NEW ISSUE – BOOK ENTRY ONLY

RATINGS: FITCH AA
MOODY'S Aa3
See "RATINGS" herein

Subject to compliance by the Board with certain covenants, in the opinion of Katten Muchin Rosenman LLP, Bond Counsel, under present law, interest on the Tax-Exempt Bonds (as defined herein) is excludable from gross income of the owners thereof for federal income tax purposes and is not included as an item of tax preference in computing the federal alternative minimum tax. Interest on the Taxable Bonds, as defined herein, will be includible in gross income for federal income tax purposes. Interest on the Series 2020 Bonds is exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes. See "TAX MATTERS" in this Official Statement.

UNIVERSITY of HAWAIʻI SYSTEM

$217,165,000
BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII UNIVERSITY REVENUE BONDS

CONSISTING OF

$10,045,000	$44,555,000	$54,300,000	$77,135,000	$31,130,000
Series 2020A	**Series 2020B**	**Series 2020C**	**Series 2020D**	**Series 2020E**
(Taxable)	**(Refunding)**	**(Taxable Refunding)**	**(Refunding)**	**(Taxable Refunding)**

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

This Official Statement relates to the issuance and sale by the Board of Regents of the University of Hawaii (the "*Board*) of its University Revenue Bonds, Series 2020A (Taxable) (the "*Series 2020A Bonds*"), Series 2020B (Refunding) (the "*Series 2020B Bonds*"), University Revenue Bonds, Series 2020C (Taxable Refunding) (the "*Series 2020C Bonds*"), University Revenue Bonds, Series 2020D (Refunding) (the "*Series 2020D Bonds*") and University Revenue Bonds, Series 2020E (Taxable Refunding) (the "*Series 2020E Bonds*," and, together with the Series 2020A Bonds, the Series 2020B Bonds, the Series 2020C Bonds and the Series 2020D Bonds, the "*Series 2020 Bonds*"). The Series 2020B Bonds and the Series 2020D Bonds are referred to as the "*Tax-Exempt Bonds*." The Series 2020 Bonds are being issued to provide funds to: (i) pay costs of University Projects, including improvements to parking facilities, (ii) refund all of the Board's University Revenue Bonds, Series 2010A-1 and University Revenue Bonds, Series 2010B-1 (collectively, the "*Refunded Bonds*") and (iii) pay costs relating to the issuance of the Series 2020 Bonds and the refunding of the Refunded Bonds, all as more fully described herein.

The Series 2020 Bonds are authorized to be issued under a resolution of the Board adopted on November 16, 2001, as amended and supplemented by certain resolutions including a supplemental resolution of the Board adopted September 17, 2020 (collectively, the "*Resolution*"). The Series 2020 Bonds, together with certain outstanding parity bonds and additional parity bonds that may be issued in the future, are payable from and secured by certain amounts pledged under the Resolution. The Series 2020B Bonds and the Series 2020C Bonds will additionally be secured by a pledge of cigarette tax revenues. See "**SECURITY FOR THE BONDS.**"

The Series 2020 Bonds, when initially issued, will be fully registered bonds, in the denomination of $5,000 or integral multiples of $5,000 and, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("*DTC*"). DTC will act as securities depository for the Series 2020 Bonds. Purchases of beneficial ownership interests in the Series 2020 Bonds will be made in book-entry form only. Beneficial owners of the Series 2020 Bonds will not receive physical delivery of certificates evidencing their ownership interest in the Series 2020 Bonds so long as DTC or a successor securities depository acts as the securities depository with respect to the Series 2020 Bonds. So long as DTC or its nominee is the registered owner of the Series 2020 Bonds, payments of the principal of and interest on the Series 2020 Bonds will be made directly to DTC. Disbursement of such payments to DTC Participants is the responsibility of DTC and disbursement of such payments to the beneficial owners is the responsibility of DTC Participants. See "**THE SERIES 2020 BONDS.**"

The Series 2020 Bonds will bear interest from the date thereof, payable on April 1 and October 1 of each year, commencing April 1, 2021, for the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds, and October 1, 2021, for the Series 2020B Bonds and the Series 2020D Bonds at the rates per annum, and will mature on October 1 of the years and in the principal amounts, as set forth on the inside first page. The Series 2020 Bonds are subject to redemption as described herein.

