such as matching gifts from other donors, are recognized when the conditions are substantially met.

INVESTMENTS

Investments are recorded at fair value. Gains and losses (realized and unrealized) on investments are recognized in the *Consolidated Statements of Activities* (see Note 6).

The investment portfolio may be exposed to various risks, including, but not limited to, interest rate, market, sovereign, geographic, counterparty, liquidity and credit risk. Stanford management regularly assesses these risks through established policies and procedures. Fair value reporting requires management to make estimates and assumptions about the effects of matters that are inherently uncertain. Actual results could differ from these estimates and such differences could have a material impact on the *Consolidated Financial Statements*.

PLANT FACILITIES

Plant facilities are recorded at cost or, for donated assets, at fair value at the date of donation. Interest expense for construction financing, net of income earned on unspent proceeds, is capitalized as a cost of construction. Depreciation is computed using the straight-line method over the estimated useful lives of the assets.

The useful lives used in calculating depreciation for the years ended August 31, 2018 and 2017 are as follows:

Land improvements	5-25 years
Buildings and building improvements	3-50 years
Furniture, fixtures and equipment	3-20 years
Utilities	5-40 years

WORKS OF ART AND SPECIAL COLLECTIONS

Works of art, historical treasures, literary works and artifacts, which are preserved and protected for educational, research and public exhibition purposes, are not capitalized. Donations of such collections are not recorded for financial statement purposes. Purchases of collection items are recorded as operating expenses in the period in which they are acquired. Proceeds from sales of such items are used to acquire other items for the collections.

DONATED ASSETS

Donated assets, other than works of art and special collections, are recorded at fair value at the date of donation. Undeveloped land, including land acquired under the original endowment to the University from Senator Leland and Mrs. Jane Stanford, is reported at fair value at the date of acquisition. Under the terms of the original founding grant, a significant portion of University land may not be sold.

DONOR ADVISED FUNDS

The University receives gifts from donors under donor advised fund (DAF) agreements. These funds are owned and controlled by the University and are separately identified by donor. A significant portion of the gift must be designated to the University. At August 31, 2018 and 2017, approximately \$491.7 million and \$509.5 million, respectively, of DAFs may be used to support other approved charities; the donors have advisory privileges with respect to the distribution of these funds.

Current year gifts under the DAF agreements are included in the *Consolidated Statements of Activities* as “donor advised funds, net” at the full amount of the gift. Transfers of funds to other charitable organizations are included in the *Consolidated Statements of Activities* as a reduction to “donor advised funds, net” at the time the transfer is made.

SPLIT-INTEREST AGREEMENTS

Split-interest agreements consist of arrangements with donors where Stanford has an interest in the assets and receives benefits that are shared with other beneficiaries. Stanford’s split-interest agreements with donors, for which Stanford serves as trustee, consist primarily of irrevocable charitable remainder trusts, charitable gift annuities, pooled income funds, perpetual trusts and charitable lead trusts. Assets are invested and payments are made to donors or other beneficiaries in accordance with the respective agreements. Contribution revenues are recognized at the date the agreements are established. The fair value of the estimated future payments to beneficiaries under these agreements is recorded as a liability.

The assets held under split-interest agreements, where the University is the trustee, were \$823.1 million and \$773.3 million at August 31, 2018 and 2017, respectively, and were recorded in specific investment categories. The assets held under split-interest agreements, where LPCH is the trustee, were \$26.6 million and \$24.1 million at August 31, 2018 and 2017, respectively, and were recorded in specific investment categories. Liabilities for the discounted present value of any income beneficiary interest are reported in “liabilities associated with investments” in the *Consolidated Statements of Financial Position*. At August 31, 2018 and 2017, the University used discount rates of 3.4% and 2.4%, respectively, based on the Charitable Federal Midterm Rate. The LPCH discount rate used during the years ended August 31, 2018 and 2017 was 2.9% and 2.1%, respectively, determined using the T-bill rate.

Included in assets held under split-interest agreements are amounts held to meet legally mandated annuity reserves of \$26.6 million and \$27.6 million as of August 31, 2018 and 2017 respectively, as required by California state law.

For irrevocable split-interest agreements whose assets are held in trusts not administered by the University, Stanford recognizes the estimated fair value of its beneficial interest in the trust assets and the associated gift revenue when reported to Stanford. These split-interest agreements are recorded in the “assets held by other trustees” category of “investments” in the *Consolidated Statements of Financial Position* as described in *Note 6*.

During fiscal years 2018 and 2017, the discounted present value of new University gifts subject to split-interest agreements, net of any income beneficiary share, was \$20.9 million and \$12.0 million, respectively, and was included in “gifts and pledges, net” in the *Consolidated Statements of Activities*. Actuarial gains or losses were included in “change in value of split-interest agreements, net” in the *Consolidated Statements of Activities*.

Funds subject to donor-imposed restrictions requiring that the principal be invested in perpetuity are classified as “permanently restricted net assets” in the *Consolidated Statements of Financial Position*; all others are classified as “temporarily restricted net assets” until the expiration of the donor-imposed restrictions, at which point they will be classified as “unrestricted net assets.”

DEFERRED INCOME AND OTHER OBLIGATIONS

Deferred income and other obligations consist of advance payments of student tuition, student room and board, sponsored research support, and support of other operating programs. Revenue is recognized as it is earned. In addition, the University records other deferred income and obligations as described below.

Deferred Rental Income

As part of its investment portfolio, the University holds certain investment properties that it leases to third parties under non-cancellable leases. In some lease transactions with properties in the Stanford Research Park and other properties, including the Stanford Shopping Center, prepaid rent is received, recorded as deferred rental income and amortized over the term of the lease (see also the *Future Minimum Rental Income* section in *Note 6*). As of August 31, 2018 and 2017, deferred rental income was \$601.9 million and \$609.6 million, respectively.

457(b) Deferred Compensation Plan

The University offers a non-qualified deferred compensation plan under Internal Revenue Code 457(b) to a select group of highly compensated employees. There is no University contribution related to the plan. The University has recorded both an asset and a liability related to the plan of \$165.4 million as of August 31, 2018; the assets are included in "assets limited as to use" on the *Consolidated Statements of Financial Position*.

Repurchase Obligations

In an effort to provide affordable housing, certain residential units are offered to eligible faculty and staff under long-term restricted ground leases. These units are located on or in close proximity to Stanford's campus. The cost of the units that are constructed or purchased by the University is included in "plant facilities, net of accumulated depreciation" in the *Consolidated Statements of Financial Position*.

The University has the obligation to repurchase certain residential units when certain triggering events occur. As of August 31, 2018, Stanford has recognized a net repurchase obligation of \$63.2 million to repurchase its interests in these residential units, net of home mortgage financing assistance provided by the University of \$117.9 million (see *Note 5*). The change in the repurchase obligation and the original purchase price is recorded as interest accretion and is reflected in "other operating expenses" in the *Consolidated Statements of Activities*. For the year ended August 31, 2018, interest accretion was \$1.5 million.

Asset Retirement Obligations

Asset retirement obligations are legal obligations associated with the retirement of long-lived assets. These liabilities are initially recorded at fair value and the related asset retirement costs are capitalized at the same amount as the liability. Asset retirement costs are subsequently amortized over the useful lives of the related assets and the obligations are increased based on an appropriate discount rate. As of August 31, 2018 and 2017, SHC had asset retirement obligations of \$93.6 million and \$8.3 million, respectively.

SELF-INSURANCE

The University self-insures at varying levels for unemployment, disability, workers' compensation, property losses, certain health care plans and general and professional liability losses. SHC and LPCH self-insure at varying levels for health care plans, workers' compensation and, through their captive insurance company, for professional liability losses. Third-party insurance is purchased to cover liabilities above the self-insurance limits. Estimates of retained exposures are accrued.

INTEREST RATE EXCHANGE AGREEMENTS

The University and SHC have entered into several interest rate exchange agreements to reduce the effect of interest rate fluctuation on their variable rate revenue bonds and notes. Current accounting guidance for derivatives and hedges requires entities to recognize all derivative instruments at fair value. The University and SHC do not designate and qualify their derivatives for hedge accounting; accordingly, any changes in the fair value (i.e. gains or losses) flow directly to the *Consolidated Statements of Activities* as a non-operating activity in "swap interest and change in value of swap agreements." The settlements (net cash payments less receipts) under the interest rate exchange agreements are recorded in the *Consolidated Statements of Activities* in "swap interest and change in value of swap agreements" for the University and SHC; in fiscal year 2017 SHC recorded the settlements in "other operating expenses."

The University has also entered into interest rate exchange agreements to reduce the effect of interest rate fluctuations of certain investment positions (see *Note 8*).

STUDENT FINANCIAL AID

The University provides financial assistance in the form of scholarship and fellowship grants that cover a portion of tuition, living and other costs that is reflected as a reduction of student income. Graduate student research and teaching assistantship appointments provide the recipient with salary and tuition support, which are reflected as salaries and benefits expense and other operating expense, respectively.

SPONSORED RESEARCH

The University conducts substantial research for the federal government pursuant to contracts and grants from federal agencies and departments. Sponsored research revenue earned from the Federal government (including SLAC) totaled \$1.3 billion for both years ended August 31, 2018 and 2017. The University records reimbursements of direct and indirect costs (facilities and administrative costs) from grants and contracts as operating revenues. The Office of Naval Research is the University's cognizant federal agency for determining indirect cost rates charged to federally sponsored agreements. It is supported by the Defense Contract Audit Agency, which has the responsibility for auditing direct and indirect charges under those agreements.

PATIENT CARE AND OTHER SERVICES

Health Care Services

"Patient care, net" is reported in the *Consolidated Statements of Activities* at the estimated net realizable amounts from patients, third-party payers, and others for services rendered. SHC and LPCH derive a majority of patient care revenues from contractual agreements with Medicare, Medi-Cal and other third-party payers. Payments under these agreements and programs are based on a variety of payment models (see *Note 3*).

The University has entered into various operating agreements with SHC and LPCH for the professional services of SOM faculty members, and for non-physician services such as telecommunications, facilities, and other services. The payments by the Hospitals to the University for professional services are eliminated in consolidation.

Charity Care

SHC and LPCH provide care to patients who meet certain criteria under their charity care policies without charge or at amounts less than their established rates. The Hospitals do not record revenue for amounts determined to qualify as charity care (see *Note 3*).

RECENT ACCOUNTING PRONOUNCEMENTS

Periodically, the Financial Accounting Standards Board (FASB) issues updates to the Accounting Standards Codification (ASC) which impacts Stanford's financial reporting and related disclosures. The paragraphs which follow summarize a number of relevant updates. Unless otherwise noted, Stanford is currently evaluating the impact that these updates will have on the *Consolidated Financial Statements*.

Fair value - In August 2018, the FASB issued an ASC update which adds, modifies, and removes some fair value measurement disclosure requirements. The new guidance is effective for fiscal year 2021 and will not have a material impact on the *Consolidated Financial Statements*.

Defined benefit plan disclosures - In August 2018, the FASB issued an ASC update which adds, removes, and clarifies disclosure requirements related to defined benefit pension and other postretirement plans. The new guidance is effective for fiscal year 2021 and will not have a material impact on the *Consolidated Financial Statements*.

Cloud computing arrangements - In August 2018, the FASB issued an ASC update to allow capitalization of implementation costs incurred in a cloud computing arrangement in a manner that is consistent with the

capitalization of implementation costs incurred to develop or obtain internal-use software. The new guidance is effective for fiscal year 2022.

Pension service costs - In March 2017, the FASB issued an ASC update which requires that an employer report the service cost component of pension costs in the same line item as employee compensation costs within operating income. The other components of net benefit cost are required to be presented as "non-operating activities", and will not be eligible for capitalization. The new guidance is effective for fiscal year 2020 and will have minimal impact. There is no impact on total net assets or change in total net assets.

Statement of cash flows - In November 2016, the FASB issued an ASC update which requires that the amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The new guidance is effective for fiscal year 2020 and will have minimal impact. There is no impact on total net assets or change in total net assets.

In August 2016, the FASB issued an ASC update which intends to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The new guidance is effective for fiscal year 2020.

Not-for-profit reporting - In August 2016, the FASB issued an ASC update which modifies the current NFP reporting requirements. The ASC update changes the way NFPs classify net assets and results in significant changes to financial reporting and disclosures for NFPs. The new guidance is effective for fiscal year 2019.

Leases - In February 2016, the FASB issued an ASC update which requires lessees to recognize operating and financing lease liabilities and corresponding right-of use assets on the statement of financial position. The new guidance is effective for fiscal year 2020.

Revenue recognition - In May 2014, the FASB issued an ASC update to improve consistency of revenue recognition practices across industries for economically similar transactions. Subsequently, the FASB has issued several amendments and updates to the original standard. The core principle is that an entity recognizes revenue for goods or services to customers in an amount that reflects the consideration it expects to receive in return. The guidance is effective for fiscal year 2019.

In June 2018, the FASB issued an ASC update which will assist entities in (1) evaluating whether transactions should be accounted for as contributions (nonreciprocal transactions) or as exchange (reciprocal) transactions and (2) determining whether a contribution is conditional. The guidance is effective for fiscal year 2019.

2. Accounts Receivable

Accounts receivable, net of bad debt allowances, at August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2018				
U.S. government sponsors	\$ 119,245	\$ —	\$ —	\$ 119,245
Non-federal sponsors and programs	85,797	28,711	22,990	137,498
Pending trades of securities	11,318	—	—	11,318
Accrued interest on investments	17,934	—	—	17,934
Student	7,940	—	—	7,940
Patient and third-party payers:				
Blue Cross	—	176,858	84,585	261,443
Blue Shield	—	76,401	29,163	105,564
Medicare	—	114,210	1,419	115,629
Medi-Cal	—	17,159	43,740	60,899
Other managed care and payers	—	446,731	141,985	588,716
Other	44,536	18,479	32,317	95,332
	286,770	878,549	356,199	1,521,518
Less bad debt allowances	(1,732)	(208,282)	(12,559)	(222,573)
ACCOUNTS RECEIVABLE, NET	\$ 285,038	\$ 670,267	\$ 343,640	\$ 1,298,945
2017				
U.S. government sponsors	\$ 122,645	\$ —	\$ —	\$ 122,645
Non-federal sponsors and programs	74,438	20,483	9,271	104,192
Pending trades of securities	22,033	—	—	22,033
Accrued interest on investments	16,366	—	—	16,366
Student	7,660	—	—	7,660
Patient and third-party payers:				
Blue Cross	—	149,536	62,217	211,753
Blue Shield	—	82,847	29,470	112,317
Medicare	—	116,950	836	117,786
Medi-Cal	—	16,072	48,651	64,723
Other managed care and payers	—	436,614	159,532	596,146
Other	43,208	36,961	20,364	100,533
	286,350	859,463	330,341	1,476,154
Less bad debt allowances	(1,657)	(191,285)	(13,214)	(206,156)
ACCOUNTS RECEIVABLE, NET	\$ 284,693	\$ 668,178	\$ 317,127	\$ 1,269,998

3. Health Care Services Revenue

SHC and LPCH derive a majority of health care services revenue from contractual agreements with Medicare, Medi-Cal and other third-party payers that provide for payments at amounts different from established rates. Payments under these agreements and programs are based on a variety of payment models, including estimated retroactive audit adjustments under reimbursement agreements with third-party payers. Retroactive adjustments are estimated and recorded in the period the related services are rendered and adjusted in future periods, as final settlements are determined. Contracts, laws and regulations governing the Medicare and Medi-Cal programs are complex and subject to interpretation. As a result, it is reasonably possible that recorded estimates may change by a material amount in the near term.

A summary of payment arrangements with major third-party payers follows:

Medicare

Inpatient acute care services rendered to Medicare program beneficiaries are paid at prospectively determined rates per discharge. These rates vary according to a patient classification system that is based on clinical, diagnostic and other factors. Medicare reimburses hospitals for covered outpatient services rendered to its beneficiaries by way of an outpatient prospective payment system based on ambulatory payment classifications.

Inpatient non-acute services, certain outpatient services and medical education costs related to Medicare beneficiaries are paid based, in part, on a cost reimbursement methodology subject to final settlement after submission of annual cost reports and audits thereof by the Medicare fiscal intermediary. The estimated amounts due to or from the program are reviewed and adjusted annually based on the status of such audits and any subsequent appeals. Differences between final settlements and amounts accrued in previous years are reported as adjustments to net health care services revenue in the year examination is substantially completed. Medicare cost reports have been audited by the Medicare administrative contractor through August 31, 2010 for SHC and August 31, 2016 for LPCH.

Professional services are reimbursed based on a fee schedule.

Medi-Cal

The State reimburses hospitals for inpatient services rendered to Medi-Cal program beneficiaries based on a prospectively determined rate per discharge. Hospital outpatient and professional services are reimbursed based upon prospectively determined fee schedules.

The California Children's Services ("CCS") Program is a partnership between state and counties that provides medical case management for children in California diagnosed with serious chronic diseases. Currently, approximately 70 percent of CCS-eligible children are also Medi-Cal eligible. The Medi-Cal program reimburses their care.

Managed Care Organizations

SHC and LPCH have entered into agreements with numerous third-party payers to provide patient care to beneficiaries under a variety of payment arrangements. These include arrangements with:

- Commercial insurance companies which reimburse at negotiated charges.
- Managed care contracts such as those with HMOs and PPOs, which reimburse at contracted or per diem rates, which are usually less than full charges.
- Counties in the State of California, which reimburse for certain indigent patients covered under county contracts.

Uninsured

For uninsured patients that do not qualify for charity care, revenue is recognized on the basis of standard rates for services less an uninsured discount applied to the patient's account that approximates the average discount for managed care payers.

The following table presents health care services revenue, net of contractual allowances (but before provision for doubtful accounts), for the years ended August 31, in thousands of dollars:

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
2018					
Patient care revenue:					
Medicare	\$ —	\$ 892,195	\$ 5,512	\$ —	\$ 897,707
Medi-Cal	—	140,788	362,300	—	503,088
Managed care	—	3,498,434	1,103,782	—	4,602,216
Self pay and other	—	160,605	80,871	—	241,476
Physician services and support (see Note 1)	1,048,749	43,344	—	(1,092,093)	—
Total patient care revenue	1,048,749	4,735,366	1,552,465	(1,092,093)	6,244,487
Premium revenue	—	92,654	—	—	92,654
Other services and support	40,672	—	—	(12,438)	28,234
	1,089,421	4,828,020	1,552,465	(1,104,531)	6,365,375
Provision for doubtful accounts	—	(57,437)	(5,660)	—	(63,097)
HEALTH CARE SERVICES REVENUE	\$1,089,421	\$4,770,583	\$1,546,805	\$ (1,104,531)	\$ 6,302,278
2017					
Patient care revenue:					
Medicare	\$ —	\$ 858,076	\$ 6,094	\$ —	\$ 864,170
Medi-Cal	—	93,699	270,041	—	363,740
Managed care	—	3,108,719	1,030,995	—	4,139,714
Self pay and other	—	206,191	85,356	—	291,547
Physician services and support (see Note 1)	986,184	44,845	—	(1,031,029)	—
Total patient care revenue	986,184	4,311,530	1,392,486	(1,031,029)	5,659,171
Premium revenue	—	80,647	—	—	80,647
Other services and support	37,137	—	—	(10,429)	26,708
	1,023,321	4,392,177	1,392,486	(1,041,458)	5,766,526
Provision for doubtful accounts	—	(77,004)	(7,657)	—	(84,661)
HEALTH CARE SERVICES REVENUE	\$1,023,321	\$4,315,173	\$1,384,829	\$ (1,041,458)	\$ 5,681,865

SHC recognized net health care services revenue adjustments of \$2.4 million and \$24.3 million as a result of prior years' favorable developments related to reimbursement and appeals for the years ended August 31, 2018 and 2017, respectively. LPCH had no significant adjustments to revenue for the years ended August 31, 2018 and 2017.

SHC's and LPCH's provisions for doubtful accounts are based upon management's assessment of expected net collections considering historical experience and other collection indicators.

Charity Care and Uncompensated Costs

SHC's estimated cost of providing charity care was \$24.8 million and \$22.0 million, and LPCH's estimated cost of providing charity care was \$1.8 million and \$2.1 million for the years ended August 31, 2018 and 2017, respectively. This cost is estimated by calculating a ratio of total costs to gross patient service charges at established rates, and then multiplying that ratio by gross uncompensated patient service charges at established rates associated with providing care to charity patients. SHC received \$876 thousand and \$663 thousand during the years ended August 31, 2018 and 2017, respectively, from contributions that were restricted for the care of indigent patients.

SHC and LPCH also provide services to other patients under the Medicare, Medi-Cal and other publicly sponsored programs, which reimburse at amounts less than the cost of the services provided to the recipients. Estimated costs in excess of reimbursements for the Medicare, Medi-Cal and other publicly sponsored programs for the years ended August 31, 2018 and 2017 were \$976.2 million and \$973.6 million for SHC, and \$298.1 million and \$237.5 million for LPCH, respectively.

Provider Fee

The State of California enacted legislation in 2009 as subsequently amended which established a Hospital Quality Assurance Fee (QAF) Program and a Hospital Fee Program. These programs impose a provider fee on certain California general acute care hospitals that, combined with federal matching funds, is used to provide supplemental payments to certain hospitals and support the State's effort to maintain health care coverage for children. California's participation in these programs was made permanent by a ballot initiative passed in November 2016. However, specific portions of the program covering the period from January 1, 2015 to June 30, 2019, have not yet been approved by the Centers for Medicare and Medicaid Services (CMS). Accordingly, any potential activity under unapproved programs related to January 1, 2015 through August 31, 2018 have not been recorded in the *Consolidated Statements of Activities*. SHC recorded \$49.5 million and \$6.2 million in deferred revenue as of August 31, 2018 and 2017, respectively, pending CMS approval. LPCH recorded \$63.4 million and \$7.4 million in deferred revenue as of August 31, 2018 and 2017, respectively, pending CMS approval.