Neither the State of Hawaii (the "*State*") nor any department or political subdivision thereof, including the Board, is obligated to pay the Series 2020 Bonds from any source other than the moneys pledged under the Resolution. The Series 2020 Bonds are not a general or moral obligation or an indebtedness of the State within the meaning of any limitation of law or a charge upon the general fund of the State, nor is the full faith and credit of the State or any political subdivision thereof pledged to the payment of the principal of or interest on the Series 2020 Bonds. No holder of any Series 2020 Bonds shall ever have the right to compel any exercise of the taxing power of the State or any political subdivision thereof for the payment of principal of or interest on the Series 2020 Bonds.

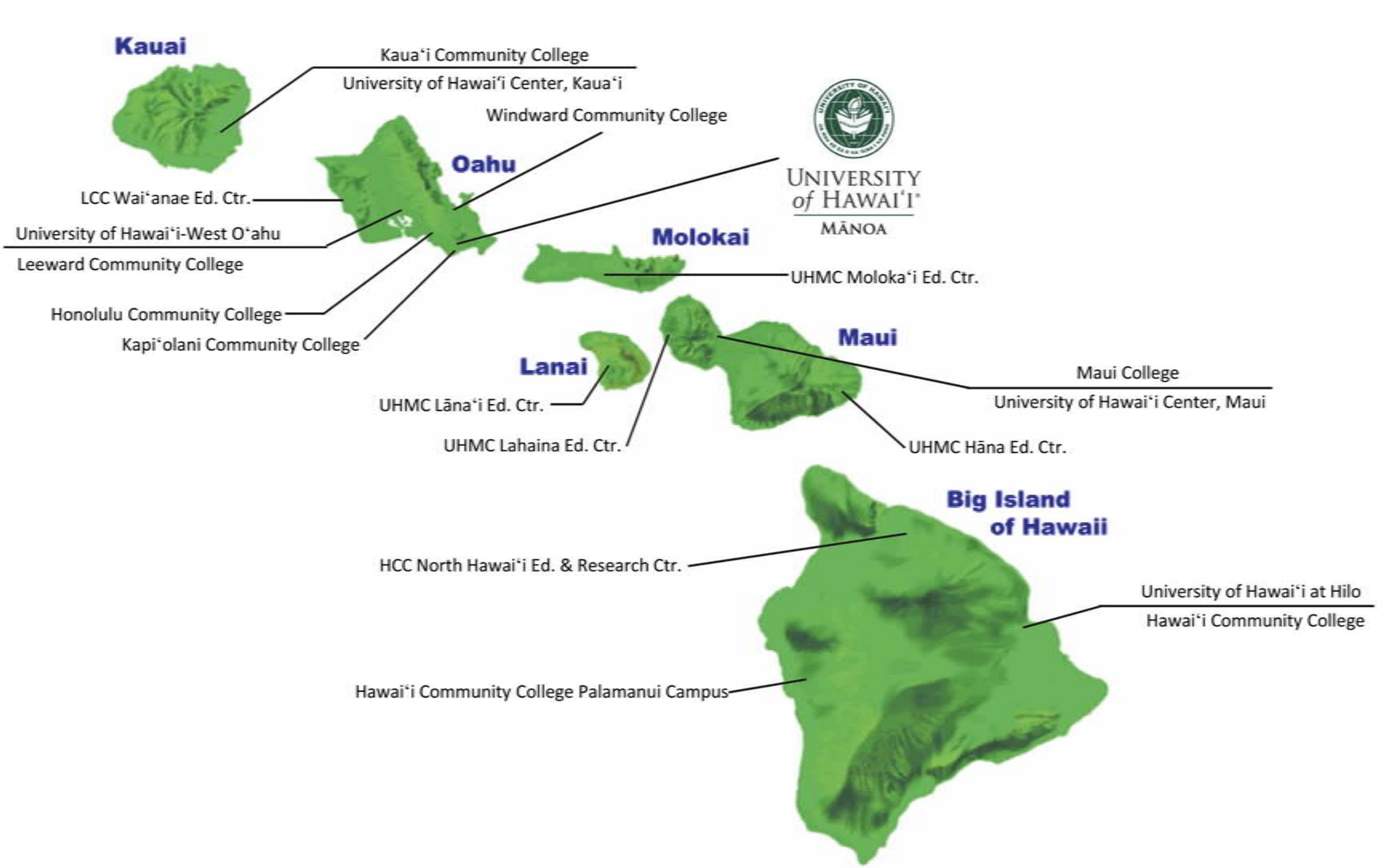
This cover page contains certain information for quick reference only. It is not a summary of this issue. Investors must read the entire Official Statement to obtain information essential to making an informed investment decision.

The Series 2020 Bonds are offered when, as and if issued by the Board and received by the Underwriters, subject to approval of legality by Katten Muchin Rosenman LLP, Bond Counsel to the Board, and subject to certain other conditions. Certain legal matters will be passed upon for the Underwriters by their counsel, Dentons US LLP. It is expected that the Series 2020 Bonds will be available for delivery in New York, New York, on or about October 28, 2020.

BofA Securities

October 14, 2020

THE UNIVERSITY OF HAWAII SYSTEM



MATURITY SCHEDULE

$10,045,000
Board of Regents of the University of Hawaii
University Revenue Bonds
Series 2020A (Taxable)

Maturity Date (October 1)	Amount	Rate	Yield	Price (%)	CUSIP[†] 91428L
2021	$425,000	0.539%	0.539%	100.000	MH6
2022	425,000	0.689%	0.689%	100.000	MJ2
2023	430,000	0.925%	0.925%	100.000	MK9
2024	435,000	1.152%	1.152%	100.000	ML7
2025	440,000	1.302%	1.302%	100.000	MM5
2026	445,000	1.555%	1.555%	100.000	MN3
2027	455,000	1.705%	1.705%	100.000	MP8
2028	465,000	2.002%	2.002%	100.000	MQ6
2029	470,000	2.072%	2.072%	100.000	MR4
2030	480,000	2.122%	2.122%	100.000	MS2
2031	495,000	2.272%	2.272%	100.000	MT0
2032	505,000	2.372%	2.372%	100.000	MU7
2033	515,000	2.472%	2.472%	100.000	MV5
2034	530,000	2.572%	2.572%	100.000	MW3
2035	545,000	2.622%	2.622%	100.000	MX1

$2,985,000 3.203% Term Bonds due October 1, 2040, Price: 100.000% to yield 3.203%, CUSIP 91428LMY9

$44,555,000
Board of Regents of the University of Hawaii
University Revenue Bonds
Series 2020B (Refunding)

Maturity Date (October 1)	Amount	Rate	Yield	Price (%)	CUSIP[†] 91428L
2021	$2,355,000	5.000%	0.350%	104.290	MZ6
2022	3,405,000	5.000%	0.400%	108.811	NA0
2023	3,575,000	5.000%	0.440%	113.237	NB8
2024	3,750,000	5.000%	0.510%	117.425	NC6
2025	3,940,000	5.000%	0.620%	121.212	ND4
2026	4,140,000	5.000%	0.800%	124.256	NE2
2027	4,345,000	5.000%	0.960%	127.003	NF9
2028	4,565,000	5.000%	1.110%	129.432	NG7
2029	4,795,000	5.000%	1.280%	131.279	NH5
2030	5,030,000	5.000%	1.410%	133.140	NJ1
2031	4,655,000	3.000%	1.620%	112.604C	NK8

C Priced to call on October 1, 2030

[†] CUSIP is a registered trademark of American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by Standard and Poor's Financial Services LLC on behalf of the American Bankers Association. The CUSIP numbers are provided for convenience of reference only. The Board is not responsible for the selection of CUSIP numbers and makes no representation as to their correctness on the Series 2020 Bonds or as set forth in this Official Statement.

$54,300,000
Board of Regents of the University of Hawaii
University Revenue Bonds
Series 2020C (Taxable Refunding)

Maturity Date (October 1)	Amount	Rate	Yield	Price (%)	CUSIP† 91428L
2031	$570,000	2.272%	2.272%	100.000	NL6
2032	5,360,000	2.372%	2.372%	100.000	NM4
2033	5,485,000	2.472%	2.472%	100.000	NN2
2034	5,620,000	2.572%	2.572%	100.000	NP7
2035	5,760,000	2.622%	2.622%	100.000	NQ5

$31,505,000 3.203% Term Bonds due October 1, 2040, Priced: 100.000% to yield 3.203%, CUSIP 91428LNR3

$77,135,000
Board of Regents of the University of Hawaii
University Revenue Bonds
Series 2020D (Refunding)