Provider fee revenue, net of expenses, under the approved portions of the programs for the years ended August 31, in thousands of dollars, is as follows:

	SHC	LPCH	CONSOLIDATED
2018			
Revenues	\$ 89,718	\$ 110,999	\$ 200,717
Expenses	(77,302)	(25,852)	(103,154)
TOTAL	\$ 12,416	\$ 85,147	\$ 97,563
2017			
Revenues	\$ 45,616	\$ 40,976	\$ 86,592
Expenses	(41,594)	(22,011)	(63,605)
TOTAL	\$ 4,022	\$ 18,965	\$ 22,987

4. Pledges Receivable

Pledges are recorded at discount rates, ranging from 1.1% to 5.7%. At August 31, 2018 and 2017, pledges receivable, net of discounts and allowances, in thousands of dollars, are as follows:

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
2018					
One year or less	\$ 217,754	\$ 34,906	\$ 42,720	\$ (2,922)	\$ 292,458
Between one year and five years	968,495	52,023	81,894	(22,671)	1,079,741
More than five years	295,908	7,000	39,460	(8,000)	334,368
	1,482,157	93,929	164,074	(33,593)	1,706,567
Less discounts and allowances	(160,989)	(9,394)	(17,698)	—	(188,081)
PLEDGES RECEIVABLE, NET	\$ 1,321,168	\$ 84,535	\$ 146,376	\$ (33,593)	\$ 1,518,486
2017					
One year or less	\$ 127,474	\$ 14,772	\$ 49,367	\$ (5,252)	\$ 186,361
Between one year and five years	1,055,991	82,647	102,743	(20,023)	1,221,358
More than five years	332,268	2,750	28,050	(9,000)	354,068
	1,515,733	100,169	180,160	(34,275)	1,761,787
Less discounts and allowances	(159,198)	(10,161)	(17,835)	—	(187,194)
PLEDGES RECEIVABLE, NET	\$ 1,356,535	\$ 90,008	\$ 162,325	\$ (34,275)	\$ 1,574,593

5. Loans Receivable

Loans receivable consist primarily of University student loans receivable and faculty and staff mortgages. University management regularly assesses the adequacy of the allowance for credit losses of its loans by performing ongoing evaluations considering the differing economic risks associated with each loan category, the financial condition of specific borrowers, the economic environment in which the borrowers operate, the level of delinquent loans and the value of any collateral.

STUDENT LOANS RECEIVABLE

Student loans receivable consist of institutional and federally-sponsored loans due from both current and former students. Student loans and allowance for student loan losses at August 31, 2018 and 2017, in thousands of dollars, are as follows:

	2018	2017
Institutional loans	\$ 26,714	\$ 26,179
Federally-sponsored loans	34,261	45,575
	60,975	71,754
Less allowance for student loan losses	(639)	(848)
STUDENT LOANS RECEIVABLE, NET	\$ 60,336	\$ 70,906

Institutional loans are funded by donor funds restricted for student loan purposes and University funds made available to meet demand for student loan borrowing in specific situations.

Federally-sponsored loans are funded by advances to the University primarily under the Federal Perkins Loan Program (the "Program"). Loans to students under the Program are subject to mandatory interest rates and significant restrictions and can be assigned to the federal government in certain non-repayment situations. In these situations, the federal portion of the loan balance is guaranteed.

Amounts received under the Program are ultimately refundable to the federal government in the event the University no longer participates in the Program, and accordingly, have been reported as an obligation in the *Consolidated Statements of Financial Position* as "U.S. government refundable loan funds." The Program expired in September 2017 and the University is no longer issuing new loans under the Program. During the year ended August 31, 2018, the University returned \$14.3 million of Program funds to the U.S. Department of Education.

FACULTY AND STAFF MORTGAGES

In a program to attract and retain excellent faculty and senior staff, the University provides home mortgage financing assistance, primarily in the form of subordinated loans. The loans and mortgages are collateralized by deeds of trust on properties concentrated in the region surrounding the University. Notes receivable amounting to \$695.7 million and \$676.8 million at August 31, 2018 and 2017, respectively, from University faculty and staff are included in "faculty and staff mortgages and other loans receivable, net" in the *Consolidated Statements of Financial Position*. Management has determined that no allowance is necessary.

The 2018 amount is net of \$117.9 million offset against the University's recorded obligation to repurchase certain residential units sold under long-term restricted ground leases. There was no offset recorded in 2017. See the *Repurchase Obligations* section of *Note 1*.

6. Investments

Investments are measured and recorded at fair value. The valuation methodology, investment categories, fair value hierarchy, certain investment activities and related commitments for fiscal years 2018 and 2017 are discussed below.

Investments held by Stanford at August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
2018					
Investment assets:					
Cash and short-term investments	\$ 1,040,835	\$ 447,307	\$ 3,400	\$ —	\$ 1,491,542
Collateral held for securities loaned	77,137	—	—	—	77,137
Public equities	8,335,690	248,631	45,865	—	8,630,186
Derivatives	(554)	—	—	—	(554)
Fixed income	2,419,741	169,983	93,485	—	2,683,209
Real estate	7,367,786	41,688	6,693	—	7,416,167
Natural resources	2,525,967	—	10,944	—	2,536,911
Private equities	8,430,025	—	22,247	—	8,452,272
Absolute return	5,673,513	—	23,378	—	5,696,891
Assets held by other trustees	123,993	—	26,634	—	150,627
Other	648,308	896	—	—	649,204
Total	36,642,441	908,505	232,646	—	37,783,592
Hospitals' funds invested in the University's investment pools	(2,125,005)	1,393,429	724,423	7,153	—
INVESTMENTS AT FAIR VALUE	\$34,517,436	\$ 2,301,934	\$ 957,069	\$ 7,153	\$ 37,783,592
Investment liabilities:					
Income beneficiary share of split interest agreements ¹	\$ 541,558	\$ —	\$ —	\$ —	\$ 541,558
Securities lending	77,137	—	—	—	77,137
Securities sold, not yet purchased	69,092	—	—	—	69,092
Accrued management fees	6,693	—	—	—	6,693
Pending trades of securities	2,912	—	—	—	2,912
Other	11,237	—	—	—	11,237
LIABILITIES ASSOCIATED WITH INVESTMENTS	\$ 708,629	\$ —	\$ —	\$ —	\$ 708,629

¹ See split-interest agreements section in Note 1

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
2017					
Investment assets:					
Cash and short-term investments	\$ 1,251,787	\$ 284,403	\$ —	\$ —	\$ 1,536,190
Collateral held for securities loaned	348,783	—	—	—	348,783
Public equities	8,106,229	—	42,086	—	8,148,315
Derivatives	1,152	—	—	—	1,152
Fixed income	2,599,389	66,399	99,130	—	2,764,918
Real estate	7,069,189	—	7,220	—	7,076,409
Natural resources	2,475,606	—	10,328	—	2,485,934
Private equities	7,305,412	—	20,784	—	7,326,196
Absolute return	5,497,956	—	20,429	—	5,518,385
Assets held by other trustees	138,804	—	24,052	—	162,856
Other	471,443	415	615	—	472,473
Total	35,265,750	351,217	224,644	—	35,841,611
Hospitals' funds invested in the University's investment pools	(1,968,257)	1,281,173	680,037	7,047	—
INVESTMENTS AT FAIR VALUE	\$ 33,297,493	\$ 1,632,390	\$ 904,681	\$ 7,047	\$ 35,841,611
Investment liabilities:					
Income beneficiary share of split interest agreements ¹	\$ 509,972	\$ —	\$ —	\$ —	\$ 509,972
Securities lending	348,783	—	—	—	348,783
Debt of investment entity	65,550	—	—	—	65,550
Pending trades of securities	12,480	—	—	—	12,480
Other	17,009	—	—	—	17,009
LIABILITIES ASSOCIATED WITH INVESTMENTS	\$ 953,794	\$ —	\$ —	\$ —	\$ 953,794

¹ See split-interest agreements section in Note 1

VALUATION METHODOLOGY

To the extent available, Stanford's investments are recorded at fair value based on quoted prices in active markets on a trade-date basis. Stanford's investments that are listed on any U.S. or non-U.S. recognized exchanges are valued based on readily available market quotations. When such inputs do not exist, fair value measurements are based on the best available information and usually require a degree of judgment. For alternative investments, which are principally interests in limited partnerships or similar investments in private equity, real estate, natural resources, public equities and absolute return funds, the value is primarily based on the Net Asset Value (NAV) of the underlying investments. The NAV is reported by external investment managers in accordance with their policies as described in their respective financial statements and offering memoranda. The most recent NAV reported is adjusted for any investment-related transactions such as capital calls or distributions and significant known valuation changes of its related portfolio through August 31, 2018 and 2017, respectively. These investments are generally less liquid than other investments, and the value reported may differ from the values that would have been reported had a ready market for these investments existed.

The University exercises due diligence in assessing the policies, procedures, and controls implemented by its external investment managers and believes its proportionate share of the carrying amount of these alternative investments is a reasonable estimate of fair value. Such due diligence procedures include, but are not limited to, ongoing communication, on-site visits, and review of information from external investment managers as well as review of performance. In conjunction with these procedures, estimated fair value is

determined by consideration of a range of factors, such as market conditions, redemption terms and restrictions, and risks inherent in the inputs of the external investment managers' valuations.

For certain alternative investments which are direct investments, Stanford considers various factors to estimate fair value, such as, but not limited to, the timing of the transaction, the market in which the company operates, comparable transactions, company performance and projections, as well as discounted cash flow analysis. The selection of an appropriate valuation technique may be affected by the availability and general reliability of relevant inputs. In some cases, one valuation technique may provide the best indication of fair value while in other circumstances, multiple valuation techniques may be appropriate. Furthermore, Stanford may review the investment's underlying portfolio as well as engage external appraisers, depending on the circumstances and the nature of the investment.

INVESTMENT CATEGORIES

Investments are categorized by asset class and valued as described below:

Cash and short-term investments include cash, cash equivalents, mutual funds, and fixed income investments with maturities of less than one year (see also *Note 1*). Cash equivalents such as money market funds and overnight repurchase agreements are carried at cost. Fixed income investments such as short-term U.S. Treasury bills are carried at amortized cost. Due to the short-term nature and liquidity of these financial instruments, the carrying values of these assets approximates fair value. Cash may include collateral provided to or received from counterparties associated with investment-related derivative contracts (see *Note 8*).

Collateral held for securities loaned is generally received in the form of cash and cash equivalents and is reinvested for income in cash equivalent vehicles. These investments are recorded at fair value.

Public equities are investments valued based on quoted market prices (and exchange rates, if applicable) on the last trading date of the principal market on or before August 31. They include investments that are directly held as well as commingled funds which invest in publicly traded equities. The fair values of public equities held through alternative investments are calculated by the respective external investment managers as described under *Valuation Methodology* above.

Derivatives are used by Stanford to manage its exposure to certain risks relating to ongoing business and investment operations. Derivatives include forward currency contracts which are valued using industry standard models with the applicable forward exchange rates.

Fixed income investments are valued by independent pricing sources, broker dealers or pricing models that factor in, where applicable, recently executed transactions, interest rates, bond or credit default spreads and volatility. They primarily include investments that are actively traded fixed income securities or mutual funds.

Real estate represents directly owned real estate, mutual funds, interests in long-term ground leases and other real estate interests held through limited partnerships. The fair value of real estate directly owned by Stanford, including the Stanford Shopping Center and the Stanford Research Park, is based primarily on discounted cash flows, using estimates from the asset manager or external investment managers, corroborated by appraisals and market data, if available. The fair value of alternative investments in real estate held through limited partnerships is based on the NAV reported by the external investment managers and is adjusted as described under *Valuation Methodology* above. The fair value of real estate held through commingled and mutual funds are based on quoted market prices.

Natural resources represent commodity and energy related investments held through both public and non-public investments. Public securities are valued based on quoted market prices (and exchange rates, if applicable) on the last trading day of the principal market on or before August 31. The fair value of direct

non-public investments are based on a combination of models, including appraisals, discounted cash flows and commodity price factors. The fair value of natural resources held as alternative investments is based on the NAV reported by the external investment managers and is adjusted as described under *Valuation Methodology* above.

Private equities are investments primarily in venture capital and leveraged buyout strategies. Distributions from these investments are received in the form of either cash or distributed shares, which are typically valued using quoted market prices. The fair value of alternative investments is based on the NAV reported by the external investment managers and is adjusted as described under *Valuation Methodology* above.

Absolute return investments are typically commingled funds that employ multiple strategies to produce positive returns which may be uncorrelated to financial market activities. The fair value of these types of alternative investments is valued based on the NAV reported by the external investment managers and is adjusted as described under *Valuation Methodology* above.

Assets held by other trustees generally represent Stanford's residual (or beneficial) interest in split-interest agreements where the University, SHC or LPCH is not the trustee. The residual interest represents the present value of the future distributions expected to be received over the term of the agreement, which approximates fair value, and the assets are based on estimates provided by trustees.

Other investments are typically non-public investments such as preferred stocks, convertible notes and mineral rights. The fair value of these types of direct investments is determined as described under *Valuation Methodology* above.

FAIR VALUE HIERARCHY

U.S. GAAP defines fair value as the price received upon sale of an asset or paid upon transfer of a liability in an orderly transaction between market participants. Current guidance establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Inputs are used in applying the various valuation techniques and take into account the assumptions that market participants use to make valuation decisions. Inputs may include price information, credit data, liquidity statistics, and other factors specific to the financial instrument. Observable inputs reflect market data obtained from independent sources. In contrast, unobservable inputs reflect the entity's assumptions about how market participants would value the financial instrument. Valuation techniques used under U.S. GAAP must maximize the use of observable inputs to the extent available.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used for financial instruments measured at fair value on a recurring basis:

Level 1 - Investments whose values are based on quoted market prices in active markets for identical assets or liabilities are classified as Level 1. Level 1 investments include active listed equities and certain short term fixed income securities. Such investments are valued based upon the closing price quoted on the last trading date on or before the reporting date on the principal market, without adjustment.

Exchange-traded derivatives such as options, futures contracts and warrants using observable inputs such as the last reportable sale price or the most recent bid price are typically classified as Level 1 (see *Note 8*).

Level 2 - Investments that trade in markets that are not actively traded, but are valued based on quoted market prices, dealer quotations, or alternative pricing sources for similar assets or liabilities are classified as Level 2. These investments include certain U.S. government and sovereign obligations, government agency obligations, investment grade corporate bonds and certain limited marketable securities.

Privately negotiated over-the-counter (OTC) derivatives such as forward currency contracts, total return swaps, and interest rate swaps are typically classified as Level 2 (see *Note 8*). In instances where quotations received from counterparties or valuation models are used, the value of an OTC derivative depends upon the contractual terms of the instrument as well as the availability and reliability of observable inputs. Such inputs include market prices for reference securities, yield curves, or credit curves.

Level 3 - Investments classified as Level 3 have significant unobservable inputs, as they trade infrequently or not at all. The inputs into the determination of fair value of these investments are based upon the best information available and may require significant management judgment. These investments primarily consist of Stanford's direct real estate and alternative investments.

The following tables summarize Stanford's investment assets and liabilities within the fair value hierarchy and asset categories at August 31, 2018 and 2017, in thousands of dollars:

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
2018				
Investment assets:				
Cash and short-term investments	\$ 569,707	\$ 914,425	\$ —	\$ 1,484,132
Collateral held for securities loaned	—	77,137	—	77,137
Public equities	2,990,428	1,417	—	2,991,845
Derivatives	—	(554)	—	(554)
Fixed income	466,923	2,216,286	—	2,683,209
Real estate	96,565	—	5,792,978	5,889,543
Natural resources	520,183	—	210,270	730,453
Private equities	505	—	20,188	20,693
Absolute return	1,278	—	27,378	28,656
Assets held by other trustees	11,157	—	139,470	150,627
Other	9,921	—	627,989	637,910
INVESTMENTS SUBJECT TO FAIR VALUE LEVELING	\$ 4,666,667	\$ 3,208,711	\$ 6,818,273	14,693,651
Investments measured using Net Asset Value ¹				23,089,941
TOTAL CONSOLIDATED INVESTMENT ASSETS				\$ 37,783,592
Investment liabilities:				
Income beneficiary share of split interest agreements	\$ —	\$ 541,558	\$ —	\$ 541,558
Securities lending	—	77,137	—	77,137
Securities sold, not yet purchased	69,092	—	—	69,092
Accrued management fees	6,693	—	—	6,693
Pending trades of securities	2,912	—	—	2,912
Other	—	—	11,237	11,237
LIABILITIES ASSOCIATED WITH INVESTMENTS	\$ 78,697	\$ 618,695	\$ 11,237	\$ 708,629

	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
2017				
Investment assets:				
Cash and short-term investments	\$ 364,762	\$ 1,171,428	\$ —	\$ 1,536,190
Collateral held for securities loaned	—	348,783	—	348,783
Public equities	2,576,316	261	—	2,576,577
Derivatives	—	1,152	—	1,152
Fixed income	359,964	2,402,729	—	2,762,693
Real estate	49,811	—	5,417,959	5,467,770
Natural resources	412,487	—	238,161	650,648
Private equities	3,424	—	52,259	55,683
Absolute return	1,313	—	28,653	29,966
Assets held by other trustees	8,004	—	154,852	162,856
Other	1,423	—	461,040	462,463
INVESTMENTS SUBJECT TO FAIR VALUE LEVELING	\$ 3,777,504	\$ 3,924,353	\$ 6,352,924	14,054,781
Investments measured using Net Asset Value ¹				21,786,830
TOTAL CONSOLIDATED INVESTMENT ASSETS				\$ 35,841,611
Investment liabilities:				
Income beneficiary share of split interest agreements	\$ —	\$ 509,972	\$ —	\$ 509,972
Securities lending	—	348,783	—	348,783
Debt of investment entity	—	65,550	—	65,550
Pending trades of securities	12,480	—	—	12,480
Other	—	—	17,009	17,009
LIABILITIES ASSOCIATED WITH INVESTMENTS	\$ 12,480	\$ 924,305	\$ 17,009	\$ 953,794

¹ Entities may estimate the fair value of certain investments by using NAV as a practical expedient as of the measurement date. Investments measured under this method are not categorized in the fair value hierarchy. The fair value amounts of such investments are presented for reconciliation purposes.

SUMMARY OF LEVEL 3 INVESTMENT ACTIVITIES AND TRANSFERS

The following tables present the activities for Level 3 investments for the years ended August 31, 2018 and 2017, in thousands of dollars:

FAIR VALUE MEASUREMENTS USING SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)	BEGINNING BALANCE AS OF SEPTEMBER 1, 2017	PURCHASES AND ADDITIONS	SALES AND MATURITIES	NET REALIZED AND UNREALIZED GAINS (LOSSES)	TRANSFERS IN*	TRANSFERS OUT*	ENDING BALANCE AS OF AUGUST 31, 2018
Real estate	\$ 5,417,959	\$ 140,542	\$ (111,150)	\$ 345,627	\$ —	\$ —	\$ 5,792,978
Natural resources	238,161	3,879	(13,705)	(2,837)	—	(15,228)	210,270
Private equities	52,259	—	(38,242)	6,171	—	—	20,188
Absolute return	28,653	—	—	(1,275)	—	—	27,378
Assets held by other trustees	154,852	4,111	(23,763)	4,895	—	(625)	139,470
Other	461,040	71,441	(30,221)	125,729	—	—	627,989
TOTAL	\$ 6,352,924	\$ 219,973	\$ (217,081)	\$ 478,310	\$ —	\$ (15,853)	\$ 6,818,273

FAIR VALUE MEASUREMENTS USING SIGNIFICANT UNOBSERVABLE INPUTS (LEVEL 3)	BEGINNING BALANCE AS OF SEPTEMBER 1, 2016	PURCHASES AND ADDITIONS	SALES AND MATURITIES	NET REALIZED AND UNREALIZED GAINS (LOSSES)	TRANSFERS IN*	TRANSFERS OUT*	ENDING BALANCE AS OF AUGUST 31, 2017
Public equities	\$ 3,045	\$ —	\$ (2,857)	\$ (188)	\$ —	\$ —	\$ —
Real estate	4,956,210	51,242	(37,885)	448,392	—	—	5,417,959
Natural resources	208,655	24,292	(32,745)	37,959	—	—	238,161
Private equities	71,875	—	(262)	20,435	—	(39,789)	52,259
Absolute return	25,587	—	—	3,066	—	—	28,653
Assets held by other trustees	191,358	5,728	(32,764)	(7,328)	489	(2,631)	154,852
Other	366,342	79,874	(22,564)	37,038	350	—	461,040
TOTAL	\$ 5,823,072	\$ 161,136	\$ (129,077)	\$ 539,374	\$ 839	\$ (42,420)	\$ 6,352,924

*Transfers in (out) are primarily due to reclassification of investments between asset classes and changes in the fair value hierarchy.

Net realized and unrealized gains (losses) in the tables above are included in the *Consolidated Statements of Activities* primarily as increases or decreases in reinvested gains by level of restriction. For the years ended August 31, 2018 and 2017, the change in unrealized gains (losses) for Level 3 investments still held at August 31, 2018 and 2017 was \$490.9 million and \$303.4 million, respectively.

Transfers in (out) include situations where observable inputs have changed. All transfer amounts are based on the fair value at the beginning of the fiscal year. There were no transfers between Level 1 and Level 2 during the years ended August 31, 2018 and 2017.

LEVEL 3 INVESTMENT VALUATION TECHNIQUES AND SIGNIFICANT UNOBSERVABLE INPUTS

The following table summarizes the significant unobservable inputs and valuation methodologies for Level 3 investments as of August 31, 2018 and 2017, in thousands of dollars.

For each investment category and respective valuation technique, the range of the significant unobservable input is dependent on the nature and characteristics of the investment. The input range and weighted average values may vary at each balance sheet date.

INVESTMENT CATEGORIES	FAIR VALUE ¹	VALUATION TECHNIQUE	SIGNIFICANT UNOBSERVABLE INPUTS	RANGE		IMPACT TO VALUATION FROM AN INCREASE IN INPUT ²
				MIN	MAX	
2018						
Real estate	\$ 5,155,212	Discounted cash flow	Discount rate	5.0%	20.0%	Decrease
			Capitalization rate	3.9%	9.0%	Decrease
Assets held by other trustees	123,993	Net present value	Discount rate	3.4%	3.4%	Decrease
Other	604,585	Market comparables	Recent transactions	N/A	N/A	N/A
TOTAL AMOUNT WITH SIGNIFICANT UNOBSERVABLE INPUTS	\$ 5,883,790					
2017						
Real estate	\$ 4,721,602	Discounted cash flow	Discount rate	5.3%	20.0%	Decrease
			Capitalization rate	6.3%	9.0%	Decrease
Natural resources	6,858	Market comparables	Weights ascribed to market comparables	20.0%	50.0%	N/A
Assets held by other trustees	138,804	Net present value	Discount rate	2.4%	2.4%	Decrease
Other	467,515	Market comparables	Recent transactions	N/A	N/A	N/A
TOTAL AMOUNT WITH SIGNIFICANT UNOBSERVABLE INPUTS	\$ 5,334,779					

¹ \$0.9 billion and \$1.0 billion of Level 3 investments at August 31, 2018 and 2017, respectively, are valued using third-party valuations, other market comparables or recent transactions as an approximation of fair value.

² Unless otherwise noted, this column represents the directional change in the fair value of the Level 3 investments that would result from an increase to the corresponding unobservable input. A decrease to the unobservable input would have the opposite effect. Significant increases and decreases in these unobservable inputs in isolation could result in significantly higher or lower fair value measurements.