Maturity Date (October 1)	Amount	Rate	Yield	Price (%)	CUSIP† 91428L
2021	$2,015,000	5.000%	0.350%	104.290	NS1
2022	3,620,000	5.000%	0.400%	108.811	NT9
2023	3,805,000	5.000%	0.440%	113.237	NU6
2024	3,990,000	5.000%	0.510%	117.425	NV4
2025	4,190,000	5.000%	0.620%	121.212	NW2
2026	4,400,000	5.000%	0.800%	124.256	NX0
2027	4,625,000	5.000%	0.960%	127.003	NY8
2028	4,855,000	5.000%	1.110%	129.432	NZ5
2029	5,095,000	5.000%	1.280%	131.279	PA8
2030	5,350,000	5.000%	1.410%	133.140	PB6
2031	5,620,000	5.000%	1.420%	133.031 C	PC4
2032	5,870,000	4.000%	1.700%	120.923 C	PD2
2033	6,100,000	4.000%	1.750%	120.416 C	PE0
2034	6,305,000	3.000%	2.000%	108.960 C	PF7
2035	6,520,000	4.000%	1.900%	118.912 C	PG5
2036	4,775,000	3.000%	2.200%	107.097 C	PH3

C Priced to call on October 1, 2030

$31,130,000
Board of Regents of the University of Hawaii
University Revenue Bonds, Series 2020E
(Taxable Refunding)

$31,130,000 3.203% Term Bonds due October 1, 2040, Priced: 100.000% to yield 3.203%, CUSIP† 91428LPJ9

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† CUSIP is a registered trademark of American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by Standard and Poor's Financial Services LLC on behalf of the American Bankers Association. The CUSIP numbers are provided for convenience of reference only. The Board is not responsible for the selection of CUSIP numbers and makes no representation as to their correctness on the Series 2020 Bonds or as set forth in this Official Statement.

INFORMATION CONCERNING OFFERING RESTRICTIONS IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES

REFERENCES IN THIS SECTION TO THE "ISSUER" MEAN THE BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII AND REFERENCES TO "SERIES 2020 BONDS" OR "SECURITIES" MEAN THE BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII REVENUE BONDS SERIES 2020A, SERIES 2020B, SERIES 2020C, SERIES 2020D AND SERIES 2020E.

THE INFORMATION UNDER THIS CAPTION HAS BEEN FURNISHED BY THE UNDERWRITER, AND THE ISSUER MAKES NO REPRESENTATION AS TO THE ACCURACY, COMPLETENESS OR ADEQUACY OF THE INFORMATION UNDER THIS CAPTION.

COMPLIANCE WITH ANY RULES OR RESTRICTIONS OF ANY JURISDICTION RELATING TO THE OFFERING, SOLICITATION AND/OR SALE OF THE SERIES 2020 BONDS IS THE RESPONSIBILITY OF THE UNDERWRITERS, AND THE ISSUER SHALL NOT HAVE ANY RESPONSIBILITY OR LIABILITY IN CONNECTION THEREWITH. NO ACTION HAS BEEN TAKEN BY THE ISSUER THAT WOULD PERMIT THE OFFERING OR SALE OF THE SERIES 2020 BONDS, OR POSSESSION OR DISTRIBUTION OF THIS OFFICIAL STATEMENT OR ANY OTHER OFFERING OR PUBLICITY MATERIAL RELATING TO THE SERIES 2020 BONDS, OR ANY INFORMATION RELATING TO THE PRICING OF THE SERIES 2020 BONDS, IN ANY NON-U.S. JURISDICTION WHERE ACTION FOR THAT PURPOSE IS REQUIRED.

MINIMUM UNIT SALES

THE SERIES 2020 BONDS WILL TRADE AND SETTLE ON A UNIT BASIS (ONE UNIT EQUALING ONE SERIES 2020 BOND OF US $5,000 PRINCIPAL AMOUNT). FOR ANY SALES MADE OUTSIDE THE UNITED STATES, THE MINIMUM PURCHASE AND TRADING AMOUNT IS 30 UNITS (BEING 30 SERIES 2020 BONDS IN AN AGGREGATE PRINCIPAL AMOUNT OF US $150,000.00).

NOTICE TO PROSPECTIVE INVESTORS IN CANADA

THE SERIES 2020 BONDS MAY BE SOLD 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 SERIES 2020 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 OFFICIAL STATEMENT (INCLUDING ANY AMENDMENT THERETO) CONTAINS A MISREPRESENTATION, PROVIDED THAT THE REMEDIES FOR RESCISSION OR DAMAGES ARE EXERCISED BY THE PURCHASER WITHIN THE TIME LIMIT PRESCRIBED BY THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY. THE PURCHASER SHOULD REFER TO ANY APPLICABLE PROVISIONS OF THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY FOR PARTICULARS OF THESE RIGHTS OR CONSULT WITH A LEGAL ADVISOR.