INVESTMENT-RELATED COMMITMENTS

The University is obligated under certain alternative investment agreements to advance additional funding up to specified levels over a period of several years. The following table presents significant terms of such agreements including redemption terms, notice periods, and remaining life for all related alternative investments at August 31, 2018, in thousands of dollars:

ASSET CLASS	FAIR VALUE	UNFUNDED COMMITMENT	REMAINING LIFE (YEARS)	REDEMPTION TERMS
Public equities	\$ 5,594,615	\$ 318,326	0 to 3	Generally, lock-up provisions ranging from 0 to 2 years. After initial lock up expires, redemptions are available on a rolling basis and require 30 to 90 days prior notification.
Real estate	1,571,977	1,121,263	0 to 15	Not eligible for redemption
Natural resources	1,970,869	674,629	0 to 15	Not eligible for redemption
Private equities	8,429,463	3,704,724	0 to 15	Not eligible for redemption
Absolute return	5,673,513	1,011,338	0 to 5	Generally, lock-up provisions ranging from 0 to 5 years. After initial lock up expires, redemptions are available on a rolling basis and require 30 to 90 days prior notification.
TOTAL	\$23,240,437	\$ 6,830,280		

LIABILITIES ASSOCIATED WITH INVESTMENTS

Income beneficiary share of split interest agreements - See the *Split-Interest Agreements* section of *Note 1*.

Securities lending - The University has a collateralized borrowing program in which it receives short-term U.S. government obligations or cash and cash equivalents in exchange for transferring securities as collateral to the counterparty and recognizes an obligation to reacquire the securities for cash at the transaction's maturity. It is the University's policy to require receipt of collateral equal to a minimum of 102% of the fair market value of these collateralized borrowings. In the event the counterparty was to default on its obligations, The University has the right to repurchase the securities in the open market using the collateral received.

Under the securities lending agreement, securities loaned are primarily public equities, corporate bonds or U.S. Treasury bills and the agreement continues until the security is delivered back to the University. The estimated fair value of securities loaned at August 31, 2018 and 2017 was \$75.5 million and \$341.4 million, respectively. At August 31, 2018, the University received cash and short-term investments in the amount of \$77.1 million; \$30.4 million was received for loaned publicly traded equities and \$46.7 million was received for loaned U.S. Treasury notes. At August 31, 2017, the University received cash and short-term investments in the amount of \$348.8 million; \$121.2 million was received for loaned publicly traded equities and \$227.6 million was received for loaned U.S. Treasury notes.

Debt of investment entity relates to the University's controlling interests in several investment entities which are consolidated in the financial statements. The investment assets of these entities are \$234.4 million and \$223.7 million as of August 31, 2018 and 2017, respectively, and are included in "investments" in the *Consolidated Statements of Financial Position*. An investment entity held debt of \$65.6 million as of August 31, 2017, where the University was ultimately liable for principal should the entity default. The debt was paid in full as of August 31, 2018.

Securities sold, not yet purchased are obligations to acquire and deliver to the lenders the publicly traded securities identical to the ones borrowed. A realized gain or loss is recognized for the difference between the proceeds and the cost of such securities at that time.

Accrued management fees are obligations related to management and performance fees due quarterly or annually to external investment managers in accordance with agreed-upon terms.

Pending trades of securities are obligations arising from trades of securities purchased but not settled. These are usually settled three business days after the trade date.

OFFSETS TO INVESTMENT-RELATED ASSETS AND LIABILITIES

Financial instruments with off-balance sheet risk such as derivatives, securities lending agreements, securities sold, not yet purchased and repurchase agreements are subject to counterparty credit risk. The University seeks to control this risk in various ways, such as entering into transactions with quality counterparties, establishing and monitoring credit limits, and requiring collateral in certain situations.

The University generally maintains master netting agreements and collateral agreements with its counterparties. These agreements provide the University the right to net a counterparty's rights and obligations under the agreement and to liquidate and offset collateral against any net amount owed by the counterparty, in the event of default by the counterparty, such as bankruptcy or a failure to pay or perform. For certain derivatives, a master netting arrangement allows the counterparty to net any of its applicable liabilities or payment obligations to the University against any collateral previously provided or received (see *Note 8*).

The University may enter into repurchase and reverse repurchase agreements to sell or purchase securities to or from the counterparty with an agreement to repurchase or sell the same securities from or to the counterparty at a predetermined price.

The following table presents information about the gross amounts of assets and liabilities, the offset of these instruments and the related collateral amounts as of August 31, 2018 and 2017, in thousands of dollars:

	GROSS AMOUNTS OF ASSETS AND LIABILITIES	OFFSET AMOUNTS	NET AMOUNTS	COLLATERAL RECEIVED (PLEDGED) ²	NET EXPOSURE
2018					
Assets:					
Derivatives ¹	\$ 3	\$ (3)	\$ —	\$ —	\$ —
Repurchase agreements ³	176,539	—	176,539	176,539	—
TOTAL	176,542	(3)	176,539	176,539	—
Liabilities:					
Derivatives ¹	557	(3)	554	(554)	—
Securities sold, not yet purchased	69,092	—	69,092	(69,092)	—
Securities lending	77,137	—	77,137	(77,137)	—
TOTAL	\$ 146,786	\$ (3)	\$ 146,783	\$ (146,783)	\$ —
2017					
Assets:					
Derivatives ¹	\$ 1,163	\$ (11)	\$ 1,152	\$ —	\$ 1,152
Repurchase agreements ³	410,116	—	410,116	410,116	—
TOTAL	411,279	(11)	411,268	410,116	1,152
Liabilities:					
Derivatives ¹	11	(11)	—	—	—
Securities lending	348,783	—	348,783	(348,783)	—
TOTAL	\$ 348,794	\$ (11)	\$ 348,783	\$ (348,783)	\$ —

¹ Gross derivative assets less gross derivative liabilities are presented as "derivatives" in the investment assets table.

² These collateral amounts received (pledged) are limited to the asset balance and accordingly, do not include any excess collateral received.

³ Repurchase agreements are included in "Cash and short-term investments" in the investment assets table.

INVESTMENT RETURNS

Total investment returns for the years ended August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2018				
Investment income	\$ 349,569	\$ 40,091	\$ 5,072	\$ 394,732
Net realized and unrealized gains	2,689,706	122,912	87,336	2,899,954
TOTAL INVESTMENT RETURNS	\$ 3,039,275	\$ 163,003	\$ 92,408	\$ 3,294,686
Reconciliation to <i>Statements of Activities</i> :				
Total investment income distributed for operations	\$ 1,493,388	\$ 1,232	\$ 14,187	\$ 1,508,807
Increase (decrease) in reinvested gains:				
Unrestricted	951,197	158,592	49,765	1,159,554
Temporarily restricted	493,660	3,179	28,244	525,083
Permanently restricted	27,885	—	—	27,885
Change in value of split-interest agreements, net:				
Temporarily restricted	11,198	—	(3)	11,195
Permanently restricted	12,705	—	215	12,920
Adjustments for actuarial re-evaluations and maturities of split-interest agreements:				
Temporarily restricted	14,039	—	—	14,039
Permanently restricted	35,203	—	—	35,203
TOTAL INVESTMENT RETURNS	\$ 3,039,275	\$ 163,003	\$ 92,408	\$ 3,294,686
2017				
Investment income	\$ 258,801	\$ 26,393	\$ 2,953	\$ 288,147
Net realized and unrealized gains	3,365,278	147,101	107,565	3,619,944
TOTAL INVESTMENT RETURNS	\$ 3,624,079	\$ 173,494	\$ 110,518	\$ 3,908,091
Reconciliation to <i>Statements of Activities</i> :				
Total investment income distributed for operations	\$ 1,309,833	\$ 1,068	\$ 15,669	\$ 1,326,570
Increase in reinvested gains:				
Unrestricted	1,375,450	166,326	58,801	1,600,577
Temporarily restricted	805,790	6,100	34,764	846,654
Permanently restricted	33,251	—	—	33,251
Change in value of split-interest agreements, net:				
Temporarily restricted	9,189	—	884	10,073
Permanently restricted	(33,819)	—	400	(33,419)
Adjustments for actuarial re-evaluations and maturities of split-interest agreements:				
Temporarily restricted	42,610	—	—	42,610
Permanently restricted	81,775	—	—	81,775
TOTAL INVESTMENT RETURNS	\$ 3,624,079	\$ 173,494	\$ 110,518	\$ 3,908,091

Investment returns are net of investment management expenses, including both external management fees and internal University investment-related salaries, benefits and operating expenses, and the portion of interest expense and amortization related to the April 2009 bond issuance held for liquidity purposes (see *Note 10*).

FUTURE MINIMUM RENTAL INCOME

As part of its investment portfolio, Stanford holds certain investment properties that it leases to third parties. Future minimum rental income due from the Stanford Shopping Center, the Stanford Research Park and other properties under non-cancelable leases in effect with tenants at August 31, 2018, in thousands of dollars, is as follows:

YEAR ENDING AUGUST 31	FUTURE MINIMUM RENTAL INCOME			
	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2019	\$ 126,629	\$ 2,823	\$ 1,453	\$ 130,905
2020	126,279	1,946	1,070	129,295
2021	126,226	1,541	1,014	128,781
2022	123,939	1,601	962	126,502
2023	111,109	941	316	112,366
Thereafter	2,087,350	9,223	—	2,096,573
TOTAL	\$ 2,701,532	\$ 18,075	\$ 4,815	\$ 2,724,422

7. Investment Pools

Investments are held in various investment pools or in specific investments to comply with donor requirements as indicated in the following table, at August 31, 2018 and 2017, in thousands of dollars:

	2018	2017
Merged Pool (MP)	\$ 28,882,135	\$ 27,507,695
Short-Term Investment Pool (STIP)	1,086,578	1,367,072
Expendable Funds Pool (EFP)	4,011,294	3,891,181
Endowment Income Funds Pool (EIFP)	368,194	356,001
Intermediate Pool (IPool)	485,382	431,514
Other investment pools	123,845	107,154
Specific investments	6,787,501	6,794,982
	41,744,929	40,455,599
Adjustments:		
Amounts included in "cash and cash equivalents" in the <i>Statements of Financial Position</i>	(212,648)	(199,625)
Funds cross-invested in investment pools	(4,889,840)	(4,990,224)
Hospitals' funds not invested in the University's investment pools	1,141,151	575,861
TOTAL INVESTMENTS	\$ 37,783,592	\$ 35,841,611

The MP is the primary investment pool in which endowment (see *Note 11*) and other long-term funds are invested. The MP is invested with the objective of optimizing long-term total return while maintaining an appropriate level of risk for the University. It is a unitized investment pool in which the fundholders purchase investments and withdraw funds based on a monthly share value.

The University manages the majority of SHC's and LPCH's investments, including their investments in the Merged Pool (MP). SHC's investments in the MP were \$1.4 billion and \$1.3 billion at August 31, 2018 and 2017, respectively. LPCH's investments in the MP were \$724.4 million and \$680.0 million at August 31, 2018 and 2017, respectively.

The majority of Stanford's cash and other highly liquid investments are accumulated and managed in a short-term investment pool (STIP). The primary objective of the STIP is to preserve the principal value of the portfolio, while meeting the liquidity needs of the University.

The Expendable Funds Pool (EFP) and Endowment Income Funds Pool (EIFP) are the principal investment vehicles for the University's expendable funds. A substantial portion of the EFP is cross-invested in the MP. For the year ended August 31, 2018, the EFP was also invested in the STIP and the Intermediate Pool (IPool). The EIFP holds income previously distributed to holders of permanently restricted endowment funds that has not yet been expended and the entire balance is invested in the STIP.

During fiscal year 2017, the IPool was established to invest funds with the objective of achieving greater liquidity than the MP and higher returns than the STIP. Similar to the MP, the IPool is a unitized investment pool with a monthly share value.

The Board has established a policy for the distribution of the investment returns of the EFP. The difference between the actual return of this investment pool and the approved payout is deposited in, or withdrawn from, funds functioning as endowment (FFE) (see *Note 11*). For the years ended August 31, 2018 and 2017, the results of the EFP, in thousands of dollars, are as follows:

	2018	2017
Total investment return of the EFP	\$ 336,767	\$ 448,934
Less distributions to fund holders and operations	(181,411)	(79,490)
AMOUNTS ADDED TO FFE	\$ 155,356	\$ 369,444

8. Derivatives

Stanford, directly or through external investment managers on Stanford's behalf, utilizes various strategies to reduce investment and credit risks, to serve as a temporary surrogate for investment in stocks and bonds, to manage interest rate exposure on debt, and/or to manage specific exposure to foreign currencies. Futures, options and other derivative instruments are used to adjust elements of investment exposures to various securities, sectors, markets and currencies without actually taking a position in the underlying asset or basket of assets. Interest rate swaps are used to manage interest rate risk. With respect to foreign currencies, Stanford utilizes forward contracts and foreign currency options to manage exchange rate risk.

INVESTMENT-RELATED DERIVATIVES

The following table presents amounts for investment-related derivatives, including the notional amount, the fair values at August 31, 2018 and 2017, and gains and losses for the years ended August 31, 2018 and 2017, in thousands of dollars:

	NOTIONAL AMOUNT ¹	GROSS DERIVATIVE ASSETS ²	GROSS DERIVATIVE LIABILITIES ²	REALIZED AND UNREALIZED GAINS (LOSSES) ³
	AS OF AUGUST 31			YEAR ENDED AUGUST 31
2018				
Foreign exchange contracts	\$ 8,700	\$ 3	\$ 557	\$ (4,017)
Equity contracts	—	—	—	(2,248)
TOTAL	\$ 8,700	\$ 3	\$ 557	\$ (6,265)
2017				
Foreign exchange contracts	\$ 150,592	\$ 1,163	\$ 11	\$ 3,560
TOTAL	\$ 150,592	\$ 1,163	\$ 11	\$ 3,560

¹ The notional amount is representative of the volume and activity of the respective derivative type during the years ended August 31, 2018 and 2017.

² Gross derivative assets less gross derivative liabilities of (\$554) thousand and \$1.2 million as of August 31, 2018 and 2017, respectively, are presented as "derivatives" on the investment table in Note 6.

³ Gains (losses) on derivatives are included in the Statements of Activities line "increase in reinvested gains" in "non-operating activities."

DEBT-RELATED DERIVATIVES

The University and SHC use interest rate exchange agreements to manage the interest rate exposure of their debt portfolios. Under the terms of the current agreements, the entities pay a fixed interest rate, determined at inception, and receive a variable rate on the underlying notional principal amount. Generally, the exchange agreements require mutual posting of collateral by the University and SHC and the counterparties if the termination values exceed a predetermined threshold dollar amount.

At August 31, 2018, the University had interest rate exchange agreements related to \$97.0 million of the outstanding balance of the CEFA Series S bonds in variable rate mode (see *Note 10*). The agreements, which have a weighted average interest rate of 3.68%, expire November 1, 2039. The notional amount and the fair value of the exchange agreements are included in the table below. Collateral posted with various counterparties was \$13.5 million and \$19.8 million at August 31, 2018 and 2017, respectively, and is included in the *Consolidated Statements of Financial Position*. In addition, the University issued an irrevocable standby letter of credit of \$15.0 million to support collateral requirements at August 31, 2018 and 2017 (see *Note 10*).

At August 31, 2018, SHC had interest rate exchange agreements expiring through November 2051 (see *Note 10*). The agreements require SHC to pay fixed interest rates to the counterparties varying from 3.37% to 4.08% in exchange for variable rate payments from the counterparties based on a percentage of the One Month London Interbank Offered Rate (LIBOR). The notional amount and the fair value of the exchange agreements are included in the table below. There was no cash collateral required to be posted with counterparties at August 31, 2018 and \$10.1 million cash collateral posted at August 31, 2017.

The following table presents amounts for debt-related derivatives including the notional amount, the fair values at August 31, 2018 and 2017, and gains and losses for the years ended August 31, 2018 and 2017, in thousands of dollars:

	AS OF AUGUST 31, 2018		YEAR ENDED AUGUST 31, 2018	AS OF AUGUST 31, 2017		YEAR ENDED AUGUST 31, 2017
	NOTIONAL AMOUNT ¹	GROSS DERIVATIVE LIABILITIES ²	UNREALIZED GAINS ³	NOTIONAL AMOUNT ¹	GROSS DERIVATIVE LIABILITIES ²	UNREALIZED GAINS ³
Debt-related interest-rate contracts:						
University	\$ 97,000	\$ 27,714	\$ 10,653	\$ 97,000	\$ 38,367	\$ 13,855
SHC	575,400	182,527	63,439	575,825	245,966	85,368
TOTAL	\$ 672,400	\$ 210,241	\$ 74,092	\$ 672,825	\$ 284,333	\$ 99,223

¹ The notional amount is representative of the volume and activity of the respective derivative type during the years ended August 31, 2018 and 2017.

² Fair value is measured using Level 2 inputs as defined in Note 6. Amounts are included in the *Statements of Financial Position* in "accounts payable and accrued expenses" and discussed more fully in Note 10.

³ Gains (losses) on derivatives are included in the *Statements of Activities* as "swap interest and change in value of swap agreements" in "non-operating activities".

9. Plant Facilities

Plant facilities, net of accumulated depreciation, at August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2018				
Land and improvements	\$ 595,470	\$ 68,844	\$ 120,519	\$ 784,833
Buildings and building improvements	6,624,088	1,694,056	1,736,783	10,054,927
Furniture, fixtures and equipment	1,872,370	1,185,244	476,025	3,533,639
Utilities	862,810	—	—	862,810
Construction in progress	1,387,188	1,969,625	108,531	3,465,344
	11,341,926	4,917,769	2,441,858	18,701,553
Less accumulated depreciation	(4,834,389)	(1,638,721)	(550,157)	(7,023,267)
PLANT FACILITIES, NET OF ACCUMULATED DEPRECIATION	\$ 6,507,537	\$ 3,279,048	\$ 1,891,701	\$ 11,678,286
2017				
Land and improvements	\$ 584,623	\$ 68,885	\$ 91,630	\$ 745,138
Buildings and building improvements	6,123,026	1,446,312	471,172	8,040,510
Furniture, fixtures and equipment	1,798,289	1,052,857	367,781	3,218,927
Utilities	836,533	—	—	836,533
Construction in progress	787,544	1,768,837	1,288,173	3,844,554
	10,130,015	4,336,891	2,218,756	16,685,662
Less accumulated depreciation	(4,506,732)	(1,467,545)	(488,648)	(6,462,925)
PLANT FACILITIES, NET OF ACCUMULATED DEPRECIATION	\$ 5,623,283	\$ 2,869,346	\$ 1,730,108	\$ 10,222,737

At August 31, 2018, \$2.1 billion, \$979.3 million, and \$142.4 million of fully depreciated plant facilities were still in use by the University, SHC, and LPCH, respectively, and were included in plant facilities and accumulated depreciation.

10. Notes and Bonds Payable

Notes and bonds payable for the University, SHC, and LPCH at August 31, 2018 and 2017, in thousands of dollars, are presented in the table below. The University is not an obligor or guarantor with respect to any obligations of SHC or LPCH, nor are SHC or LPCH obligors or guarantors with respect to obligations of the University or each other.

	YEAR OF MATURITY	EFFECTIVE INTEREST RATE *	OUTSTANDING PRINCIPAL	
		2018/2017	2018	2017
UNIVERSITY:				
Tax-exempt:				
CEFA Fixed Rate Revenue Bonds:				
Series S	2040	3.18%	\$ 30,210	\$ 30,210
Series T	2023-2039	3.66%-4.30%	188,900	188,900
Series U	2021-2046	1.75%-4.25%	1,167,205	1,167,205
CEFA Variable Rate Revenue Bonds and Notes:				
Series L	2023	1.31%/0.75%	36,208	51,373
Series S	2040-2051	1.53%-1.78%/0.88%-0.92%	141,200	141,200
Commercial Paper	2019	1.60%-1.63%	130,000	—
Taxable:				
Fixed Rate Notes and Bonds:				
Stanford University Bonds	2024	6.88%	150,000	150,000
Medium Term Note	2026	7.65%	50,000	50,000
Stanford University Series 2009A	2019	4.75%	137,815	400,000
Stanford University Series 2012	2042	4.01%	143,235	143,235
Stanford University Series 2013	2044	3.56%	150,115	150,115
Stanford University Series 2014	2054	4.25%	150,000	150,000
Stanford University Series 2015	2047	3.46%	250,000	250,000
Stanford University Series 2017	2048	3.65%	750,000	750,000
Other	2020-2031	Various	3,481	3,480
Revolving Credit Facilities	2021	2.22%-2.27%/1.53%	75,850	33,400
University notes and bonds payable			3,554,219	3,659,118
Unamortized issuance costs, premiums, and discounts, net			280,078	295,023
UNIVERSITY TOTAL			\$ 3,834,297	\$ 3,954,141
SHC:				
CHFFA Fixed Rate Revenue Bonds:				
2008 Series A-1	2019-2021	3.79%/5.14%	\$ 1,375	\$ 67,410
2008 Series A-2	2019-2022	3.65%/5.32%	2,475	99,725
2008 Series A-3	2019-2022	3.65%/5.29%	2,000	80,615
2010 Series A	2019-2021	3.76%/4.66%	19,325	119,315
2010 Series B	2026-2037	4.95%	—	146,710
2012 Series A	2028-2051	3.98%	340,000	340,000
2012 Series B	2019-2023	2.36%/2.30%	35,420	41,340
2015 Series A	2052-2054	4.10%	100,000	100,000
2017 Series A	2022-2041	2.81%	454,200	—
2018 Series Taxable Bonds	2049	3.80%	500,000	—
CHFFA Variable Rate Revenue Bonds:				
2008 Series B	2042-2046	1.38%/0.84%	168,200	168,200
2012 Series C	2039-2051	1.81%/1.04%	60,000	60,000
2012 Series D	2020-2051	1.79%/1.23%	100,000	100,000
2015 Series B	2024-2054	1.94%/1.38%	75,000	75,000
Revolving Credit Facility	2020	1.53%	—	135,000
SHC notes and bonds payable			1,857,995	1,533,315
Unamortized issuance costs, premiums, and discounts, net			96,677	32,749
SHC TOTAL			\$ 1,954,672	\$ 1,566,064
LPCH:				
CHFFA Fixed Rate Revenue Bonds:				
2012 Series A	2044-2051	4.32%	\$ 200,000	\$ 200,000
2012 Series B	2018-2027	2.79%/2.71%	37,205	39,760
2014 Series A	2025-2043	3.84%	100,000	100,000
2016 Series A	2018-2033	2.23%/2.16%	67,170	70,415
2016 Series B	2052-2055	3.34%	100,000	100,000
2017 Series A	2018-2056	3.01%	200,000	200,000
CHFFA Variable Rate Revenue Bonds:				
2014 Series B	2034-2043	1.79%/1.22%	100,000	100,000
LPCH notes and bonds payable			804,375	810,175
Unamortized issuance costs, premiums, and discounts, net			68,300	70,962
LPCH TOTAL			\$ 872,675	\$ 881,137
CONSOLIDATED TOTAL			\$ 6,661,644	\$ 6,401,342

*Exclusive of interest rate exchange agreements (see Note 8).

All bonds held at August 31, 2018 and 2017 are classified as Level 2 in the fair value hierarchy as described in Note 6. The fair values of the University's, SHC's, and LPCH's debt instruments at August 31, 2018 and 2017, in thousands of dollars, are as follows:

	2018	2017
University	\$ 3,946,058	\$ 4,298,362
SHC	1,956,292	1,517,350
LPCH	878,938	911,301
TOTAL	\$ 6,781,288	\$ 6,727,013

The University borrows at tax-exempt rates through the California Educational Facilities Authority (CEFA), a conduit issuer. CEFA debt is a general unsecured obligation of the University. Although CEFA is the issuer, the University is responsible for the repayment of the tax-exempt debt. SHC and LPCH borrow at tax-exempt rates through the California Health Facilities Financing Authority (CHFFA). CHFFA debt is a general obligation of each of the hospitals. Payments of principal and interest on SHC's and LPCH's bonds are collateralized by a pledge of their respective revenues. Although CHFFA is the issuer, each hospital is responsible for the repayment of its respective tax-exempt debt.

The University's long-term ratings of AAA/Aaa/AAA were affirmed in June 2018 by S&P Global Ratings and in March 2017 by Moody's Investors Service and Fitch Ratings, respectively. In December 2017, SHC's long-term ratings were affirmed by S&P Global Ratings, Moody's Investors Service and Fitch Ratings at AA-/Aa3/AA, respectively. In July 2017, LPCH's long-term ratings were adjusted by S&P Global Ratings, Moody's Investors Service and Fitch Ratings to A+/A1/AA-, respectively, and the 2017 Series A Bonds were assigned the same ratings. In November 2018, S&P Global Ratings and Moody's Investors Service reaffirmed LPCH's July 2017 rating of A+ and A1, respectively.

SHC and LPCH are each party to separate master trust indentures that include, among other requirements, limitations on the incurrence of additional indebtedness, liens on property, restrictions on disposition or transfer of assets and compliance with certain financial ratios. Subject to applicable no-call provisions, SHC and LPCH may cause the redemption of the bonds, in whole or in part, prior to the stated maturities.

UNIVERSITY

Debt issuances and repayment activity

In August 2018, the University called and prepaid \$262.2 million of the taxable Series 2009A bonds due in May 2019.

In April 2017, the University issued taxable fixed rate bonds (Series 2017) in the amount of \$750.0 million plus an original issue discount of \$15 thousand. The bonds bear interest at a coupon rate and yield of 3.65% and mature on May 1, 2048. Proceeds will be used for general corporate purposes, including financing and refinancing capital projects.

The University has two unsecured revolving credit facilities with a \$250.0 million and \$175.0 million capacity, respectively. Funds drawn on the revolving credit facilities bear interest at a floating rate equal to the applicable LIBOR rate plus a specified margin. The amount outstanding on these credit facilities was \$75.9 million and \$33.4 million at August 31, 2018 and 2017, respectively.

In October 2017 and 2016, CEFA Series L tranches in the amount of \$15.2 million and \$8.8 million, respectively, matured and were repaid.

The University's taxable and tax-exempt commercial paper authorized borrowing capacity was \$500.0 million and \$300.0 million, respectively, at both August 31, 2018 and 2017. Tax-exempt commercial paper of \$130.0 million was outstanding at August 31, 2018 and no amounts were outstanding at August 31, 2017.

Variable rate debt subject to remarketing or tender

The University had \$177.4 million of revenue bonds in variable rate mode outstanding at August 31, 2018. CEFA Series L bonds bear interest at a weekly rate and CEFA Series S bonds bear interest at a commercial paper municipal rate for various interest periods of 270 days or less. In the event the University receives notice of any optional tender of these bonds, or if the bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, the University will have a current obligation to purchase the bonds tendered. The University has identified several sources of funding including cash, money market funds, U.S. Treasury securities and agencies' discount notes to provide for the full and timely purchase price of any bonds tendered in the event of a failed remarketing.

Letters of credit

In December 2010, the University entered into a credit agreement and established a letter of credit facility under which the bank agreed to issue standby letters of credit in a principal amount not to exceed \$50.0 million. In June 2018, the University increased the facility to \$75.0 million. At August 31, 2018, irrevocable standby letters of credit of \$53.0 million were outstanding in the following amounts and for the following respective purposes: (1) \$15.0 million to support collateral requirements under certain interest rate exchange agreements discussed in *Note 8*; (2) \$32.7 million to serve as security for workers' compensation deductible insurance arrangements; and (3) \$5.3 million for other purposes. No amounts have been drawn on these letters of credit at August 31, 2018.

SHC**Debt issuances and repayment activity**

In January 2018, SHC issued taxable fixed rate bonds in the amount of \$500.0 million. The bonds bear interest at a coupon rate and yield of 3.80% and mature on November 15, 2048. Proceeds will be used for general corporate purposes.

In December 2017, CHFFA, on behalf of SHC, issued fixed rate refunding revenue bonds (the "2017 Bonds") in the aggregate principal amount of \$454.2 million plus an original issue premium of \$76.1 million. Proceeds of the 2017 Bonds were used to advance refund a portion of the 2008 Series A bonds and the 2010 Series A and B bonds.

In May 2017, SHC entered into a \$200.0 million revolving credit facility. Funds drawn on the revolving credit facility bear interest at a floating rate equal to the applicable LIBOR rate plus a specified margin. No amounts were outstanding as of August 31, 2018. The amount outstanding on this credit facility was \$135.0 million at August 31, 2017.

Variable rate debt subject to remarketing or tender

At August 31, 2018, SHC had \$403.2 million of revenue bonds in variable rate mode outstanding. The 2008 Series B-1 bonds bear interest at a weekly rate, and bondholders have the option to tender their bonds on a weekly basis. The 2008 Series B-2 bonds bear interest at the commercial paper rate for each commercial paper period of 270 days or less. Bondholders in commercial paper mode have the option to tender their bonds only at the end of the commercial paper rate period.

The 2012 Series C bonds are in a windows weekly floating index mode and cannot be tendered for 180 days after a 30 day notice and remarketing period. The 2012 Series D and 2015 Series B bonds are also in a floating index mode with monthly interest rate resets. The 2012 Series D and 2015 Series B bonds are not subject to remarketing or tender until May 13, 2020 and June 28, 2024, respectively.

In the event SHC receives notice of any optional tender of the 2008 Series B-1 bonds or the 2012 Series C bonds, or if any bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, SHC will have a

current obligation to purchase any remaining bonds. SHC maintains sufficient liquidity to provide for the full and timely purchase price of any bonds tendered in the event of a failed remarketing.

Letters of credit

At August 31, 2018, SHC had irrevocable standby letters of credit in the aggregate amount of \$21.8 million posted with certain beneficiaries in the following amounts and for the following respective purposes: (i) \$19.6 million to serve as security for the workers' compensation self-insurance arrangement and (ii) \$2.2 million to serve as security deposits for certain construction projects being undertaken by SHC including the Renewal Project (see *Note 18*). No amounts have been drawn on these letters of credit at August 31, 2018 and 2017.

LPCH

Debt issuances and repayment activity

In August 2017, CHFFA, on behalf of LPCH, issued a series of revenue bonds (2017 Series A) in the aggregate par amount of \$200.0 million plus an original issue premium of \$29.1 million. Proceeds of the bonds are being used to finance a portion of the Renewal Project and to pay for the cost of issuance.

In May 2017, LPCH entered into a \$200.0 million revolving credit facility. There were no amounts outstanding on the revolving credit facility as of August 31, 2018 and 2017.

Letters of credit

At August 31, 2018, LPCH had irrevocable standby letters of credit in the aggregate amount of \$7.7 million posted with certain beneficiaries in the following amounts and for the following respective purposes: (i) \$6.3 million to serve as security for the workers' compensation self-insurance arrangement, and (ii) \$1.4 million to serve as security deposits for certain construction projects being undertaken by LPCH including the Renewal Project (see *Note 18*). No amounts have been drawn on these letters of credit at August 31, 2018 and 2017.

INTEREST

Stanford's interest expense, which includes settlements under the interest rate exchange agreements, amortized bond issuance costs and amortized bond premium or discount, in thousands of dollars, is as follows:

	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2018				
Interest expense, gross	\$ 149,051	\$ 61,191	\$ 36,390	\$ 246,632
Less:				
Interest income earned on unspent proceeds	(9,643)	—	—	(9,643)
Interest capitalized as a cost of construction	(16,402)	(27,718)	(19,359)	(63,479)
Interest expense on Series 2009A bonds which is classified as an investment expense	(14,844)	—	—	(14,844)
INTEREST EXPENSE, NET	\$ 108,162	\$ 33,473	\$ 17,031	\$ 158,666
2017				
Interest expense, gross	\$ 127,335	\$ 68,986	\$ 27,107	\$ 223,428
Less:				
Interest income earned on unspent proceeds	(5,266)	—	—	(5,266)
Interest capitalized as a cost of construction	(5,280)	(25,815)	(15,954)	(47,049)
Interest expense on Series 2009A bonds which is classified as an investment expense	(13,260)	—	—	(13,260)
INTEREST EXPENSE, NET	\$ 103,529	\$ 43,171	\$ 11,153	\$ 157,853

The University and SHC use interest rate exchange agreements to manage the interest rate exposure of their debt portfolios. University net payments on interest rate exchange agreements were \$2.5 million and \$3.0 million for the years ended August 31, 2018 and 2017, respectively. SHC net payments on interest rate exchange agreements were \$15.4 million and \$17.2 million for the years ended August 31, 2018 and 2017, respectively.

PRINCIPAL PAYMENTS

At August 31, 2018, scheduled principal payments on notes, bonds and capital lease obligations, in thousands of dollars, are as follows:

YEAR ENDING AUGUST 31	PRINCIPAL PAYMENTS			
	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2019 Commercial paper	\$ 130,000	\$ —	\$ —	\$ 130,000
2019 Variable debt subject to remarketing	177,408	228,200	—	405,608
2019 Other	137,815	14,505	7,920	160,240
2020	3,000	14,235	8,245	25,480
2021	199,965	16,045	8,635	224,645
2022	—	15,505	9,045	24,550
2023	51,765	17,065	9,490	78,320
Thereafter	2,854,266	1,552,440	761,040	5,167,746
TOTAL	\$ 3,554,219	\$ 1,857,995	\$ 804,375	\$ 6,216,589

11. Endowments

The University classifies a substantial portion of its financial resources as endowment, which is invested to generate income to support operating and strategic initiatives. The endowment, which includes endowed lands, is comprised of pure endowment funds, term endowment funds, and funds functioning as endowment (FFE). Depending on the nature of the donor's stipulation, these resources are recorded as permanently restricted, temporarily restricted or unrestricted net assets. Term endowments are similar to other endowment funds except that, upon the passage of a stated period of time or the occurrence of a particular event, all or part of the principal may be expended. Accordingly, term endowments are classified as temporarily restricted net assets. FFE are University resources designated by the Board as endowment and are invested for long-term appreciation and current income. These assets, however, remain available and may be spent at the Board's discretion. Accordingly, FFE are recorded as unrestricted net assets.

Stanford classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment and (b) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are authorized for expenditure. In the absence of donor stipulations or law to the contrary, net unrealized losses on permanently restricted endowment funds first reduce related appreciation on temporarily restricted net assets and then on unrestricted net assets, as needed, until the fair value of the fund equals or exceeds historic value. The aggregate amount by which fair value was below historic value was \$1.4 million and \$2.4 million at August 31, 2018 and 2017, respectively.

Endowment funds by net asset classification at August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	TOTAL
2018				
University endowment				
Donor-restricted endowment funds	\$ (1,448)	\$ 7,336,653	\$ 6,777,977	\$ 14,113,182
Funds functioning as endowment	12,351,730	—	—	12,351,730
University endowment	12,350,282	7,336,653	6,777,977	26,464,912
SHC donor-restricted endowment funds	—	13,982	8,233	22,215
LPCH donor-restricted endowment funds	—	125,386	227,988	353,374
TOTAL ENDOWMENT FUNDS	\$ 12,350,282	\$ 7,476,021	\$ 7,014,198	\$26,840,501
2017				
University endowment				
Donor-restricted endowment funds	\$ (2,406)	\$ 6,867,393	\$ 6,435,268	\$ 13,300,255
Funds functioning as endowment	11,484,688	—	—	11,484,688
University endowment	11,482,282	6,867,393	6,435,268	24,784,943
SHC donor-restricted endowment funds	—	12,567	8,144	20,711
LPCH donor-restricted endowment funds	—	112,153	227,129	339,282
TOTAL ENDOWMENT FUNDS	\$ 11,482,282	\$ 6,992,113	\$ 6,670,541	\$25,144,936

Most of Stanford's endowment is invested in the MP. The return objective for the MP is to generate optimal long-term total return while maintaining an appropriate level of risk. Investment returns are achieved through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). Portfolio asset allocation targets as well as expected risk, return and correlation among the asset classes are reevaluated regularly by Stanford Management Company.

UNIVERSITY

Changes in the University's endowment, excluding pledges, for the years ended August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	TOTAL
2018				
Endowment, beginning of year	\$ 11,482,282	\$ 6,867,393	\$ 6,435,268	\$ 24,784,943
Investment returns:				
Earned income	215,677	—	—	215,677
Unrealized and realized gains	1,684,630	459,790	27,537	2,171,957
Total investment returns	1,900,307	459,790	27,537	2,387,634
Amounts distributed for operations	(1,239,746)	—	—	(1,239,746)
Gifts, transfers and other changes in endowment:				
Current year gifts and pledge payments	4,414	16,030	211,724	232,168
Transfers of prior year gifts	2,621	—	69,816	72,437
EFP funds added to the endowment	155,356	—	—	155,356
Other funds invested in (withdrawn from) the endowment, net	45,048	(6,560)	33,632	72,120
Total gifts, transfers and other changes in endowment	207,439	9,470	315,172	532,081
Total net increase in endowment	868,000	469,260	342,709	1,679,969
ENDOWMENT, END OF YEAR	\$ 12,350,282	\$ 7,336,653	\$ 6,777,977	\$ 26,464,912
2017				
Endowment, beginning of year	\$ 10,211,076	\$ 6,119,400	\$ 6,067,654	\$ 22,398,130
Investment returns:				
Earned income	156,730	—	—	156,730
Unrealized and realized gains	1,902,599	766,666	33,027	2,702,292
Total investment returns	2,059,329	766,666	33,027	2,859,022
Amounts distributed for operations	(1,166,399)	—	—	(1,166,399)
Gifts, transfers and other changes in endowment:				
Current year gifts and pledge payments	4,155	1,698	246,109	251,962
Transfers of prior year gifts	8,250	500	64,574	73,324
EFP funds added to the endowment	369,444	—	—	369,444
Other funds invested in (withdrawn from) the endowment, net	(3,573)	(20,871)	23,904	(540)
Total gifts, transfers and other changes in endowment	378,276	(18,673)	334,587	694,190
Total net increase in endowment	1,271,206	747,993	367,614	2,386,813
ENDOWMENT, END OF YEAR	\$ 11,482,282	\$ 6,867,393	\$ 6,435,268	\$ 24,784,943

Approximately 15% of the University's endowment is invested in real estate on Stanford's lands, including the Stanford Research Park. This portion of the endowment includes the present value of ground leases, and rental properties that have been developed on Stanford lands. The net operating income from these properties is distributed each year for University operations.

Through the combination of investment strategy and payout policy, the University strives to provide a reasonably consistent payout from endowment to support operations, while preserving the purchasing power of the endowment adjusted for inflation.

The Board approves the amounts to be paid out annually from endowment funds invested in the MP. Consistent with the Uniform Prudent Management of Institutional Funds Act, when determining the appropriate payout the Board considers the purposes of the University and the endowment, the duration and preservation of the endowment, general economic conditions, the possible effect of inflation or deflation, the expected return from income and the appreciation of investments, other resources of the University, and the University's investment policy.

The current Board approved targeted spending rate is 5.5%. The payout amount is determined by applying a smoothing rule that limits payout in a given year to the sum of 70% of the previous year's actual rate and 30% of the long-term spending target rate applied to the projected per share value of the endowment adjusted by a growth factor. The smoothing rule is designed to mitigate the impact of short-term market volatility on the flow of funds to support operations. In situations when the payout rate reaches 6% or drops below 4%, the Board has the authority to override the smoothing rule and set the payout rate directly. The sources of payout are earned income on endowment assets (interest, dividends, rents and royalties), realized capital gains and FFE, as needed and as available.

SHC AND LPCH

The endowments of SHC and LPCH are intended to generate investment income to support their current operating and strategic initiatives. The Hospitals invest the majority of their endowments in the University's MP. The endowments are subject to similar investment and spending strategies that the University employs. The Hospitals' Boards of Directors have approved payout policies which provide for annual amounts to be distributed for current use. "Amounts distributed for operations" in the tables below represents SHC's and LPCH's current year endowment payout spent for designated purposes during fiscal years 2018 and 2017 .

SHC

Changes in SHC's endowment, excluding pledges, for the years ended August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	TOTAL
2018				
Endowments, beginning of year	\$ —	\$ 12,567	\$ 8,144	\$ 20,711
Investment returns:				
Earned income	—	541	—	541
Unrealized and realized gains	—	1,256	—	1,256
Total investment returns	—	1,797	—	1,797
Amounts distributed for operations	—	(382)	—	(382)
Gifts and pledge payments	—	—	89	89
Total net increase in endowments	—	1,415	89	1,504
ENDOWMENT, END OF YEAR	\$ —	\$ 13,982	\$ 8,233	\$ 22,215
2017				
Endowments, beginning of year	\$ —	\$ 10,723	\$ 7,894	\$ 18,617
Investment returns:				
Earned income	—	491	—	491
Unrealized and realized gains	—	1,717	—	1,717
Total investment returns	—	2,208	—	2,208
Amounts distributed for operations	—	(364)	—	(364)
Gifts and pledge payments	—	—	250	250
Total net increase in endowments	—	1,844	250	2,094
ENDOWMENT, END OF YEAR	\$ —	\$ 12,567	\$ 8,144	\$ 20,711

LPCH

Changes in LPCH's endowment, excluding pledges, for the years ended August 31, 2018 and 2017, in thousands of dollars, are as follows:

	UNRESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	TOTAL
2018				
Endowments, beginning of year	\$ —	\$ 112,153	\$ 227,129	\$ 339,282
Investment returns:				
Earned income	—	17,383	—	17,383
Unrealized and realized gains	—	10,930	932	11,862
Total investment returns	—	28,313	932	29,245
Amounts distributed for operations	—	(14,187)	—	(14,187)
Gifts and pledge payments	—	—	869	869
Other	—	(893)	(942)	(1,835)
Total net increase in endowments	—	13,233	859	14,092
ENDOWMENT, END OF YEAR	\$ —	\$ 125,386	\$ 227,988	\$ 353,374
2017				
Endowments, beginning of year	\$ —	\$ 94,936	\$ 211,348	\$ 306,284
Investment returns:				
Earned income	—	16,202	—	16,202
Unrealized and realized gains	—	18,623	940	19,563
Total investment returns	—	34,825	940	35,765
Amounts distributed for operations	—	(15,669)	—	(15,669)
Gifts and pledge payments	—	—	14,186	14,186
Other	—	(1,939)	655	(1,284)
Total net increase in endowments	—	17,217	15,781	32,998
ENDOWMENT, END OF YEAR	\$ —	\$ 112,153	\$ 227,129	\$ 339,282

12. Gifts and Pledges

Gifts and pledges reported for financial statement purposes are recorded on the accrual basis. The Office of Development (OOD), which is the primary fundraising agent for the University and SHC, reports total gifts based on contributions received in cash or property during the fiscal year. Lucile Packard Foundation for Children's Health (LPFCH) is the primary community fundraising agent for LPCH and the pediatric faculty and programs at the University's SOM. The following summarizes gifts and pledges reported for the years ended August 31, 2018 and 2017, per the *Consolidated Statements of Activities*, in thousands of dollars:

	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2018				
Current year gifts in support of operations	\$ 278,867	\$ 294	\$ 3,951	\$ 283,112
Donor advised funds, net	(6,489)	—	—	(6,489)
Current year gifts not included in operations	3,064	—	—	3,064
Temporarily restricted gifts and pledges, net	248,955	44,894	41,828	335,677
Permanently restricted gifts and pledges, net	238,568	89	960	239,617
TOTAL	\$ 762,965	\$ 45,277	\$ 46,739	\$ 854,981
2017				
Current year gifts in support of operations	\$ 324,523	\$ 160	\$ 5,667	\$ 330,350
Donor advised funds, net	68,021	—	—	68,021
Current year gifts not included in operations	4,090	—	—	4,090
Temporarily restricted gifts and pledges, net	291,606	28,541	67,428	387,575
Permanently restricted gifts and pledges, net	228,392	250	14,256	242,898
TOTAL	\$ 916,632	\$ 28,951	\$ 87,351	\$ 1,032,934

13. Functional Expenses

Expenses for the years ended August 31, 2018 and 2017 are categorized on a functional basis as follows, in thousands of dollars:

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
2018					
Instruction and departmental research	\$ 1,967,459	\$ —	\$ —	\$ —	\$ 1,967,459
Organized research - direct costs	1,170,600	—	—	—	1,170,600
Patient services	—	4,119,260	1,473,893	(1,050,187)	4,542,966
Auxiliary activities	1,207,516	—	—	—	1,207,516
Administration and general	476,570	457,722	186,881	(42,659)	1,078,514
Student services	284,183	—	—	—	284,183
Libraries	159,633	—	—	—	159,633
Development	112,511	12,905	23,029	(11,685)	136,760
SLAC construction	291,477	—	—	—	291,477
TOTAL EXPENSES	\$ 5,669,949	\$ 4,589,887	\$ 1,683,803	\$ (1,104,531)	\$ 10,839,108
2017					
Instruction and departmental research	\$ 1,839,112	\$ —	\$ —	\$ —	\$ 1,839,112
Organized research - direct costs	1,149,557	—	—	—	1,149,557
Patient services	—	3,811,682	1,323,255	(980,468)	4,154,469
Auxiliary activities	1,113,053	—	—	—	1,113,053
Administration and general	449,893	396,871	159,647	(50,250)	956,161
Student services	270,542	—	—	—	270,542
Libraries	161,681	—	—	—	161,681
Development	109,587	11,966	16,662	(10,740)	127,475
SLAC construction	284,105	—	—	—	284,105
TOTAL EXPENSES	\$ 5,377,530	\$ 4,220,519	\$ 1,499,564	\$ (1,041,458)	\$ 10,056,155

Depreciation, interest, operations and maintenance expenses are allocated to program and supporting activities, except for SLAC construction. Auxiliary activities include housing and dining services, intercollegiate athletics, Stanford Alumni Association, patient care provided by the SOM faculty, and other activities.

14. University Retirement Plans

The University provides retirement benefits through both defined contribution and defined benefit retirement plans for substantially all of its employees.