PURSUANT TO SECTION 3A.3 (OR, IN THE CASE OF SECURITIES ISSUED OR GUARANTEED BY THE GOVERNMENT OF A NON-CANADIAN JURISDICTION, SECTION 3A.4) OF NATIONAL INSTRUMENT 33-105 *UNDERWRITING CONFLICTS* ("NI 33-105"), THE UNDERWRITERS ARE NOT REQUIRED TO COMPLY WITH THE DISCLOSURE REQUIREMENTS OF NI 33-105 REGARDING UNDERWRITER CONFLICTS OF INTEREST IN CONNECTION WITH THIS OFFERING.

NOTICE TO PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA AND THE UNITED KINGDOM

THIS OFFICIAL STATEMENT HAS BEEN PREPARED ON THE BASIS THAT ALL OFFERS OF THE SECURITIES TO ANY PERSON THAT IS LOCATED WITHIN A MEMBER STATE OF THE EUROPEAN ECONOMIC AREA ("EEA") OR THE UNITED KINGDOM WILL BE MADE PURSUANT TO AN EXEMPTION UNDER ARTICLE 1(4) REGULATION (EU) 2017/1129 (THE "PROSPECTUS REGULATION") FROM THE REQUIREMENT TO PRODUCE A PROSPECTUS FOR OFFERS OF THE SECURITIES. ACCORDINGLY, ANY PERSON MAKING OR INTENDING TO MAKE ANY OFFER TO ANY PERSON LOCATED WITHIN A MEMBER STATE OF THE EEA OR THE UNITED KINGDOM OF THE SECURITIES SHOULD ONLY DO SO IN CIRCUMSTANCES IN WHICH NO OBLIGATION ARISES FOR THE ISSUER OR ANY OF THE INITIAL PURCHASERS TO PRODUCE A PROSPECTUS OR SUPPLEMENT FOR SUCH AN OFFER. NEITHER THE ISSUER NOR THE INITIAL PURCHASERS HAVE AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF SECURITIES THROUGH ANY FINANCIAL INTERMEDIARY, OTHER THAN OFFERS MADE BY THE INITIAL PURCHASERS, WHICH CONSTITUTE THE FINAL PLACEMENT OF THE SECURITIES CONTEMPLATED IN THIS OFFICIAL STATEMENT.

THE OFFER OF ANY SECURITIES WHICH IS THE SUBJECT OF THE OFFERING CONTEMPLATED BY THIS OFFICIAL STATEMENT IS NOT BEING MADE AND WILL NOT BE MADE TO THE PUBLIC IN ANY MEMBER STATE OF THE EEA OR THE UNITED KINGDOM, OTHER THAN: (A) TO ANY LEGAL ENTITY WHICH IS A "QUALIFIED INVESTOR" AS SUCH TERM IS DEFINED IN THE PROSPECTUS REGULATION; (B) TO FEWER THAN 150 NATURAL OR LEGAL PERSONS (OTHER THAN "QUALIFIED INVESTORS" AS SUCH TERM IS DEFINED IN THE PROSPECTUS REGULATION); OR (C) IN ANY OTHER CIRCUMSTANCES FALLING WITHIN ARTICLE 1(4) OF THE PROSPECTUS REGULATION, SUBJECT TO OBTAINING THE PRIOR CONSENT OF THE RELEVANT UNDERWRITER FOR ANY SUCH OFFER; PROVIDED THAT NO SUCH OFFER OF THE SECURITIES SHALL REQUIRE THE ISSUER OR THE INITIAL PURCHASERS TO PUBLISH A PROSPECTUS PURSUANT TO ARTICLE 3 OF THE PROSPECTUS REGULATION OR A SUPPLEMENT TO A PROSPECTUS PURSUANT TO ARTICLE 23 OF THE PROSPECTUS REGULATION.

FOR THE PURPOSES OF THIS PROVISION, THE EXPRESSION AN "OFFER OF SECURITIES TO THE PUBLIC" IN RELATION TO THE SECURITIES IN ANY MEMBER STATE OF THE EEA OR THE UNITED KINGDOM MEANS THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE SECURITIES TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE THE SECURITIES.