DEFINED CONTRIBUTION PLAN

The University offers a defined contribution plan to eligible faculty and staff through the *Stanford Contributory Retirement Plan* (SCRCP). Employer contributions are based on a percentage of participant annual compensation, participant contributions and years of service. University and participant contributions are primarily invested in annuities and mutual funds. University contributions under the SCRCP, which are vested immediately to participants, were approximately \$168.1 million and \$156.1 million for the years ended August 31, 2018 and 2017, respectively.

DEFINED BENEFIT PLANS

The University provides retirement and postretirement medical and other benefits through the *Staff Retirement Annuity Plan*, the *Faculty Retirement Incentive Program*, and the *Postretirement Benefit Plan* (the "Plans"). The obligations for the Plans, net of plan assets, are recorded in the *Consolidated Statements of Financial Position* as "accrued pension and postretirement benefit obligations." These plans are described more fully below.

Staff Retirement Annuity Plan

Retirement benefits for certain employees are provided through the *Staff Retirement Annuity Plan* (SRAP), a noncontributory plan. While the SRAP is closed to new participants, certain employees continue to accrue benefits. Contributions to the plan are made in accordance with the Employee Retirement Income Security Act (ERISA) based on actuarially determined amounts sufficient to meet the benefits to be paid to plan participants.

In fiscal year 2018, the University purchased a group annuity contract for certain SRAP retirees. This resulted in a \$21.7 million lump sum payment from plan assets and a permanent reduction in the plan benefit obligation and triggered a settlement event. This transaction and other routine payments resulted in additional net periodic benefit expense of approximately \$4.8 million for the year ended August 31, 2018.

Faculty Retirement Incentive Program

The University provides a retirement incentive bonus for eligible faculty through the University *Faculty Retirement Incentive Program* (FRIP). The University's faculty may become eligible for the FRIP program if they commit to retire within a designated window of time. At August 31, 2018 and 2017, there were no program assets. The University funds benefit payouts as they are incurred.

Postretirement Benefit Plan

The University provides health care benefits for retired employees through its *Postretirement Benefit Plan* (PRBP). The University's employees and their covered dependents may become eligible for the PRBP upon the employee's retirement and meeting specific years of service and age criteria. Retiree health plans are paid for, in part, by retiree contributions, which are adjusted annually. The University's subsidy varies depending on whether the retiree is covered under the grandfathered design or the defined dollar benefit design. Medicare supplement options are provided for retirees over age 65.

The change in the Plans' assets, the related change in benefit obligations and the amounts recognized in the financial statements, in thousands of dollars, are as follows:

	SRAP	FRIP	PRBP	TOTAL
2018				
Fair value of plan assets, beginning of year	\$ 282,461	\$ —	\$ 230,081	\$ 512,542
Change in plan assets:				
Actual return on plan assets	8,523	—	21,925	30,448
Employer contributions	—	7,236	14,753	21,989
Plan participants' contributions	—	—	14,620	14,620
Benefits and plan expenses paid	(12,180)	(7,236)	(31,790) *	(51,206)
Plan settlements	(29,371)	—	—	(29,371)
FAIR VALUE OF PLAN ASSETS, END OF YEAR	249,433	—	249,589	499,022
Benefit obligation, beginning of year	330,234	174,447	571,951	1,076,632
Change in projected benefit obligation:				
Service cost	3,008	10,301	16,840	30,149
Interest cost	10,364	5,795	21,247	37,406
Plan participants' contributions	—	—	14,620	14,620
Plan amendments	4,564	—	—	4,564
Plan settlements	(29,371)	—	—	(29,371)
Actuarial gain	(18,183)	(10,543)	(36,493)	(65,219)
Benefits and plan expenses paid	(12,180)	(7,236)	(31,790) *	(51,206)
BENEFIT OBLIGATION, END OF YEAR	288,436	172,764	556,375	1,017,575
NET LIABILITY RECOGNIZED IN THE STATEMENTS OF FINANCIAL POSITION	\$ (39,003)	\$(172,764)	\$(306,786)	\$ (518,553)

* Net of Medicare subsidy of \$1.8 million

2017				
Fair value of plan assets, beginning of year	\$ 285,674	\$ —	\$ 210,574	\$ 496,248
Change in plan assets:				
Actual return on plan assets	15,949	—	27,199	43,148
Employer contributions	5,000	8,028	8,600	21,628
Plan participants' contributions	—	—	13,011	13,011
Benefits and plan expenses paid	(24,162)	(8,028)	(29,303) *	(61,493)
FAIR VALUE OF PLAN ASSETS, END OF YEAR	282,461	—	230,081	512,542
Benefit obligation, beginning of year	346,563	170,689	534,043	1,051,295
Change in projected benefit obligation:				
Service cost	2,923	10,234	15,668	28,825
Interest cost	10,482	5,197	18,703	34,382
Plan participants' contributions	—	—	13,011	13,011
Actuarial loss (gain)	(5,572)	(3,645)	19,829	10,612
Benefits and plan expenses paid	(24,162)	(8,028)	(29,303) *	(61,493)
BENEFIT OBLIGATION, END OF YEAR	330,234	174,447	571,951	1,076,632
NET LIABILITY RECOGNIZED IN THE STATEMENTS OF FINANCIAL POSITION	\$ (47,773)	\$(174,447)	\$(341,870)	\$ (564,090)

* Net of Medicare subsidy of \$2.0 million

The accumulated benefit obligation for the SRAP was \$287.6 million and \$328.9 million at August 31, 2018 and 2017, respectively.

Net periodic benefit expense and non-operating activities related to the Plans for the years ended August 31, 2018 and 2017, in thousands of dollars, includes the following components:

	SRAP	FRIP	PRBP	TOTAL
2018				
Service cost	\$ 3,008	\$ 10,301	\$ 16,840	\$ 30,149
Interest cost	10,364	5,795	21,247	37,406
Expected return on plan assets	(13,961)	—	(14,955)	(28,916)
Amortization of:				
Prior service cost	390	—	—	390
Actuarial loss	916	597	701	2,214
Settlement loss	4,779	—	—	4,779
NET PERIODIC BENEFIT EXPENSE	5,496	16,693	23,833	46,022
New prior service cost	4,564	—	—	4,564
Net actuarial gain	(12,745)	(10,543)	(43,463)	(66,751)
Amortization of:				
Prior service cost	(390)	—	—	(390)
Actuarial loss	(916)	(597)	(701)	(2,214)
Settlement loss	(4,779)	—	—	(4,779)
TOTAL AMOUNTS RECOGNIZED IN NON-OPERATING ACTIVITIES	(14,266)	(11,140)	(44,164)	(69,570)
TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND NON-OPERATING ACTIVITIES	\$ (8,770)	\$ 5,553	\$ (20,331)	\$ (23,548)
2017				
Service cost	\$ 2,923	\$ 10,234	\$ 15,668	\$ 28,825
Interest cost	10,482	5,197	18,703	34,382
Expected return on plan assets	(15,173)	—	(14,740)	(29,913)
Amortization of:				
Prior service cost	390	—	—	390
Actuarial loss	1,508	870	464	2,842
NET PERIODIC BENEFIT EXPENSE	130	16,301	20,095	36,526
Net actuarial loss (gain)	(6,348)	(3,645)	7,370	(2,623)
Amortization of:				
Prior service cost	(390)	—	—	(390)
Actuarial loss	(1,508)	(870)	(464)	(2,842)
TOTAL AMOUNTS RECOGNIZED IN NON-OPERATING ACTIVITIES	(8,246)	(4,515)	6,906	(5,855)
TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND NON-OPERATING ACTIVITIES	\$ (8,116)	\$ 11,786	\$ 27,001	\$ 30,671

Cumulative amounts recognized in non-operating activities, but not yet recognized in net periodic benefit expense in the *Consolidated Statements of Activities*, are presented in the following table for the years ended August 31, 2018 and 2017, in thousands of dollars:

	SRAP	FRIP	PRBP	TOTAL
2018				
Prior service cost	\$ 4,990	\$ —	\$ —	\$ 4,990
Net actuarial loss	44,053	16,774	22,402	83,229
ACCUMULATED PLAN BENEFIT COSTS NOT YET RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE	\$ 49,043	\$ 16,774	\$ 22,402	\$ 88,219
2017				
Prior service cost	\$ 816	\$ —	\$ —	\$ 816
Net actuarial loss	62,493	27,914	66,566	156,973
ACCUMULATED PLAN BENEFIT COSTS NOT YET RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE	\$ 63,309	\$ 27,914	\$ 66,566	\$ 157,789

The prior service costs and net actuarial loss expected to be amortized from non-operating activities to net periodic benefit expense in fiscal year 2019, in thousands of dollars, are as follows:

	SRAP	FRIP	PRBP	TOTAL
Prior service cost	\$ 960	\$ —	\$ —	\$ 960
Net actuarial loss	\$ 627	\$ —	\$ —	\$ 627

ACTUARIAL ASSUMPTIONS

The weighted average assumptions used to determine the benefit obligations and net periodic benefit cost for the Plans are shown below:

	SRAP		FRIP		PRBP	
	2018	2017	2018	2017	2018	2017
BENEFIT OBLIGATIONS						
Discount rate	4.00%	3.42%	4.02%	3.44%	4.16%	3.78%
Covered payroll growth rate	3.00%	3.00%	4.26%	4.26%	N/A	N/A
NET PERIODIC BENEFIT COST						
Discount rate	3.42%/3.53%*	3.15%	3.44%	3.15%	3.78%	3.56%
Expected returns on plan assets	5.50%	5.50%	N/A	N/A	6.50%	7.00%
Covered payroll growth rate	3.00%	3.00%	4.26%	4.26%	N/A	N/A

* Reflects discount rates as of August 31, 2017 and November 30, 2017, respectively

The expected long-term rate of return on asset assumptions for the SRAP and PRBP plans is 5.00% and 6.50%, respectively. The assumption is used in determining the expected returns on plan assets, a component of net periodic benefit expense (income), representing the expected return for the upcoming fiscal year on plan assets. This assumption is developed based on future expectations for returns in each asset class, as well as the target asset allocation of the portfolios. The use of expected long-term returns on plan assets may result in income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns, and therefore result in a pattern of income and cost recognition that more closely matches the pattern of the services provided by the employees. Differences between actual and expected returns are recognized as a

component of non-operating activities and amortized as a component of net periodic benefit expense (income) over the service or life expectancy of the plan participants, depending on the plan, provided such amounts exceed the accounting standards threshold.

To determine the accumulated PRBP obligation at August 31, 2018, a 6.50% annual rate of increase in the per capita cost of covered health care was assumed for calendar year 2018, declining gradually to 4.50% by 2038 and remaining at this rate thereafter.

Health care cost trend rate assumptions have a significant effect on the amounts reported for the health care plans. If the assumed health care cost trend were increased or decreased by 1%, the impact on the PRBP service and interest cost and the accumulated obligation are as follows, in thousands of dollars:

		1% INCREASE IN HEALTH CARE COST TREND RATE		1% DECREASE IN HEALTH CARE COST TREND RATE
Effect on PRBP total service and interest cost	\$	8,848	\$	(6,729)
Effect on accumulated PRBP obligation	\$	95,874	\$	(76,375)

EXPECTED CONTRIBUTIONS

The University expects to contribute \$10.7 million to the FRIP and \$5.0 million to the SRAP, and does not expect to contribute to the PRBP during the fiscal year ending August 31, 2019.

EXPECTED BENEFIT PAYMENTS

The following benefit payments, which reflect expected future service, are expected to be paid for the years ending August 31, in thousands of dollars:

YEAR ENDING AUGUST 31	PRBP			
	SRAP	FRIP	EXCLUDING MEDICARE SUBSIDY	EXPECTED MEDICARE PART D SUBSIDY
2019	\$ 28,975	\$ 10,680	\$ 22,818	\$ 2,270
2020	22,678	15,663	24,129	2,455
2021	21,224	12,631	25,476	2,642
2022	21,211	12,052	26,861	2,833
2023	20,861	11,557	28,301	3,026
2024 - 2028	90,066	63,354	163,698	18,232

INVESTMENT STRATEGY

The University's Retirement Program Investment Committee, acting in a fiduciary capacity, has established formal investment policies for the assets associated with the University's funded plans (SRAP and PRBP). The investment strategy of the plans is to preserve and enhance the value of the plans' assets within acceptable levels of risk. Investments in the plans are diversified among asset classes, striving to achieve an optimal balance between risk and return, and income and capital appreciation. Because the liabilities of each of the plans are long-term, the investment horizon is primarily long-term, with adequate liquidity to meet short-term benefit payment obligations.

CONCENTRATION OF RISK

The University manages a variety of risks, including market, credit, and liquidity risks, across its plan assets. Concentration of risk is defined as an undiversified exposure to one of the above-mentioned risks that increases the exposure of the loss of plan assets unnecessarily. Risk is minimized by predominately investing in broadly diversified index funds for public equities and fixed income. As of August 31, 2018, the University did not have concentrations of risk in any single entity, counterparty, sector, industry or country.

PLAN ASSETS AND ALLOCATIONS

Current U.S. GAAP defines a hierarchy of valuation inputs for the determination of the fair value of plan assets as described in *Note 6*. As of August 31, 2018 and 2017, all of the assets of the PRBP and substantially all of the assets of the SRAP were categorized as Level 1 investments. The fair value of plan assets by asset category, in thousands of dollars, at August 31, 2018 and 2017 and actual allocations and weighted-average target allocations at August 31, 2018 are as follows:

	2018	2017	2018 ACTUAL ALLOCATION	2018 TARGET ALLOCATION
SRAP:				
Cash and cash equivalents	\$ 2,039	\$ 1,981	1%	0%
Public equities	99,934	113,622	40%	41%
Fixed income	147,383	166,772	59%	59%
Private equities	77	86	<1%	0%
TOTAL	249,433	282,461	100%	100%
PRBP:				
Public equities	188,310	172,813	75%	75%
Fixed income	61,279	57,268	25%	25%
TOTAL	249,589	230,081	100%	100%
TOTAL PLAN ASSETS AT FAIR VALUE	\$ 499,022	\$ 512,542		

15. SHC and LPCH Retirement Plans

SHC and LPCH provide retirement benefits through defined benefit and defined contribution retirement plans covering substantially all of its regular employees.

DEFINED CONTRIBUTION PLAN

The Hospitals offer a defined contribution plan to eligible employees. Employer contributions to the defined contribution retirement plan are based on a percentage of participant annual compensation, participant contributions and years of service. SHC and LPCH contributions under the plan, which are vested immediately to participants, were approximately \$111.4 million and \$90.5 million, and \$42.7 million and \$35.0 million for the years ended August 31, 2018 and 2017, respectively.

DEFINED BENEFIT PLANS

The Hospitals provide retirement and postretirement medical benefits through the SHC *Staff Pension Plan*, the SHC *Postretirement Medical Benefit Plan*, and the LPCH *Frozen Pension Plan*, collectively (the "Plans"). The obligations for the Plans, net of plan assets, are recorded in the *Consolidated Statements of Financial Position* as "accrued pension and postretirement benefit obligations." These plans are described more fully below.

Staff Pension Plan

Certain employees of SHC and LPCH are covered by the SHC *Staff Pension Plan* (the "Pension Plan"), a noncontributory, defined benefit pension plan. While the Pension Plan is closed to new participants, certain employees continue to accrue benefits. Benefits are based on years of service and the employee's compensation. Contributions to the plan are made in accordance with ERISA based on actuarially determined amounts sufficient to meet the benefits to be paid to plan participants. SHC and LPCH have an arrangement whereby SHC assumes the pension liability of the LPCH employees and previously leased employees. However, LPCH is required to reimburse SHC for the annual expense incurred for these employees and previously leased employees.

During the year ended August 31, 2018, SHC purchased a group annuity contract for certain SHC Staff Pension Plan retirees. This resulted in a \$41.2 million payment from plan assets and a permanent reduction in the plan's benefit obligation and triggered a settlement event. The transaction resulted in additional net periodic benefit expense of \$12.1 million for the year ended August 31, 2018.

Postretirement Medical Benefit Plan

SHC and LPCH provide health care benefits for certain retired employees through the SHC *Postretirement Medical Benefit Plan* (PRMB). The Hospitals' employees and their covered dependents may become eligible for the PRMB upon the employee's retirement as early as age 55, with years of service as defined by specific criteria. Retiree health plans are paid, in part, by retiree contributions, which are adjusted annually. The Hospitals' subsidies vary depending on whether the retiree is covered under the grandfathered design or the defined dollar benefit design. Medicare supplement options are provided for retirees over age 65. LPCH reimburses SHC for costs related to this plan on a periodic basis.

Frozen Pension Plan

The remainder of certain other LPCH employees and previously leased employees not covered by the previously described plans are covered by a frozen noncontributory defined benefit pension plan (the "LPCH *Frozen Pension Plan*"). Benefits are based on years of service and the employee's compensation. Contributions to the plan are made in accordance with ERISA based on actuarially determined amounts sufficient to meet the benefits to be paid to plan participants.

The change in the Plans' assets, the related change in benefit obligations and the amounts recognized in the financial statements, in thousands of dollars, are as follows:

	STAFF PENSION PLAN	PRMB	LPCH FROZEN PENSION PLAN
2018			
Fair value of plan assets, beginning of year	\$ 193,476	\$ —	\$ 6,086
Change in plan assets:			
Actual return on plan assets	7,477	—	133
Employer contributions	34,800	5,098	400
Plan participants' contributions	—	860	—
Benefits and plan expenses paid	(13,619)	(5,958) *	(511)
Plan settlements	(41,204)	—	—
FAIR VALUE OF PLAN ASSETS, END OF YEAR	180,930	—	6,108
Benefit obligation, beginning of year	245,221	84,179	8,447
Change in projected benefit obligation:			
Service cost	1,611	2,501	—
Interest cost	8,485	2,685	280
Plan participants' contributions	—	860	—
Actuarial gain	(12,914)	(6,052)	(263)
Benefits and plan expenses paid	(13,619)	(5,958) *	(511)
Plan amendments	—	(671)	—
Plan settlements	(41,204)	—	—
BENEFIT OBLIGATION, END OF YEAR	187,580	77,544	7,953
NET LIABILITY RECOGNIZED IN THE STATEMENTS OF FINANCIAL POSITION	\$ (6,650)	\$ (77,544)	\$ (1,845)
<i>* Net of Medicare subsidy of \$289 thousand</i>			
2017			
Fair value of plan assets, beginning of year	\$ 191,021	\$ —	\$ 6,390
Change in plan assets:			
Actual return on plan assets	13,794	—	226
Employer contributions	3,207	6,439	—
Plan participants' contributions	—	925	—
Benefits and plan expenses paid	(14,546)	(7,364) *	(530)
FAIR VALUE OF PLAN ASSETS, END OF YEAR	193,476	—	6,086
Benefit obligation, beginning of year	256,484	76,644	8,700
Change in projected benefit obligation:			
Service cost	2,842	2,317	—
Interest cost	8,296	2,422	266
Plan participants' contributions	—	925	—
Actuarial loss (gain)	(7,855)	4,099	11
Benefits and plan expenses paid	(14,546)	(7,364) *	(530)
Plan amendments	—	5,136	—
BENEFIT OBLIGATION, END OF YEAR	245,221	84,179	8,447
NET LIABILITY RECOGNIZED IN THE STATEMENTS OF FINANCIAL POSITION	\$ (51,745)	\$ (84,179)	\$ (2,361)

** Net of Medicare subsidy of \$160 thousand*

The net liability for the PRMB includes amounts for both SHC and LPCH employees and is recognized on the Hospitals' respective *Statements of Financial Position*. The table below presents the plan obligations for each entity as of August 31, 2018 and 2017, in thousands of dollars:

	2018		2017	
SHC	\$	60,146	\$	65,823
LPCH		17,398		18,356
TOTAL	\$	77,544	\$	84,179

The accumulated benefit obligation for the Pension Plan and LPCH Frozen Pension Plan was \$186.2 million and \$243.2 million, and \$8.0 million and \$8.4 million at August 31, 2018 and 2017, respectively.

Net periodic benefit expense and non-operating activities related to the Plans for the years ended August 31, 2018 and 2017, in thousands of dollars, includes the following components:

	STAFF PENSION PLAN	PRMB	LPCH FROZEN PENSION PLAN
2018			
Service cost	\$ 1,611	\$ 2,501	\$ —
Interest cost	8,485	2,685	280
Expected return on plan assets	(12,786)	—	(291)
Amortization of:			
Prior service cost	—	1,602	—
Actuarial loss (gain)	2,605	(580)	121
Settlement loss	12,094	—	—
NET PERIODIC BENEFIT EXPENSE	12,009	6,208	110
Net actuarial gain	(7,604)	(6,052)	(104)
New prior service cost	—	(671)	—
Amortization of:			
Prior service cost	—	(1,602)	—
Actuarial gain (loss)	(14,699)	580	(121)
TOTAL AMOUNTS RECOGNIZED IN NON-OPERATING ACTIVITIES	(22,303)	(7,745)	(225)
TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND NON-OPERATING ACTIVITIES	\$ (10,294)	\$ (1,537)	\$ (115)
2017			
Service cost	\$ 2,842	\$ 2,317	\$ —
Interest cost	8,296	2,422	266
Expected return on plan assets	(10,682)	—	(303)
Amortization of:			
Prior service cost	—	1,602	—
Actuarial loss (gain)	3,012	(915)	118
NET PERIODIC BENEFIT EXPENSE	3,468	5,426	81
Net actuarial loss (gain)	(10,967)	4,099	88
New prior service cost	—	5,136	—
Amortization of:			
Prior service cost	—	(1,602)	—
Actuarial gain (loss)	(3,012)	915	(118)
TOTAL AMOUNTS RECOGNIZED IN NON-OPERATING ACTIVITIES	(13,979)	8,548	(30)
TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND NON-OPERATING ACTIVITIES	\$ (10,511)	\$ 13,974	\$ 51

The net periodic benefit expense and amounts recognized in non-operating activities for the PRMB include amounts for both SHC and LPCH employees and is recognized on the Hospitals' respective *Statements of Activities*. The table below presents the amount for each entity as of August 31, 2018 and 2017, in thousands of dollars:

	SHC	LPCH	TOTAL
2018			
Net periodic benefit expense	\$ 4,596	\$ 1,612	\$ 6,208
Amounts recognized in non-operating activities	(5,974)	(1,772)	(7,746)
TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND NON-OPERATING ACTIVITIES	\$ (1,378)	\$ (160)	\$ (1,538)
2017			
Net periodic benefit expense	\$ 3,871	\$ 1,555	\$ 5,426
Amounts recognized in non-operating activities	7,797	751	8,548
TOTAL AMOUNT RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE AND NON-OPERATING ACTIVITIES	\$ 11,668	\$ 2,306	\$ 13,974

Cumulative amounts recognized in non-operating activities, but not yet recognized in net periodic benefit expense in the *Consolidated Statements of Activities*, are presented in the following table for the years ended August 31, 2018 and 2017, in thousands of dollars:

	STAFF PENSION PLAN	PRMB	LPCH FROZEN PENSION PLAN
2018			
Prior service cost	\$ —	\$ 5,363	\$ —
Net actuarial loss (gain)	55,059	(14,589)	2,430
ACCUMULATED PLAN BENEFIT COSTS NOT YET RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE	\$ 55,059	\$ (9,226)	\$ 2,430
2017			
Prior service cost	\$ —	\$ 7,636	\$ —
Net actuarial loss (gain)	77,362	(9,117)	2,656
ACCUMULATED PLAN BENEFIT COSTS NOT YET RECOGNIZED IN NET PERIODIC BENEFIT EXPENSE	\$ 77,362	\$ (1,481)	\$ 2,656

The prior service cost and net actuarial loss expected to be amortized from non-operating activities to net periodic benefit expense in fiscal year 2019, in thousands of dollars, are as follows:

	STAFF PENSION PLAN	PRMB	LPCH FROZEN PENSION PLAN
Prior service cost	\$ —	\$ 1,426	\$ —
Net actuarial loss (gain)	\$ 1,361	\$ (924)	\$ 113

ACTUARIAL ASSUMPTIONS

The weighted average assumptions used to determine the benefit obligations and net periodic benefit cost for the Plans are shown below:

	STAFF PENSION PLAN		PRMB		LPCH FROZEN PENSION PLAN	
	2018	2017	2018	2017	2018	2017
BENEFIT OBLIGATIONS						
Discount rate	4.07%	3.56%	3.96%	3.33%	4.01%	3.46%
Covered payroll growth rate	3.00%	3.00%	N/A	N/A	N/A	N/A
NET PERIODIC BENEFIT COST						
Discount rate	3.56%	3.32%	3.33%	3.07%	3.46%	3.18%
Expected return on plan assets	6.00%	6.00%	N/A	N/A	5.00%	5.00%
Covered payroll growth rate	3.00%	3.00%	N/A	N/A	N/A	N/A

The expected long-term rate of return on asset assumptions for the Pension Plan and LPCH Frozen Pension Plan are 6.00% and 5.00%, respectively. The assumption is used in determining the expected returns on plan assets, a component of net periodic benefit expense (income), representing the expected return for the upcoming fiscal year on plan assets based on the calculated market-related value of plan assets. This assumption is developed based on future expectations for returns in each asset class, as well as the target asset allocation of the portfolios. The use of expected long-term returns on plan assets may result in income that is greater or less than the actual returns of those plan assets in any given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns, and therefore result in a pattern of income and cost recognition that more closely matches the pattern of the services provided by the employees. Differences between actual and expected returns are recognized as a component of non-operating activities and amortized as a component of net periodic benefit expense (income) over the service or life expectancy of the plan participants, depending on the plan, provided such amounts exceed the accounting standards threshold.

To determine the accumulated PRMB obligation at August 31, 2018, a 6.5% annual rate of increase in the per capita cost of covered health care was assumed for calendar year 2018, declining gradually to 4.50% by 2038 and remaining at this rate thereafter.

Health care cost trend rate assumptions have a significant effect on the amounts reported for the health care plan. If the assumed health care cost trend were increased or decreased by 1%, the impact on PRMB service and interest cost and accumulated obligation are as follows, in thousands of dollars:

	1% INCREASE IN HEALTH CARE COST TREND RATE		1% DECREASE IN HEALTH CARE COST TREND RATE	
Effect on PRMB total service and interest cost	\$	81	\$	(97)
Effect on accumulated PRMB obligation	\$	1,699	\$	(1,554)

EXPECTED CONTRIBUTIONS

SHC expects to contribute \$5.6 million to the PRMB and does not expect to contribute to the Pension Plan during the fiscal year ending August 31, 2019. LPCH does not expect to contribute to the LPCH Frozen Pension Plan during the fiscal year ending August 31, 2019.

EXPECTED BENEFIT PAYMENTS

The following benefit payments, which reflect expected future service, are expected to be paid for the fiscal years ending August 31, in thousands of dollars:

YEAR ENDING AUGUST 31	STAFF PENSION PLAN	PRMB		LPCH FROZEN PENSION PLAN
		EXCLUDING MEDICARE SUBSIDY	EXPECTED MEDICARE PART D SUBSIDY	
2019	\$ 10,721	\$ 7,337	\$ 144	\$ 766
2020	11,115	7,060	141	733
2021	11,469	7,094	137	643
2022	11,756	7,100	132	594
2023	11,947	6,915	127	576
2024 - 2028	60,731	32,297	531	2,553

INVESTMENT STRATEGY

SHC's and LPCH's investment strategies for the Pension Plan and LPCH Frozen Pension Plan is to maximize the total rate of return (income and appreciation) within the limits of prudent risk taking and Section 404 of ERISA. The funds are diversified across asset classes to achieve an optimal balance between risk and return and between income and capital appreciation. Because the liabilities of each of the plans are long-term, the investment horizon is primarily long-term, with adequate liquidity to meet short-term benefit payment obligations.

CONCENTRATION OF RISK

SHC and LPCH manage a variety of risks, including market, credit, and liquidity risks, across its plan assets. Concentration of risk is defined as an undiversified exposure to one of the above-mentioned risks that increases the exposure of the loss of plan assets unnecessarily. Risk is minimized by diversifying the Hospitals' exposure to such risks across a variety of instruments, markets, and counterparties. As of August 31, 2018, the Hospitals did not have concentrations of risk in any single entity, counterparty, sector, industry or country.

PLAN ASSETS AND ALLOCATIONS

Current U.S. GAAP defines a hierarchy of valuation inputs for the determination of the fair value of plan assets as described in *Note 6*. The Plans' assets measured at fair value at August 31, 2018 and 2017, are all categorized as Level 1 investments. The fair value of plan assets by asset category, in thousands of dollars, at August 31, 2018 and 2017 and actual allocations and weighted-average target allocations at August 31, 2018 are as follows:

	2018	2017	2018 ACTUAL ALLOCATION	2018 TARGET ALLOCATION
STAFF PENSION PLAN:				
Cash and cash equivalents	\$ 683	\$ 1,247	<1%	0%
Public equities	72,009	96,202	40%	40%
Fixed income	108,238	96,027	60%	60%
PLAN ASSETS AT FAIR VALUE	\$ 180,930	\$ 193,476	100%	100%
LPCH FROZEN PENSION PLAN:				
Cash and cash equivalents	\$ 30	\$ 43	<1%	0%
Public equities	1,828	1,808	30%	30%
Fixed income	4,250	4,235	70%	70%
PLAN ASSETS AT FAIR VALUE	\$ 6,108	\$ 6,086	100%	100%

16. Operating Leases

Stanford leases certain equipment and facilities under operating leases expiring at various dates. Total rental expense under these leases for the years ended August 31, 2018 and 2017 was \$79.7 million and \$76.4 million, respectively, for the University, \$116.3 million and \$97.7 million, respectively, for SHC, and \$28.6 million and \$27.7 million, respectively, for LPCH.

Net minimum future operating lease payments for periods subsequent to August 31, 2018, in thousands of dollars, are as follows:

YEAR ENDING AUGUST 31	MINIMUM LEASE PAYMENTS			
	UNIVERSITY	SHC	LPCH	CONSOLIDATED
2019	\$ 65,366	\$ 78,207	\$ 26,204	\$ 169,777
2020	32,748	68,465	20,153	121,366
2021	29,126	59,364	8,683	97,173
2022	29,083	55,917	4,269	89,269
2023	26,456	50,066	3,750	80,272
Thereafter	112,222	83,000	6,618	201,840
TOTAL	\$ 295,001	\$ 395,019	\$ 69,677	\$ 759,697

17. Related Party Transactions

Members of the University, SHC, and LPCH boards and senior management may, from time to time, be associated, either directly or indirectly, with companies doing business with Stanford.

The University, SHC and LPCH have separate written conflict of interest policies that require, among other items, that no member of their respective board can participate in any decision in which he or she (or an immediate family member) has a material financial interest. Each board member is required to certify compliance with his or her respective entity's conflict of interest policy on an annual basis and indicate whether his or her respective entity does business with any entity in which the board member has a material financial interest. When such relationships exist, measures are taken to mitigate any actual or perceived conflict, including requiring that such transactions be conducted at arm's length, for good and sufficient consideration, based on terms that are fair and reasonable to and for the benefit of the respective entity, and in accordance with applicable conflict of interest laws and policies. No such associations are considered to be significant.

Each of the University, SHC, and LPCH requires its senior management to disclose annually any significant financial interests in, or employment or consulting relationships with, entities doing business with it. These annual disclosures cover both senior management and their immediate family members. When such relationships exist, measures are taken to appropriately manage the actual or perceived conflict in the best interests of the relevant entity. No such associations are considered to be significant.

18. Commitments and Contingencies

Management is of the opinion that none of the following commitments and contingencies will have a material adverse effect on Stanford's consolidated financial position.

SPONSORED RESEARCH

As described in *Note 1*, costs recovered by the University in support of sponsored research are subject to audit and adjustment. Fringe benefit costs for the fiscal years ended August 31, 2010 to 2018 are subject to audit. The University does not anticipate any adjustments material to the *Consolidated Financial Statements*.

HEALTH CARE

As described in *Note 3*, cost reports filed under the Medicare program for services based upon cost reimbursement are subject to audit. The estimated amounts due to or from the program are reviewed and adjusted annually based upon the status of such audits and subsequent appeals.

The health care industry is subject to numerous laws and regulations of federal, state and local governments. Compliance with these laws and regulations can be subject to future government review and interpretation, as well as to regulatory actions unknown or unasserted at this time. Government activity with respect to investigations and allegations concerning possible violations of regulations by health care providers could result in the imposition of significant fines and penalties, as well as significant repayments for patient services previously billed. SHC and LPCH are subject to similar regulatory reviews, and while such reviews may result in repayments and civil remedies that could have a material effect on their respective financial results of operations in a given period, SHC's and LPCH's management believes that such repayments and civil remedies would not have a material effect on the financial position of SHC and LPCH, respectively.

INFORMATION PRIVACY AND SECURITY

As with many medical centers and universities across the country, information privacy and security is a significant enterprise risk area, owing to persistent and pervasive cyber threats along with expanding regulatory compliance obligations and enforcement. The University, SHC and LPCH have programs in place to safeguard important systems and protected information, yet significant incidents have occurred in the past and may occur in the future involving potential or actual disclosure of such information (including, for example, personally identifiable information relating to employees, students, patients or research participants). In most cases, there has been no evidence of unauthorized access to, or use/disclosure of, such information, yet privacy laws may require reporting to potentially affected individuals as well as federal, state and international governmental agencies. Governmental agencies have the authority to investigate and request further information about an incident or safeguards, to cite the University, SHC or LPCH for a deficiency or regulatory violation, and/or require payment of fines, corrective action, or both. California law also allows a private right to sue for a breach of medical information. To date, the cost of such possible consequences has not been material to the University, SHC or LPCH, and management does not believe that any future consequences of these identified incidents will be material to the *Consolidated Financial Statements*.

LABOR AGREEMENTS

Approximately 7% of the University's, 29% of SHC's and 42% of LPCH's employees are covered under union contract arrangements and are, therefore, subject to labor stoppages when contracts expire. There are currently no expired contracts under these union contract arrangements. The University's agreements with the Stanford Deputy Sheriffs' Association and the Service Employees International Union (SEIU) will expire in 2020 and 2019, respectively. SHC's and LPCH's agreements with SEIU and the Committee for Recognition of Nursing Achievement (CRONA) will expire in 2020 and 2019, respectively.

GUARANTEES AND INDEMNIFICATIONS

Stanford enters into indemnification agreements with third parties in the normal course of business. The impact of these agreements, individually or in the aggregate, is not expected to be material to the *Consolidated Financial Statements*. As a result, no liabilities related to guarantees and indemnifications have been recorded at August 31, 2018.

LITIGATION

The University, SHC and LPCH are defendants in a number of legal actions. While the final outcome cannot be determined at this time, management is of the opinion that the liability, if any, resulting from these legal actions will not have a material adverse effect on the consolidated financial position.

MEDICAL CENTER RENEWAL PROJECT

In July 2011, Stanford obtained local approval for a Renewal Project to rebuild SHC and expand LPCH to assure adequate capacity and provide modern, technologically-advanced hospital facilities. The Renewal Project includes replacement of outdated laboratory facilities at the Stanford SOM.

California's Hospital Seismic Safety Act requires licensed acute care functions to be conducted only in facilities that meet specified seismic safety standards which have varying deadlines. The Renewal Project as approved is also designed to meet these standards and deadlines.

The sources of funding for the Renewal Project include operating surpluses, gifts, government grants, and bond proceeds. SHC's share of the estimated total cost of the Renewal Project is \$2.1 billion and construction is scheduled to be completed in late 2019. Through August 31, 2018, SHC has recorded \$1.8 billion in construction in progress, inclusive of \$151.0 million in capitalized interest.

During FY18, LPCH opened the majority of their new expanded facilities and expects to complete the remaining components of its portion of the Renewal Project in fiscal year 2019. The cost of LPCH's project has exceeded its originally estimated amount of \$1.2 billion because of cost increases related to changes in technology, change orders, and market availability of subcontractors, among other factors. Through August 31, 2018, LPCH has placed in service new facilities costing \$1.4 billion related to the Renewal Project.

The first of the replacement SOM laboratory facilities is currently under construction and is scheduled to be completed in 2020. Additional research facilities, which will allow for the full replacement of the outdated laboratory facilities, will be completed in subsequent years.

CONTRACTUAL COMMITMENTS

At August 31, 2018, the University had contractual obligations of approximately \$1.3 billion in connection with major construction projects. Remaining expenditures on construction in progress are estimated to be \$1.8 billion, which will be financed with certain unexpended plant funds, gifts and debt. Commitments on contracts, including for the construction and remodeling of Hospital facilities, were approximately \$274.1 million for SHC and \$121.9 million for LPCH at August 31, 2018.

The University executed an agreement with a solar electricity developer and operator in 2015 to purchase the output from its solar photovoltaic facility, which was placed in service in December 2016. The minimum energy purchase requirements are expected to be well within the University's current consumption. The University's total payment under the agreement over the next 23 years, undiscounted, is \$184.9 million.

In addition, as described in *Note 6*, the University is obligated under certain alternative investment agreements to advance additional funding up to specified levels over a period of years.

19. Subsequent Events

Stanford has evaluated subsequent events for the period from August 31, 2018 through December 4, 2018, the date the *Consolidated Financial Statements* were issued.

20. Consolidating Entity Statements

The pages which follow present consolidating statements of financial position as of August 31, 2018 and 2017, and consolidating statements of activities and cash flows for the years then ended, in thousands of dollars.

CONSOLIDATING STATEMENTS OF FINANCIAL POSITION

At August 31, 2018 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
ASSETS					
Cash and cash equivalents	\$ 265,795	\$ 652,256	\$ 288,469	\$ (7,153)	\$ 1,199,367
Assets limited as to use	165,429	—	—	—	165,429
Accounts receivable, net	285,038	670,267	343,640	—	1,298,945
Receivables (payables) from SHC and LPCH, net	114,219	—	—	(114,219)	—
Prepaid expenses and other assets	87,666	226,809	82,731	(67,506)	329,700
Pledges receivable, net	1,321,168	84,535	146,376	(33,593)	1,518,486
Student loans receivable, net	60,336	—	—	—	60,336
Faculty and staff mortgages and other loans receivable, net	712,161	—	—	—	712,161
Investments at fair value, including securities pledged or on loan of \$75,499	34,517,436	2,301,934	957,069	7,153	37,783,592
Plant facilities, net of accumulated depreciation	6,507,537	3,279,048	1,891,701	—	11,678,286
Works of art and special collections	—	—	—	—	—
TOTAL ASSETS	\$ 44,036,785	\$ 7,214,849	\$ 3,709,986	\$ (215,318)	\$ 54,746,302
LIABILITIES AND NET ASSETS					
LIABILITIES:					
Accounts payable and accrued expenses	\$ 933,291	\$ 1,138,577	\$ 371,324	\$ (151,515)	\$ 2,291,677
Accrued pension and postretirement benefit obligations	518,553	66,796	19,243	—	604,592
Liabilities associated with investments	708,629	—	—	—	708,629
Deferred income and other obligations	1,118,899	93,620	—	—	1,212,519
Notes and bonds payable	3,834,297	1,954,672	872,675	—	6,661,644
U.S. government refundable loan funds	39,678	—	—	—	39,678
TOTAL LIABILITIES	7,153,347	3,253,665	1,263,242	(151,515)	11,518,739
NET ASSETS:					
Unrestricted, including non-controlling interest attributable to SHC of \$63,803	20,475,957	3,304,125	1,873,422	(63,803)	25,589,701
Temporarily restricted	8,707,127	648,826	345,334	—	9,701,287
Permanently restricted	7,700,354	8,233	227,988	—	7,936,575
TOTAL NET ASSETS	36,883,438	3,961,184	2,446,744	(63,803)	43,227,563
TOTAL LIABILITIES AND NET ASSETS	\$ 44,036,785	\$ 7,214,849	\$ 3,709,986	\$ (215,318)	\$ 54,746,302

CONSOLIDATING STATEMENTS OF FINANCIAL POSITION

At August 31, 2017 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
ASSETS					
Cash and cash equivalents	\$ 260,373	\$ 710,109	\$ 406,683	\$ (7,047)	\$ 1,370,118
Assets limited as to use	194,376	58,134	33,096	—	285,606
Accounts receivable, net	284,693	668,178	317,127	—	1,269,998
Receivables (payables) from SHC and LPCH, net	92,808	—	—	(92,808)	—
Prepaid expenses and other assets	96,210	201,447	87,093	(49,520)	335,230
Pledges receivable, net	1,356,535	90,008	162,325	(34,275)	1,574,593
Student loans receivable, net	70,906	—	—	—	70,906
Faculty and staff mortgages and other loans receivable, net	677,545	—	—	—	677,545
Investments at fair value, including securities pledged or on loan of \$341,412	33,297,493	1,632,390	904,681	7,047	35,841,611
Plant facilities, net of accumulated depreciation	5,623,283	2,869,346	1,730,108	—	10,222,737
Works of art and special collections	—	—	—	—	—
TOTAL ASSETS	\$ 41,954,222	\$ 6,229,612	\$ 3,641,113	\$ (176,603)	\$ 51,648,344
LIABILITIES AND NET ASSETS					
LIABILITIES:					
Accounts payable and accrued expenses	\$ 865,313	\$ 1,041,412	\$ 315,195	\$ (130,893)	\$ 2,091,027
Accrued pension and postretirement benefit obligations	564,090	117,568	20,717	—	702,375
Liabilities associated with investments	953,794	—	—	—	953,794
Deferred income and other obligations	871,729	—	—	—	871,729
Notes and bonds payable	3,954,141	1,566,064	881,137	—	6,401,342
U.S. government refundable loan funds	53,936	—	—	—	53,936
TOTAL LIABILITIES	7,263,003	2,725,044	1,217,049	(130,893)	11,074,203
NET ASSETS:					
Unrestricted, including non-controlling interest attributable to SHC of \$45,710	19,072,619	2,893,173	1,545,390	(45,710)	23,465,472
Temporarily restricted	8,273,483	603,251	651,545	—	9,528,279
Permanently restricted	7,345,117	8,144	227,129	—	7,580,390
TOTAL NET ASSETS	34,691,219	3,504,568	2,424,064	(45,710)	40,574,141
TOTAL LIABILITIES AND NET ASSETS	\$ 41,954,222	\$ 6,229,612	\$ 3,641,113	\$ (176,603)	\$ 51,648,344

CONSOLIDATING STATEMENTS OF ACTIVITIES

For the year ended August 31, 2018 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
UNRESTRICTED NET ASSETS					
OPERATING REVENUES:					
Student income:					
Undergraduate programs	\$ 368,383	\$ —	\$ —	\$ —	368,383
Graduate programs	374,857	—	—	—	374,857
Room and board	195,225	—	—	—	195,225
Student financial aid	(303,445)	—	—	—	(303,445)
TOTAL STUDENT INCOME	635,020	—	—	—	635,020
Sponsored research support:					
Direct costs - University	801,534	—	—	—	801,534
Direct costs - SLAC National Accelerator Laboratory	580,314	—	—	—	580,314
Indirect costs	273,679	—	—	—	273,679
TOTAL SPONSORED RESEARCH SUPPORT	1,655,527	—	—	—	1,655,527
Health care services:					
Net patient service revenue	—	4,677,929	1,546,805	(43,344)	6,181,390
Premium revenue	—	92,654	—	—	92,654
Physicians' services and support - SHC and LPCH, net	1,048,749	—	—	(1,048,749)	—
Physicians' services and support - other facilities, net	40,672	—	—	(12,438)	28,234
TOTAL HEALTH CARE SERVICES	1,089,421	4,770,583	1,546,805	(1,104,531)	6,302,278
CURRENT YEAR GIFTS IN SUPPORT OF OPERATIONS	278,867	294	3,951	—	283,112
Net assets released from restrictions:					
Payments received on pledges	138,704	3,928	—	—	142,632
Prior year gifts released from donor restrictions	51,892	(1,088)	5,139	—	55,943
TOTAL NET ASSETS RELEASED FROM RESTRICTIONS	190,596	2,840	5,139	—	198,575
Investment income distributed for operations:					
Endowment	1,239,746	382	14,187	—	1,254,315
Expendable funds pools and other investment income	253,642	850	—	—	254,492
TOTAL INVESTMENT INCOME DISTRIBUTED FOR OPERATIONS	1,493,388	1,232	14,187	—	1,508,807
SPECIAL PROGRAM FEES AND OTHER INCOME	524,675	135,597	67,804	—	728,076
TOTAL OPERATING REVENUES	5,867,494	4,910,546	1,637,886	(1,104,531)	11,311,395
OPERATING EXPENSES:					
Salaries and benefits	3,495,306	2,091,260	741,925	—	6,328,491
Depreciation	380,142	176,595	99,367	—	656,104
Other operating expenses	1,794,501	2,322,032	842,511	(1,104,531)	3,854,513
TOTAL OPERATING EXPENSES	5,669,949	4,589,887	1,683,803	(1,104,531)	10,839,108
CHANGE IN NET ASSETS FROM OPERATING ACTIVITIES	\$ 197,545	\$ 320,659	\$ (45,917)	\$ —	\$ 472,287