EACH SUBSCRIBER FOR OR PURCHASER OF THE SERIES 2020 BONDS IN THE OFFERING LOCATED WITHIN A MEMBER STATE OR THE UNITED KINGDOM WILL BE DEEMED TO HAVE REPRESENTED, ACKNOWLEDGED AND AGREED THAT IT IS A "QUALIFIED INVESTOR" AS DEFINED IN THE PROSPECTUS REGULATION. THE ISSUER AND EACH UNDERWRITER AND OTHERS WILL RELY ON THE TRUTH AND ACCURACY OF THE FOREGOING REPRESENTATION, ACKNOWLEDGEMENT AND AGREEMENT.

PROHIBITION OF SALES TO EEA OR THE UNITED KINGDOM RETAIL INVESTORS – THE SERIES 2020 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 EEA OR IN THE UNITED KINGDOM. FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "MIFID II"); OR (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE (EU) 2016/97 (THE "INSURANCE DISTRIBUTION DIRECTIVE"), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II. CONSEQUENTLY NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 (THE "PRIIPS REGULATION") FOR OFFERING OR SELLING THE NOTES OR OTHERWISE MAKING THEM AVAILABLE TO RETAIL INVESTORS IN THE EEA OR IN THE UNITED KINGDOM HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE NOTES OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL

INVESTOR IN THE EEA OR IN THE UNITED KINGDOM MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

THIS OFFICIAL STATEMENT IS FOR DISTRIBUTION ONLY TO, AND IS DIRECTED SOLELY AT, PERSONS WHO (I) ARE OUTSIDE 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 FINANCIAL SERVICES AND MARKETS ACT 2000) IN CONNECTION WITH THE ISSUE OR SALE OF ANY SERIES 2020 BONDS MAY OTHERWISE BE LAWFULLY COMMUNICATED OR CAUSED TO BE COMMUNICATED (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). THIS OFFICIAL STATEMENT 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 OFFICIAL STATEMENT 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 OFFICIAL STATEMENT OR ANY OF ITS CONTENTS.

NOTICE TO PROSPECTIVE INVESTORS IN SWITZERLAND

THE SERIES 2020 BONDS MAY NOT BE PUBLICLY OFFERED, DIRECTLY OR INDIRECTLY, IN SWITZERLAND WITHIN THE MEANING OF THE SWISS FINANCIAL SERVICES ACT (THE "FINSA"), AND NO APPLICATION HAS BEEN OR WILL BE MADE TO ADMIT THE SERIES 2020 BONDS TO TRADING ON ANY TRADING VENUE (EXCHANGE OR MULTILATERAL TRADING FACILITY) IN SWITZERLAND. NEITHER THIS OFFICIAL STATEMENT NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE SERIES 2020 BONDS (1) CONSTITUTES A PROSPECTUS PURSUANT TO THE FINSA OR (2) HAS BEEN OR WILL BE FILED WITH OR APPROVED BY A SWISS REVIEW BODY PURSUANT TO ARTICLE 52 OF THE FINSA, AND NEITHER THIS OFFICIAL STATEMENT NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE SERIES 2020 BONDS MAY BE PUBLICLY DISTRIBUTED OR OTHERWISE MADE PUBLICLY AVAILABLE IN SWITZERLAND.

NOTICE TO PROSPECTIVE INVESTORS IN HONG KONG

WARNING. THE CONTENTS OF THIS OFFICIAL STATEMENT HAVE NOT BEEN REVIEWED BY ANY REGULATORY AUTHORITY IN HONG KONG. YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFER OF THE SERIES 2020 BONDS. IF YOU ARE IN ANY DOUBT ABOUT ANY OF THE CONTENTS OF THIS DOCUMENT, YOU SHOULD OBTAIN INDEPENDENT PROFESSIONAL ADVICE.

THIS DOCUMENT HAS NOT BEEN, AND WILL NOT BE, REGISTERED AS A PROSPECTUS 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"). THE SERIES 2020 BONDS MAY NOT BE OFFERED OR SOLD IN HONG KONG BY MEANS OF THIS DOCUMENT OR ANY OTHER DOCUMENT, AND THIS DOCUMENT MUST NOT BE ISSUED, CIRCULATED OR DISTRIBUTED IN HONG KONG, OTHER THAN TO `PROFESSIONAL INVESTORS' AS DEFINED IN THE SFO AND ANY RULES MADE THEREUNDER. 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 SERIES 2020 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 SERIES 2020 BONDS WHICH ARE OR ARE INTENDED TO BE DISPOSED OF ONLY (A) TO PERSONS OUTSIDE

HONG KONG, OR (B) TO `PROFESSIONAL INVESTORS' AS DEFINED IN THE SFO AND ANY RULES MADE THEREUNDER.