CONSOLIDATING STATEMENTS OF ACTIVITIES, Continued
For the year ended August 31, 2018 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
UNRESTRICTED NET ASSETS (continued)					
CHANGE IN NET ASSETS FROM OPERATING ACTIVITIES	\$ 197,545	\$ 320,659	\$ (45,917)	\$ —	\$ 472,287
NON-OPERATING ACTIVITIES:					
Increase in reinvested gains	951,197	158,592	49,765	—	1,159,554
Donor advised funds, net	(6,489)	—	—	—	(6,489)
Current year gifts not included in operations	3,064	—	—	—	3,064
Equity and fund transfers, net	126,000	(96,157)	(29,843)	—	—
Capital and other gifts released from restrictions	162,511	309	352,979	—	515,799
Pension and other postemployment benefit related changes other than net periodic benefit expense	69,570	28,277	1,997	—	99,844
Transfer to permanently restricted net assets, net	(53,349)	—	—	—	(53,349)
Transfer to temporarily restricted net assets, net	(61,251)	—	—	—	(61,251)
Swap interest and change in value of swap agreements	8,168	48,043	—	—	56,211
Loss on extinguishment of debt	—	(47,613)	—	—	(47,613)
Non-controlling interest attributable to SHC	18,093	—	—	(18,093)	—
Other	(11,721)	(1,158)	(949)	—	(13,828)
NET CHANGE IN UNRESTRICTED NET ASSETS	1,403,338	410,952	328,032	(18,093)	2,124,229
TEMPORARILY RESTRICTED NET ASSETS					
Gifts and pledges, net	248,955	44,894	41,828	—	335,677
Increase in reinvested gains	493,660	3,179	28,244	—	525,083
Change in value of split-interest agreements, net	11,198	—	(3)	—	11,195
Net assets released to operations	(190,596)	(4,366)	(23,277)	—	(218,239)
Capital and other gifts released to unrestricted net assets	(162,511)	(309)	(352,979)	—	(515,799)
Gift transfers, net	(2,381)	2,177	204	—	—
Transfer from unrestricted net assets, net	61,251	—	—	—	61,251
Transfer from permanently restricted net assets, net	(22,730)	—	—	—	(22,730)
Other	(3,202)	—	(228)	—	(3,430)
NET CHANGE IN TEMPORARILY RESTRICTED NET ASSETS	433,644	45,575	(306,211)	—	173,008
PERMANENTLY RESTRICTED NET ASSETS					
Gifts and pledges, net	238,568	89	960	—	239,617
Increase in reinvested gains	27,885	—	—	—	27,885
Change in value of split-interest agreements, net	12,705	—	215	—	12,920
Transfer from unrestricted net assets, net	53,349	—	—	—	53,349
Transfer to temporarily restricted net assets, net	22,730	—	—	—	22,730
Other	—	—	(316)	—	(316)
NET CHANGE IN PERMANENTLY RESTRICTED NET ASSETS	355,237	89	859	—	356,185
NET CHANGE IN TOTAL NET ASSETS	2,192,219	456,616	22,680	(18,093)	2,653,422
Total net assets, beginning of year	34,691,219	3,504,568	2,424,064	(45,710)	40,574,141
TOTAL NET ASSETS, END OF YEAR	\$ 36,883,438	\$ 3,961,184	\$ 2,446,744	\$ (63,803)	\$ 43,227,563

CONSOLIDATING STATEMENTS OF ACTIVITIES

For the year ended August 31, 2017 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
UNRESTRICTED NET ASSETS					
OPERATING REVENUES:					
Student income:					
Undergraduate programs	\$ 356,871	\$ —	\$ —	\$ —	356,871
Graduate programs	361,228	—	—	—	361,228
Room and board	186,565	—	—	—	186,565
Student financial aid	(286,851)	—	—	—	(286,851)
TOTAL STUDENT INCOME	617,813	—	—	—	617,813
Sponsored research support:					
Direct costs - University	786,866	—	—	—	786,866
Direct costs - SLAC National Accelerator Laboratory	584,635	—	—	—	584,635
Indirect costs	264,604	—	—	—	264,604
TOTAL SPONSORED RESEARCH SUPPORT	1,636,105	—	—	—	1,636,105
Health care services:					
Net patient service revenue	—	4,234,526	1,384,829	(44,845)	5,574,510
Premium revenue	—	80,647	—	—	80,647
Physicians' services and support - SHC and LPCH, net	986,184	—	—	(986,184)	—
Physicians' services and support - other facilities, net	37,137	—	—	(10,429)	26,708
TOTAL HEALTH CARE SERVICES	1,023,321	4,315,173	1,384,829	(1,041,458)	5,681,865
CURRENT YEAR GIFTS IN SUPPORT OF OPERATIONS	324,523	160	5,667	—	330,350
Net assets released from restrictions:					
Payments received on pledges	119,002	3,978	—	—	122,980
Prior year gifts released from donor restrictions	65,082	4,698	3,027	—	72,807
TOTAL NET ASSETS RELEASED FROM RESTRICTIONS	184,084	8,676	3,027	—	195,787
Investment income distributed for operations:					
Endowment	1,166,399	364	15,669	—	1,182,432
Expendable funds pools and other investment income	143,434	704	—	—	144,138
TOTAL INVESTMENT INCOME DISTRIBUTED FOR OPERATIONS	1,309,833	1,068	15,669	—	1,326,570
SPECIAL PROGRAM FEES AND OTHER INCOME	508,899	129,324	77,666	—	715,889
TOTAL OPERATING REVENUES	5,604,578	4,454,401	1,486,858	(1,041,458)	10,504,379
OPERATING EXPENSES:					
Salaries and benefits	3,301,485	1,986,360	659,637	(943)	5,946,539
Depreciation	364,857	154,423	66,635	—	585,915
Other operating expenses	1,711,188	2,079,736	773,292	(1,040,515)	3,523,701
TOTAL OPERATING EXPENSES	5,377,530	4,220,519	1,499,564	(1,041,458)	10,056,155
CHANGE IN NET ASSETS FROM OPERATING ACTIVITIES	\$ 227,048	\$ 233,882	\$ (12,706)	\$ —	\$ 448,224

CONSOLIDATING STATEMENTS OF ACTIVITIES, Continued
For the year ended August 31, 2017 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
UNRESTRICTED NET ASSETS (continued)					
CHANGE IN NET ASSETS FROM OPERATING ACTIVITIES	\$ 227,048	\$ 233,882	\$ (12,706)	\$ —	\$ 448,224
NON-OPERATING ACTIVITIES:					
Increase in reinvested gains	1,375,450	166,326	58,801	—	1,600,577
Donor advised funds, net	68,021	—	—	—	68,021
Current year gifts not included in operations	4,090	—	—	—	4,090
Equity and fund transfers, net	87,760	(69,376)	(18,384)	—	—
Capital and other gifts released from restrictions	109,174	1,320	155	—	110,649
Pension and other postemployment benefit related changes other than net periodic benefit expense	5,855	6,182	(721)	—	11,316
Transfer to permanently restricted net assets, net	(50,490)	—	—	—	(50,490)
Transfer to temporarily restricted net assets, net	(67,369)	—	—	—	(67,369)
Swap interest and change in value of swap agreements	10,844	85,368	—	—	96,212
Non-controlling interest attributable to SHC	45,710	—	—	(45,710)	—
Contribution received in acquisition of LPFCH	—	—	109,794	—	109,794
Other	707	301	(2,982)	—	(1,974)
NET CHANGE IN UNRESTRICTED NET ASSETS	1,816,800	424,003	133,957	(45,710)	2,329,050
TEMPORARILY RESTRICTED NET ASSETS					
Gifts and pledges, net	291,606	28,541	67,428	—	387,575
Increase in reinvested gains	805,790	6,100	34,764	—	846,654
Change in value of split-interest agreements, net	9,189	—	884	—	10,073
Net assets released to operations	(184,084)	(9,904)	(24,363)	—	(218,351)
Capital and other gifts released to unrestricted net assets	(109,174)	(1,320)	(155)	—	(110,649)
Gift transfers, net	(625)	2,748	(2,123)	—	—
Transfer from unrestricted net assets, net	67,369	—	—	—	67,369
Transfer from permanently restricted net assets, net	1,811	—	—	—	1,811
Other	(3,144)	—	991	—	(2,153)
NET CHANGE IN TEMPORARILY RESTRICTED NET ASSETS	878,738	26,165	77,426	—	982,329
PERMANENTLY RESTRICTED NET ASSETS					
Gifts and pledges, net	228,392	250	14,256	—	242,898
Increase in reinvested gains	33,251	—	—	—	33,251
Change in value of split-interest agreements, net	(33,819)	—	400	—	(33,419)
Transfer from unrestricted net assets, net	50,490	—	—	—	50,490
Transfer to temporarily restricted net assets, net	(1,811)	—	—	—	(1,811)
Other	—	—	1,125	—	1,125
NET CHANGE IN PERMANENTLY RESTRICTED NET ASSETS	276,503	250	15,781	—	292,534
NET CHANGE IN TOTAL NET ASSETS	2,972,041	450,418	227,164	(45,710)	3,603,913
Total net assets, beginning of year	31,719,178	3,054,150	2,196,900	—	36,970,228
TOTAL NET ASSETS, END OF YEAR	\$ 34,691,219	\$ 3,504,568	\$ 2,424,064	\$ (45,710)	\$ 40,574,141

CONSOLIDATING STATEMENTS OF CASH FLOWS

For the year ended August 31, 2018 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
CASH FLOW FROM OPERATING ACTIVITIES					
Change in net assets	\$ 2,192,219	\$ 456,616	\$ 22,680	\$ (18,093)	\$ 2,653,422
Adjustments to reconcile change in net assets to net cash provided by (used for) operating activities:					
Depreciation	380,142	176,595	99,367	—	656,104
Amortization of bond premiums and discounts	(14,896)	(3,839)	(2,846)	—	(21,581)
Provision for doubtful accounts for health care services	—	57,437	5,660	—	63,097
Losses on disposal of plant facilities	4,350	—	—	—	4,350
Net gains on investments	(2,683,987)	(123,731)	(38,216)	—	(2,845,934)
Change in fair value of interest rate swaps	(10,654)	(63,439)	—	—	(74,093)
Change in split-interest agreements	44,626	—	353	—	44,979
Investment income for restricted purposes	(12,413)	—	—	—	(12,413)
Gifts restricted for long-term investments	(232,520)	(37,958)	(71,032)	—	(341,510)
Equity and fund transfers, net	(123,619)	93,938	29,681	—	—
Gifts of securities and properties	(31,093)	—	—	—	(31,093)
Loss on extinguishment of debt	—	47,613	—	—	47,613
Other	32,140	1,909	—	—	34,049
Premiums received from bond issuance	—	76,138	—	—	76,138
Changes in operating assets and liabilities:					
Accounts receivable	(9,697)	(82,765)	(6,589)	—	(99,051)
Pledges receivable, net	(31,016)	2,684	13,767	—	(14,565)
Prepaid expenses and other assets	578	(13,877)	(18,095)	—	(31,394)
Accounts payable and accrued expenses	10,345	64,535	66,743	—	141,623
Accrued pension and postretirement benefit obligations	(45,537)	(50,772)	(1,474)	—	(97,783)
Deferred income and other obligations	18,566	93,620	—	—	112,186
NET CASH PROVIDED BY (USED FOR) OPERATING ACTIVITIES	(512,466)	694,704	99,999	(18,093)	264,144
CASH FLOW FROM INVESTING ACTIVITIES					
Additions to plant facilities, net	(1,133,180)	(474,735)	(271,391)	—	(1,879,306)
Change in assets limited as to use	194,376	58,134	33,096	—	285,606
Student, faculty and other loans:					
New loans made	(121,949)	—	—	—	(121,949)
Principal collected	69,831	—	—	—	69,831
Purchases of investments	(12,054,658)	(605,959)	(12,502)	17,987	(12,655,132)
Sales and maturities of investments	13,367,548	47,262	14,570	—	13,429,380
Change associated with repurchase agreements	246,599	—	—	—	246,599
Swap settlement payments, net	—	(15,393)	—	—	(15,393)
NET CASH PROVIDED BY (USED FOR) INVESTING ACTIVITIES	568,567	(990,691)	(236,227)	17,987	(640,364)
CASH FLOW FROM FINANCING ACTIVITIES					
Gifts and reinvested income for restricted purposes	297,548	40,747	53,658	—	391,953
Equity and fund transfers from Hospitals	100,718	(70,875)	(29,843)	—	—
Proceeds from borrowing	293,471	954,200	—	—	1,247,671
Repayment of notes and bonds payable	(398,371)	(679,331)	(5,801)	—	(1,083,503)
Bond issuance costs and interest rate swaps	—	(6,783)	—	—	(6,783)
Contributions received for split-interest agreements	29,561	—	—	—	29,561
Payments made under split-interest agreements	(42,630)	—	—	—	(42,630)
Change in liabilities associated with investments	(342,969)	—	—	—	(342,969)
Other	11,993	176	—	—	12,169
NET CASH PROVIDED BY (USED FOR) FINANCING ACTIVITIES	(50,679)	238,134	18,014	—	205,469
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	5,422	(57,853)	(118,214)	(106)	(170,751)
Cash and cash equivalents, beginning of year	260,373	710,109	406,683	(7,047)	1,370,118
CASH AND CASH EQUIVALENTS, END OF YEAR	\$ 265,795	\$ 652,256	\$ 288,469	\$ (7,153)	\$ 1,199,367
SUPPLEMENTAL DATA:					
Interest paid, net of capitalized interest	\$ 154,654	\$ 33,033	\$ 14,750	\$ —	\$ 202,437
Cash collateral received under security lending agreements	\$ 77,137	\$ —	\$ —	\$ —	\$ 77,137
Change in payables for plant facilities	\$ 75,031	\$ 111,562	\$ 10,615	\$ —	\$ 197,208

CONSOLIDATING STATEMENTS OF CASH FLOWS

For the year ended August 31, 2017 (in thousands of dollars)

	UNIVERSITY	SHC	LPCH	ELIMINATIONS	CONSOLIDATED
CASH FLOW FROM OPERATING ACTIVITIES					
Change in net assets	\$ 2,972,041	\$ 450,418	\$ 227,164	\$ (45,710)	\$ 3,603,913
Adjustments to reconcile change in net assets to net cash provided by (used for) operating activities:					
Depreciation	364,857	154,423	66,635	—	585,915
Amortization of bond premiums and discounts	(15,147)	(1,583)	(2,202)	—	(18,932)
Provision for doubtful accounts for health care services	—	77,004	7,657	—	84,661
Gains on disposal of plant facilities	(4,247)	—	—	—	(4,247)
Net gains on investments	(3,377,819)	(162,143)	(68,576)	—	(3,608,538)
Change in fair value of interest rate swaps	(13,855)	(85,368)	—	—	(99,223)
Change in split-interest agreements	132,367	—	—	—	132,367
Investment income for restricted purposes	(30,733)	—	—	—	(30,733)
Gifts restricted for long-term investments	(324,742)	(21,989)	(92,085)	—	(438,816)
Equity and fund transfers, net	(87,135)	66,628	20,507	—	—
Gifts of securities and properties	(89,611)	—	—	—	(89,611)
Contribution received in acquisition of LPFCH	—	—	(109,794)	—	(109,794)
Other	13,986	—	—	—	13,986
Premiums received from bond issuance	—	—	29,069	—	29,069
Changes in operating assets and liabilities:					
Accounts receivable	(35,224)	(128,875)	(115,615)	—	(279,714)
Pledges receivable, net	1,458	1,422	76,673	—	79,553
Prepaid expenses and other assets	3,030	(10,919)	(7,376)	—	(15,265)
Accounts payable and accrued expenses	102,974	4,108	(1,378)	—	105,704
Accrued pension and postretirement benefit obligations	9,043	(7,790)	1,658	—	2,911
Deferred income and other obligations	214,351	—	—	—	214,351
NET CASH PROVIDED BY (USED FOR) OPERATING ACTIVITIES	(164,406)	335,336	32,337	(45,710)	157,557
CASH FLOW FROM INVESTING ACTIVITIES					
Additions to plant facilities, net	(780,710)	(635,550)	(383,719)	—	(1,799,979)
Change in assets limited as to use	121,513	177,654	(32,643)	—	266,524
Student, faculty and other loans:					
New loans made	(132,076)	—	—	—	(132,076)
Principal collected	63,187	—	—	—	63,187
Purchases of investments	(19,489,991)	(219,338)	(37,148)	38,663	(19,707,814)
Sales and maturities of investments	19,164,395	248,339	37,042	—	19,449,776
Change associated with repurchase agreements	(410,116)	—	—	—	(410,116)
Cash received in acquisition of LPFCH	—	—	13,290	—	13,290
NET CASH USED FOR INVESTING ACTIVITIES	(1,463,798)	(428,895)	(403,178)	38,663	(2,257,208)
CASH FLOW FROM FINANCING ACTIVITIES					
Gifts and reinvested income for restricted purposes	347,653	55,899	73,839	—	477,391
Equity and fund transfers from Hospitals	80,249	(58,912)	(21,337)	—	—
Proceeds from borrowing	929,385	135,000	200,000	—	1,264,385
Repayment of notes and bonds payable	(217,579)	(18,708)	(5,695)	—	(241,982)
Bond issuance costs and interest rate swaps	(2,136)	(71)	(2,183)	—	(4,390)
Contributions received for split-interest agreements	15,730	—	—	—	15,730
Payments made under split-interest agreements	(39,750)	—	—	—	(39,750)
Change in liabilities associated with investments	134,900	—	—	—	134,900
Other	(99)	—	—	—	(99)
NET CASH PROVIDED BY FINANCING ACTIVITIES	1,248,353	113,208	244,624	—	1,606,185
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(379,851)	19,649	(126,217)	(7,047)	(493,466)
Cash and cash equivalents, beginning of year	640,224	690,460	532,900	—	1,863,584
CASH AND CASH EQUIVALENTS, END OF YEAR	\$ 260,373	\$ 710,109	\$ 406,683	\$ (7,047)	\$ 1,370,118
SUPPLEMENTAL DATA:					
Interest paid, net of capitalized interest	\$ 128,374	\$ 45,439	\$ 9,728	\$ —	\$ 183,541
Cash collateral received under security lending agreements	\$ 348,783	\$ —	\$ —	\$ —	\$ 348,783
Change in payables for plant facilities	\$ 33,198	\$ (13,356)	\$ 17,104	\$ —	\$ 36,946

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APPENDIX B

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

The following is a summary of certain provisions of the Indenture that are not described elsewhere in this Offering Memorandum. The Bonds will be issued pursuant to the Indenture. References to the Indenture or a fund or account refer to the related document, fund or account with respect to the Bonds, as described in the Offering Memorandum. Unless otherwise specified to the contrary in this Appendix B, all definitions and provisions summarized refer to such language as in the Indenture. This summary does not purport to be comprehensive and reference should be made to the Indenture for a full and complete statement of its provisions.

Definitions

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

“Authorized Denomination” means \$1,000 or any multiple integral thereof.

“Authorized Representative” means the Institution’s Vice President for Business Affairs and Chief Financial Officer, its Senior Associate Vice President for Finance, its Treasurer, or any other individual designated as an Authorized Representative of the Institution by a Certificate of the Institution signed by the Institution’s Vice President for Business Affairs and Chief Financial Officer, its Senior Associate Vice President for Finance or its Treasurer, and sent to the Trustee.

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

“Bond Fund” means the fund by that name established pursuant to the Indenture.

“Bonds” means Stanford University Taxable Bonds Series 2019 authorized by, and at any time Outstanding pursuant to, the Indenture.

“Book-Entry Form” or *“Book-Entry System”* means a form or system, as applicable, under which physical bond certificates in fully registered form are registered only in the name of a Securities Depository or its nominee, as Bondholder, with the physical bond certificates held by and “immobilized” in the custody of the Securities Depository, which form or system is maintained by and the responsibility of others than the Institution or the Trustee and 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” or “Request” of the Institution mean, respectively, a written certificate, statement or request signed in the name of the Institution by an Authorized Representative. Any such instrument and supporting opinions or representations, if any, may, but need not, be combined in a single instrument with any other instrument, opinion or representation, and the two or more so combined shall

be read and construed as a single instrument. If and to the extent required by the Indenture, each such instrument shall include the statements provided for in the Indenture.

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

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

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

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

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

“*Designated Office*” means the Designated Office of the Trustee as specified in the Indenture.

“*Electronic Means*” means the following communications methods: e-mail, facsimile transmission, secure electronic transmission containing applicable authorization codes, passwords and/or authentication keys issued by the Trustee, or another method or system specified by the Trustee as available for use in connection with its services hereunder.

“*Event of Default*” means any of the events specified as such in the Indenture.

“*Fitch*” means Fitch, Inc., doing business as Fitch Ratings, a corporation organized and existing under the laws of the State of Delaware, and any successor to its securities rating agency business, 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.

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

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

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

“*Institution*” means the Board of Trustees of the Leland Stanford Junior University, a body having corporate powers under the Constitution and laws of the State of California, or such body’s successor or successors.

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

“Interest Payment Date” means May 1 and November 1 of each year, commencing on November 1, 2019.

“Make-Whole Redemption Price” means the greater of (1) 100% of the principal amount of the Bonds to be redeemed; or (2) the sum of the present values of the remaining scheduled payments of principal and interest to the maturity date of the Bonds to be redeemed (not including any portion of those payments of interest accrued and unpaid as of the redemption date), discounted to the redemption date on a semi-annual basis assuming a 360-day year consisting of twelve 30-day months at the adjusted Treasury Rate plus 10 basis points, plus, in each case, accrued and unpaid interest on such Bonds to, but excluding, the redemption date.

“Moody’s” means Moody’s Investors Service, Inc., a corporation organized and existing under the laws of the State of Delaware, and any successor to its securities rating agency business, 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.

“Opinion of Counsel” means a written opinion of counsel (which may be subject to customary assumptions and exclusions) from legal counsel who is reasonably acceptable to the Trustee. Such counsel may be an employee of, or outside counsel to, the Institution.

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

“Par Call Date” means, with respect to the Bonds maturing on May 1, 2029, February 1, 2029.

“Payment Date” means an Interest Payment Date or a Principal Payment Date.

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

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

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

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

“Principal Payment Date” means the date of maturity of the Bonds: May 1, 2029.

“Rating Agency” means any of Moody’s, S&P and Fitch.

“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 fifteenth (15th) 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 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.

“Responsible Officer” means when used with respect to the Trustee, the president, any vice president, any assistant vice president, the secretary, any assistant secretary, the treasurer, any assistant treasurer, any senior associate, any associate or any other officer of the Trustee within the Designated Office (or any successor corporate trust office) customarily performing functions similar to those performed by the persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred at the Designated Office because of such person’s knowledge of and familiarity with the particular subject and, in each case, having direct responsibility for the administration of the Indenture.

“S&P” means S&P Global Ratings, a corporation organized and existing under the laws of the State of New York, and any successor to its securities rating agency business, 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 The Depository Trust Company and its successors and assigns, or any other securities depository selected as set forth in the Indenture, which agrees to follow the procedures required to be followed by such securities depository in connection with the Bonds.

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

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

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

“Trustee” means The Bank of New York Mellon Trust Company, N.A., a national banking association duly organized and existing under the laws of the United States, or its successor or successors, as Trustee hereunder as provided in the Indenture.

“Underwriters” means J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC

“*Uniform Commercial Code*” means the Uniform Commercial Code as in effect in the State of California from time to time.

Establishment and Pledge of Indenture Fund

Subject only to the provisions of the Indenture permitting or requiring the application thereof for the purposes and on the terms and conditions set forth therein, the Indenture Fund and all amounts held therein are pledged, assigned and transferred by the Institution to the Trustee for the benefit of the Bondholders to secure the full payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of the Indenture. The Institution grants to the Trustee a security interest in and acknowledges and agrees that the Indenture Fund and all amounts on deposit therein shall constitute collateral security to secure the full payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of the Indenture.

Nothing in the Indenture or in the Bonds, expressed or implied, shall be construed to constitute a security interest under the Uniform Commercial Code or otherwise in the assets of the Institution other than in any interest of the Institution in the Indenture Fund and/or the amounts on deposit therein. No recourse for the payment of the principal, Redemption Price or Make-Whole Redemption Price of or interest on any Bond, or for any claim based thereon or otherwise in respect thereof, and no recourse under or upon any obligation, covenant or agreement of the Institution in the Indenture or in any Supplemental Indenture or in any Bond, or because of the creation of any indebtedness represented thereby, shall be had against any past, present or future employee, agent or officer of the Institution or of any successor entity, either directly or through any successor entity, whether by any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, it being expressly understood that all such liability is expressly waived and released as a condition of, and as a consideration for, the execution of the Indenture and the issue of the Bonds. No officer or agent of the Institution, nor any individual executing the Bonds, shall in any event be subject to any personal liability or accountability by reason of the issuance of the Bonds.

Funds and Accounts

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

Application of Proceeds of Bonds. The proceeds of the Bonds will be used for general corporate purposes, including without limitation financing and refinancing capital expenditures.

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

Bond Fund. Upon the receipt thereof, the Trustee shall deposit all payments received from the Institution (other than amounts which are to be deposited in the Redemption Fund or income or profit from investments which are to be applied pursuant to the Indenture) in a special fund designated the

“Bond Fund” which the Trustee shall establish and maintain and hold in trust and which shall be disbursed and applied only as authorized in the Indenture.

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

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

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

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

All amounts deposited in the Redemption Fund shall be used and withdrawn by the Trustee solely for the purpose of redeeming Bonds, in the manner and upon the terms and conditions specified in the Indenture, at the 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 direction of the Institution, apply such amounts to the purchase of Bonds at public or private sale, as and when and at such prices (including brokerage and other charges, but excluding accrued and unpaid interest, which is payable from the Interest Account) as the Institution may direct, except that the purchase price (exclusive of accrued interest) may not exceed the Redemption Price or Make-Whole Redemption Price 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 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.

Payments by the Institution; Allocation of Funds. On or before 11:00 AM (Pacific 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 the Indenture, the Institution shall pay to the Trustee a sum equal to the amount payable on such Payment Date as principal of and interest on the Bonds, less the amounts, if any, in the Bond Fund and available therefor. Each payment made pursuant to this paragraph, together with other available amounts, if any, in the Bond Fund, 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 available amounts held by the Trustee in 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 promptly pay such deficiency to the Trustee.

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

Validity of Bonds

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

Additional Bonds

The Institution may, from time to time, without the consent of the Bondholders, issue additional bonds under this Indenture in addition to the Bonds (the “Additional Bonds”). If issued, the Additional Bonds will have the same interest rate, redemption provisions and maturity date as the Bonds.

Redemption of Bonds

Terms of Redemption. On or after the applicable Par Call Date, the Bonds are subject to optional redemption prior to maturity, in whole or in part, at the written direction of the Institution to the Trustee. Such redemption shall be in accordance with the terms of the Bonds as directed by the Institution, at the Redemption Price, as described in the Bonds. Prior to the applicable Par Call Date, the Bonds are also subject to optional redemption prior to maturity, in whole or in part, at the written direction of the Institution to the Trustee. Such redemption shall be in accordance with the terms of the Bonds as directed by the Institution, at the Make-Whole Redemption Price, as described in the Bonds. The Institution shall retain an independent accounting firm or an independent financial advisor to determine the Make-Whole Redemption Price of the Bonds to be redeemed and perform all actions and make all calculations required to determine such Make-Whole Redemption Price. The Make-Whole Redemption Price will be calculated by an independent accounting firm or financial advisor retained by the Institution at its expense. The Trustee and the Institution may conclusively rely on such accounting firm’s or financial advisor’s calculations in connection with, and its determination of, the Make-Whole Redemption Price, and neither the Trustee nor the Institution shall have any liability for such reliance. The determination of the Make-Whole Redemption Price by such accounting firm or financial advisor shall be conclusive and binding on the Trustee, the Institution and the Holders of the Bonds. The Bonds are redeemable prior to maturity at the written direction of the Institution to the Trustee not less than five (5) Business Days nor

more than sixty (60) days prior to the date that notice of redemption is due to be given by the Trustee in accordance with the Indenture.

Selection of Bonds for Redemption. If the Bonds are registered in book-entry only form and so long as the Securities Depository or its nominee is the sole registered owner of the Bonds, if less than all of the Bonds are called for redemption, the particular Bonds or portions thereof to be redeemed shall be selected on a pro rata pass-through distribution of principal basis in accordance with the customary procedures and operational arrangements of the Securities Depository then in effect, but, if such operational arrangements do not allow for redemption on a pro rata pass-through distribution of principal basis, the Bonds shall be selected for redemption, in accordance with the customary procedures of the Securities Depository, by lot.

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

In connection with any repayment of principal, the Trustee will direct the Securities Depository to make a pro rata pass-through distribution of principal to the holders of the Bonds in amounts to be determined in accordance with Securities Depository procedures in effect from time to time.

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 (a) the numerator is equal to the amount due to the respective bondholders on a payment date, and (b) the denominator is equal to the total original par amount of the respective Bonds.

If the Bonds are no longer registered in book-entry-only form, each owner will receive an amount of Bonds equal to the original face amount then beneficially held by that owner, registered in such investor's name. Thereafter, any redemption of less than all of the Bonds 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.

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

Notice of redemption of the Bonds shall be given to the applicable Holders by the Trustee, at the expense of the Institution, for and on behalf of the Institution.

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

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

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

Effect of Redemption. Moneys for payment of the Redemption Price or Make-Whole Redemption Price of the Bonds (or portion thereof called for redemption in accordance with the Indenture) shall be held by the Trustee, and, if any conditions specified in the notice of redemption have been satisfied, paid by the Trustee, on the date fixed for redemption designated in such notice. The Bonds (or portion thereof) so called for redemption shall become due and payable at the Redemption Price or Make-Whole Redemption Price specified in such notice, interest on the Bonds so called for redemption shall cease to accrue and such Bonds (or portion thereof) shall cease to be entitled to any benefit or security under the Indenture, and the Holders of such Bonds shall have no rights in respect thereof except to receive the payment of such Redemption Price or Make-Whole Redemption Price from funds held by the Trustee for such payment

All Bonds redeemed pursuant to the provisions of the Indenture shall be cancelled by the Trustee upon surrender thereof and delivered to, or upon the order of, the Institution.

Use of Securities Depository

Notwithstanding any provision of the Indenture to the contrary:

The Bonds shall be initially issued as fully registered Bonds, registered in the name of "Cede & Co.," as nominee of the Securities Depository, in the principal amount of the Bonds. Registered ownership of the Bonds, or any portion thereof, may not thereafter be transferred except: (1) to any successor of the Securities Depository or its nominee, or to any substitute depository designated pursuant to clause (2) of this paragraph ("substitute depository"); provided that any successor of the Securities Depository or substitute depository shall be qualified under any applicable laws to provide the service proposed to be provided by it; (2) to any substitute depository designated by the Institution and not objected to by the Trustee, upon (i) the resignation of the Securities Depository or its successor (or any substitute depository or its successor) from its functions as depository or (ii) a determination by the Institution that the Securities Depository or its successor (or any substitute depository or its successor) is

no longer able to carry out its functions as depository; provided that any such substitute depository shall be qualified under any applicable laws to provide the services proposed to be provided by it; or (3) to any Person as provided below, upon (i) the resignation of the Securities Depository or its successor (or substitute depository or its successor) from its functions as depository; provided that no substitute depository can be obtained or (ii) a determination by the Institution that it is in the best interests of the Institution to remove the Securities Depository or its successor (or any substitute depository or its successor) from its functions as depository.

In the case of any transfer pursuant to clause (1) or clause (2) of the immediately preceding paragraph, upon receipt of the Outstanding Bonds by the Trustee, together with a Certificate of the Institution to the Trustee, new Bonds shall be executed and delivered in the principal amount of the Bonds, registered in the name of such successor or such substitute depository, or their nominees, as the case may be, all as specified in such Certificate of the Institution. In the case of any transfer pursuant to clause (3) of the immediately preceding paragraph, upon receipt of the Outstanding Bonds by the Trustee together with a Certificate of the Institution to the Trustee, new Bonds shall be executed and delivered in such denominations and registered in the names of such persons as are requested in such a Certificate of the Institution, subject to the limitations of the Indenture, provided the Trustee shall not be required to deliver such new Bonds within a period less than sixty (60) days from the date of receipt of such Certificate of the Institution.

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

The Institution and the Trustee shall treat the Person in whose name any Bond is registered as the Bondholder thereof for all purposes of the Indenture and any applicable laws, notwithstanding any notice to the contrary received by the Institution or the Trustee. So long as the Outstanding Bonds are registered in the name of the Cede & Co. or its registered assign, the Institution and the Trustee shall cooperate with Cede & Co., as sole registered Bondholder, and its registered assigns, in effecting payment of the principal, Redemption Price or Make-Whole Redemption Price of and interest on the Bonds by arranging for payment in such manner that funds for such payments are properly identified and are made immediately available on the date they are due, all in accordance with the letter of representations of the Institution to the Securities Depository or as otherwise agreed by the Trustee and the Securities Depository.

In connection with any proposed transfer outside the Book-Entry Only system, the Institution or the Securities Depository shall provide or cause to be provided to the Trustee all information necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost basis reporting obligations under Internal Revenue Code Section 6045. The Trustee may rely on the information provided to it and shall have no responsibility to verify or ensure the accuracy of such information.

Particular Covenants

Punctual Payment. The Institution shall punctually pay the principal, Redemption Price or Make-Whole Redemption Price and interest to become due in respect of all the Bonds, in compliance with the terms of the Bonds and the Indenture. When and as paid in full, all Bonds shall be delivered to the Trustee and shall thereafter be cancelled by the Trustee and delivered to, or upon the order of, the Institution.

Power to Issue Bonds. The Institution is duly authorized to issue the Bonds and to enter into the Indenture and perform the transactions hereunder in the manner and to the extent provided in the Indenture. The Bonds are and will be the 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 such obligations and all the rights of the Bondholders under the Indenture against all claims and demands of all Persons, subject to the limitations set forth in the Indenture relating to the Trustee.

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

The Trustee shall furnish to the Institution, within twenty (20) days after the end of each month, a complete financial statement (which need not be audited and may be its regular account statements) covering receipts, disbursements, allocation and application of any moneys (including proceeds of Bonds) in any of the funds and accounts established pursuant to the Indenture for such month; provided that the Trustee shall not be obligated to deliver an accounting for any fund or account that has a balance of \$0.00 and has not had any activity since the last reporting.

Events of Default and Remedies of Bondholders

Events of Default. The following events shall be "Events of Default": (a) default in the due and punctual payment of the principal, Redemption Price or Make-Whole Redemption Price of any Bond when and as the same shall become due and payable, whether at maturity as therein expressed, by proceedings for redemption, by acceleration or otherwise; (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 the Indenture or in the Bonds (other than any covenant, agreement or condition a default in the performance or observance of which is specifically dealt with elsewhere in the Indenture), if such default shall have continued for a period of sixty (60) days after written notice thereof, specifying such default and requiring the same to be remedied and stating that such notice is a "Notice of Default" under the Indenture, shall have been given to the Institution by the Trustee, or to the Institution and the Trustee by the Holders of not less than a majority in aggregate principal amount of the Bonds at the time Outstanding; (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.

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

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

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

(A) To the payment of any expenses necessary in the opinion of the Trustee to protect the interests of the Holders of the Bonds and payment of reasonable fees and expenses of the Trustee (including reasonable fees and disbursements of its counsel) incurred in and about the performance of its powers and duties under the Indenture; and

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

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

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

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

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

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

Bondholders' Direction of Proceedings. The Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall have the right, by an instrument or concurrent instruments in writing executed and delivered to the Trustee, and upon indemnifying the Trustee to its satisfaction therefor, to direct the time, method and place of conducting all remedial proceedings taken by the Trustee under the Indenture, provided that such direction shall not be otherwise than in accordance with law and the provisions of the Indenture, and that the Trustee shall have the right to decline to follow any such direction which in the opinion of the Trustee would be unjustly prejudicial to Bondholders not parties to such direction (the Trustee having no obligation to determine if such direction is unjustly prejudicial).

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 the Indenture or any applicable law with respect to such Bond, unless (1) such Holder shall have given to the Trustee written notice of the occurrence of an Event of Default; (2) the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding shall have made written request upon the Trustee to exercise the powers granted in the Indenture or to institute such suit, action or proceeding in its own name; (3) such Holder or Holders shall have offered 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 such offer of indemnity shall have been made to, the Trustee.

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

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

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

Remedies Not Exclusive. No remedy conferred in the Indenture upon or reserved to the Trustee or to the Holders of the Bonds is 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 under the Indenture or now or hereafter existing at law or in equity or otherwise.

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

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

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

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

Upon a Responsible Officer's actual knowledge of the existence of any Default under the Indenture, the Trustee shall transmit by mail to all Bondholders, as their names and addresses appear in the bond register, notice of such Default under the Indenture within 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, Redemption Price or Make-Whole Redemption Price of or interest on any Bond, the Trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee or a trust committee of directors or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interest of the Bondholders; *provided, further*, that in the case of any Default as specified in (c) under "Events of Default" above, no such notice to Bondholders shall be given until at least thirty (30) days after date of the applicable Notice of Default.

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

Nothing contained in the Indenture shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt, on behalf of any Bondholder, any plan of reorganization, arrangement,

adjustment or composition affecting the Bonds or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Bondholder in any such proceeding.

The Trustee

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

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

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

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

provided in this paragraph, the Institution shall mail or cause to be mailed (at the expense of the Institution) a notice of the succession of such Trustee to the trusts under the Indenture to the Bondholders at the addresses shown on the registration books of 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.

Any successor Trustee shall be a national banking association, trust company or bank having trust powers in the State of California, having a combined capital and surplus of (or if such national banking association, trust company or bank is a member of a bank holding system, its bank holding company shall have a combined capital and surplus of) at least fifty million dollars (\$50,000,000), and subject to supervision or examination by federal or State of California authority. If such national banking association, 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 national banking association, 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 paragraph, the Trustee shall resign immediately in the manner and with the effect specified in the Indenture.

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

Modification or Amendment of the Indenture

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

The Indenture and the rights and obligations of the Institution, of the Trustee and of the Holders of the Bonds may also be modified or amended from time to time and at any time by an indenture or one or more Supplemental Indentures, which the Institution and the Trustee may enter into without the necessity of obtaining the consent of any Bondholders, but only to the extent permitted by law and only

for any one or more of the following purposes: (1) to add to the covenants and agreements of the Institution contained in the Indenture, to pledge or assign additional security for the Bonds (or any portion thereof), or to surrender any right or power reserved in the Indenture to or conferred upon the Institution, provided that such covenant, agreement, pledge, assignment or surrender shall not materially adversely affect the interests of the Holders of the Bonds; (2) to make such provisions for the purpose of curing any ambiguity, inconsistency or omission, or of curing or correcting any defective provision, contained in the Indenture, or in regard to matters or questions arising under the Indenture, as the Institution or the Trustee may deem necessary or desirable, and which shall not materially adversely affect the interests of the Holders of the Bonds; (3) to modify, amend or supplement the Indenture or any Supplemental Indenture in such manner as to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect, and to add such other terms, conditions and provisions as may be permitted by such act or similar federal statute, and which shall not materially adversely affect the interests of the Holders of the Bonds; (4) to provide for the procedures required to permit any Bondholder, at its option, to utilize an uncertificated system of registration of its Bond or to facilitate the registration of the Bonds in the name of a nominee of the Securities Depository in accordance with the provisions of the Indenture; (5) to authorize different denominations of the Bonds and to make correlative amendments and modifications to the Indenture regarding exchangeability of Bonds of different authorized denominations, redemptions of portions of Bonds of particular authorized denominations and similar amendments and modifications of a technical nature; (6) to make any changes required by a Rating Agency in order to obtain or maintain a rating for the Bonds; or (7) to modify, amend or supplement any other provision of the Indenture in a manner that shall not materially adversely affect the interests of the Holders of the Bonds.

The Trustee may in its discretion, but shall not be obligated to, enter into any such Supplemental Indenture authorized by either of the two preceding paragraphs which materially adversely affects the Trustee's own rights, duties or immunities under the Indenture or otherwise. Prior to the Trustee entering into any such Supplemental Indenture, the Institution shall deliver to the Trustee an Opinion of Counsel stating, in substance, that such Supplemental Indenture has been adopted in compliance with the requirements of the Indenture.

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

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

Defeasance

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

If the Institution shall also pay or cause to be paid all other sums payable under the Indenture by the Institution, then and in that case at the election of the Institution (evidenced by a Certificate of the Institution filed with the Trustee signifying the intention of the Institution to discharge all such indebtedness and the Indenture and upon receipt by the Trustee of an Opinion of Counsel to the effect that the obligations under the Indenture and the Bonds have been discharged), and notwithstanding that any Bonds shall not have been surrendered for payment, the Indenture and the pledge of the Indenture Fund and all amounts held therein made under the Indenture and all covenants, agreements and other obligations of the Institution under the Indenture (except as otherwise provided in the Indenture) shall cease, terminate, become void and be completely satisfied and discharged and the Bonds shall be deemed paid. In such event, upon the request of the Institution, the Trustee shall promptly cause an accounting for such period or periods as may be requested by the Institution to be prepared and sent to the Institution and shall execute and deliver to the Institution all such instruments as may be necessary to evidence such satisfaction and discharge, 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 the Indenture that are not required for the payment or redemption of Bonds not theretofore surrendered for such payment or redemption.

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

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

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

Limitation of Rights to Parties and Bondholders

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

Evidence of Rights of Bondholders

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

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

Waiver of Personal Liability

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

Governing Law; Venue

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

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.

APPENDIX C

PROPOSED FORM OF OPINION OF COUNSEL TO THE UNIVERSITY

March 28, 2019

J.P. Morgan Securities LLC,
as Representative of the Underwriters
New York, New York

The Bank of New York Mellon Trust Company, N.A., as Trustee
Los Angeles, California

Ladies and Gentlemen:

We have been requested to furnish you with an opinion in connection with the issuance by The Board of Trustees of the Leland Stanford Junior University (the "University") of \$121,000,000 aggregate principal amount of Stanford University Taxable Bonds Series 2019 (the "Bonds").

We have examined executed copies of the Indenture of Trust dated as of March 1, 2019 (the "Indenture") between the University and The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"), specimen bonds as executed on behalf of the University and authenticated by the Trustee, and a certified copy of proceedings of the University authorizing the execution of the Indenture, certain other documents and the issuance of the Bonds.

In addition, we have reviewed such other documents and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinions set forth herein.

For purposes of this opinion, we have relied on an opinion addressed to each of you by the General Counsel of the University as to the due authorization, execution and delivery of the Indenture and as to the issuance, sale and delivery of the Bonds, and we have assumed that the Trustee has all requisite power and authority and has taken all necessary corporate action, consistent with all applicable laws and regulations, to execute and deliver the Indenture and to effect the transactions contemplated thereby.

We express no opinion as to the laws of any jurisdiction other than those of the State of California and the federal laws of the United States of America.

Based upon and subject to the foregoing, and the qualifications and limitations set forth below, we are of the opinion that:

1. The Indenture constitutes the valid and binding obligation of the University, enforceable against the University in accordance with its terms.

2. The Bonds have been duly authorized and executed and, assuming the due authentication of the Bonds by the Trustee in the manner provided for in the Indenture, when delivered against payment of the agreed upon consideration, the Bonds will constitute valid and binding obligations of the University, enforceable against the University in accordance with their terms.

Our opinions are subject to (i) bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance and similar laws affecting the rights and remedies of creditors and secured parties generally and (ii) general principles of equity. We do not express any opinion herein as to the availability of the remedy of specific performance or injunctive relief or other relief in equity upon breach of any of the agreements, documents, or obligations referred to herein.

In addition, we express no opinion as to (i) the extent to which broadly worded waivers, conclusive presumptions or determinations or powers of attorney may be enforced; (ii) the enforceability of any provision of the Indenture which permits the exercise of a right of set-off against amounts not then due or which constitutes a penalty or forfeiture; or (iii) the enforceability of any provision that provides for non-effectiveness of oral modifications, waiver of or consent to service of process and venue, or waiver of offset or defenses.

Very truly yours,

Ropes & Gray LLP

APPENDIX D

DTC BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES

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

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

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

DTC Book-Entry Only System

DTC will act as securities depository for the Bonds. The Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Bond certificate will be issued for the Bonds in their aggregate principal amount and will be deposited with DTC.

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants,” and together with Direct Participants, “Participants”).

The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC's records. The ownership interest of each actual purchaser of each Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to DTC. Subject to the provisions described in the forepart under the heading "THE BONDS – Selection of Bonds for Redemption," if less than all of the Bonds are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such Bonds to be redeemed.

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

Payments of principal, Redemption Price and Make-Whole Redemption Price and interest payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the University or the Trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers registered in "street name," and will be the responsibility of such Participant and not of DTC, the Underwriters, the Trustee or the University, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal, Redemption Price, Make-Whole Redemption Price and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the University or the Trustee,

disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

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

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

So long as Cede & Co. is the registered owner of the Bonds, as nominee for DTC, references herein to Bondholders or registered owners of the Bonds shall mean Cede & Co. and shall not mean the Beneficial Owners of the Bonds.

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

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

The University, in its sole discretion and without the consent of any other person, may terminate the services of DTC with respect to the Bonds if the University determines that (i) DTC is unable to discharge its responsibilities with respect to the Bonds, or (ii) a continuation of the requirement that all of the outstanding Bonds be registered in the registration books kept by the Trustee in the name of Cede & Co., as nominee of DTC, is not in the best interests of the Beneficial Owners.

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

Euroclear and Clearstream Banking

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

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

Clearing and Settlement Procedures

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

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

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

The University will not impose any fees in respect of holding the Bonds; however, holders of book-entry interests in the Bonds may incur fees normally payable in respect of the maintenance and operation of accounts in DTC, Euroclear and Clearstream Banking.

Initial Settlement

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

Secondary Market Trading

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

General

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

None of the University, the Trustee or the Underwriters will have any responsibility for the performance by DTC, Euroclear or Clearstream Banking or their respective direct or indirect participants or account holders of their respective obligations under the rules and procedures governing their operations or the arrangements referred to above.

The information in this Appendix D concerning DTC, Euroclear and Clearstream Banking has been obtained from sources that the Underwriters believe to be reliable, but the Underwriters take no responsibility for the accuracy thereof or make any representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

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