NOTICE TO PROSPECTIVE INVESTORS IN JAPAN

THE SERIES 2020 BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER ARTICLE 4, PARAGRAPH 1 OF THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT OF JAPAN (ACT NO.25 OF 1948, AS AMENDED THE "FIEA"). IN RELIANCE UPON THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS SINCE THE OFFERING CONSTITUTES THE PRIVATE PLACEMENT TO QUALIFIED INSTITUTIONAL INVESTORS ONLY AS PROVIDED FOR IN "I" OF ARTICLE 2, PARAGRAPH 3, ITEM 2 OF THE FIEA. A TRANSFEROR OF THE SERIES 2020 BONDS SHALL NOT TRANSFER OR RESELL THEM EXCEPT WHERE A TRANSFEREE IS A QUALIFIED INSTITUTIONAL INVESTORS AS DEFINED UNDER ARTICLE 10 OF THE CABINET OFFICE ORDINANCE CONCERNING DEFINITIONS PROVIDED IN ARTICLE 2 OF THE FIEA (THE MINISTRY OF FINANCE ORDINANCE NO.14 OF 1993, AS AMENDED).

NOTICE TO PROSPECTIVE INVESTORS IN SOUTH KOREA

THIS OFFICIAL STATEMENT IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSIDERED AS, A PUBLIC OFFERING OF SECURITIES IN SOUTH KOREA FOR THE PURPOSES OF THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA. THE SERIES 2020 BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED WITH THE FINANCIAL SERVICES COMMISSION OF SOUTH KOREA FOR PUBLIC OFFERING IN SOUTH KOREA UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY, THE "FSCMA"). THE SERIES 2020 BONDS MAY NOT BE OFFERED, REMARKETED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, OR OFFERED, REMARKETED OR SOLD TO ANY PERSON FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN SOUTH KOREA OR TO ANY RESIDENT OF SOUTH KOREA (AS DEFINED IN THE FOREIGN EXCHANGE TRANSACTIONS LAW OF SOUTH KOREA AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY, THE "FETL")) WITHIN ONE YEAR OF THE ISSUANCE OF THE SERIES 2020 BONDS, EXCEPT AS OTHERWISE PERMITTED UNDER APPLICABLE SOUTH KOREAN LAWS AND REGULATIONS, INCLUDING THE FSCMA AND THE FETL.

NOTICE TO PROSPECTIVE INVESTORS IN TAIWAN

THE SERIES 2020 BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED OR FILED WITH, OR APPROVED BY THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN, THE REPUBLIC OF CHINA ("TAIWAN") AND/OR OTHER REGULATORY AUTHORITY OR AGENCY OF TAIWAN PURSUANT TO RELEVANT SECURITIES LAWS AND REGULATIONS OF TAIWAN AND MAY NOT BE ISSUED, OFFERED, OR SOLD IN TAIWAN THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES WHICH 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 AND/OR OTHER REGULATORY AUTHORITY OR AGENCY OF TAIWAN. THE SERIES 2020 BONDS MAY BE MADE AVAILABLE OUTSIDE TAIWAN FOR PURCHASE OUTSIDE TAIWAN BY INVESTORS RESIDING IN TAIWAN DIRECTLY, BUT MAY NOT BE OFFERED OR SOLD IN TAIWAN EXCEPT TO QUALIFIED INVESTORS VIA A TAIWAN LICENSED INTERMEDIARY TO THE EXTENT PERMITTED BY APPLICABLE LAWS OR REGULATIONS.

REGARDING USE OF THIS OFFICIAL STATEMENT

Certain statements included or incorporated by reference in this Official Statement constitute forward-looking statements. Such statements are generally identifiable by the terminology used such as "plan," "expect," "estimate," "project," "budget" or other similar words.

THE ACHIEVEMENT OF CERTAIN RESULTS OR OTHER EXPECTATIONS CONTAINED IN SUCH FORWARD-LOOKING STATEMENTS INVOLVE KNOWN AND UNKNOWN RISKS, UNCERTAINTIES AND OTHER FACTORS WHICH MAY CAUSE ACTUAL RESULTS, PERFORMANCE OR ACHIEVEMENTS DESCRIBED TO BE MATERIALLY DIFFERENT FROM ANY FUTURE RESULTS, PERFORMANCE OR ACHIEVEMENTS EXPRESSED OR IMPLIED BY SUCH FORWARD-LOOKING STATEMENTS. NO ASSURANCE IS GIVEN THAT ACTUAL RESULTS WILL MEET THE FORECASTS OF THE BOARD IN ANY WAY, REGARDLESS OF THE LEVEL OF OPTIMISM COMMUNICATED IN THE INFORMATION. THE BOARD IS NOT OBLIGATED TO AND DOES NOT PLAN TO ISSUE ANY UPDATES OR REVISIONS TO THOSE FORWARD-LOOKING STATEMENTS IF OR WHEN ANY OF ITS EXPECTATIONS, OR EVENTS, CONDITIONS OR CIRCUMSTANCES ON WHICH SUCH STATEMENTS ARE BASED OCCUR.

No dealer, broker, salesperson or other person has been authorized to give any information or to make any representation, other than as contained in this Official Statement, and if given or made such other information or representation must not be relied upon. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series 2020 Bonds by any person, in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale.

The information set forth herein has been furnished by the Board and by other sources which were believed to be reliable, but is not guaranteed as to accuracy or completeness. The information and expressions of opinion herein are subject to change without notice, and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Board since the date hereof.

All quotations from and summaries and explanations of laws and documents herein do not purport to be complete, and reference is made to such laws and documents for full and complete statements of their provisions. Any statement made in this Official Statement involving an estimate or matter of opinion, whether or not expressly so stated, is intended merely as an estimate or opinion and not as a representation of fact.

Neither the Series 2020 Bonds nor the Resolution has been registered or qualified with the Securities and Exchange Commission. The registration or qualification of the Series 2020 Bonds and the Resolution in accordance with applicable provisions of securities laws of the states in which the Series 2020 Bonds have been registered or qualified, and the exemption from registration and qualification in other states, shall not be regarded as a recommendation thereof.

In making an investment decision, investors must rely on their own examination of the Board and the terms of the offering, including the merits and risks involved. These securities have not been recommended by any federal or state securities commission or regulatory authority. Furthermore, the foregoing authorities have not confirmed the accuracy or determined the adequacy of this document. Any representation to the contrary is a criminal offense.

The Underwriter has provided the following paragraphs for inclusion in this Official Statement:

The Underwriter has reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.

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Honolulu, Hawaii

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Dallas, Texas

Paying Agent
U.S. Bank National Association
Seattle, Washington

TABLE OF CONTENTS

OFFICIAL STATEMENT

$217,165,000
BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII,
University Revenue Bonds
consisting of

$10,045,000	**$44,555,000**	**$54,300,000**	**$77,135,000**	**$31,130,000**
Series 2020A	**Series 2020B**	**Series 2020C**	**Series 2020D**	**Series 2020E**
(Taxable)	**(Refunding)**	**(Taxable Refunding)**	**(Refunding)**	**(Taxable Refunding)**

INTRODUCTION

This Official Statement, including the cover page and the appendices, is provided to furnish information regarding the $10,045,000 University Revenue Bonds, Series 2020A (Taxable) (the "*Series 2020A Bonds*"), $44,555,000 University Revenue Bonds, Series 2020B (Refunding) (the "*Series 2020B Bonds*"), $54,300,000 University Revenue Bonds, Series 2020C (Taxable Refunding) (the "*Series 2020C Bonds*"), $77,135,000 University Revenue Bonds, Series 2020D (Refunding) (the "*Series 2020D Bonds*") and $31,130,000 University Revenue Bonds, Series 2020E (Taxable Refunding) (the "*Series 2020E Bonds,*" and together with the Series 2020A Bonds, the Series 2020B Bonds, the Series 2020C Bonds and the Series 2020D Bonds, the "*Series 2020 Bonds*"), being issued by the Board of Regents of the University of Hawaii (the "*Board*"). See "**THE UNIVERSITY OF HAWAII.**

The Series 2020 Bonds are issued by the Board pursuant to Chapter 304A, Hawaii Revised Statutes, as amended (the "*Act*"), a resolution of the Board adopted November 16, 2001 (the "*Original Resolution*"), as amended, including a Supplemental Resolution of the Board adopted September 17, 2020 (the "*Supplemental Resolution*"). Act 75, Session Laws of Hawaii 2006, among other things, re-codified the legislation pursuant to which the Original Resolution was adopted. However, the re-codification did not substantively affect the provision of the original law. The terms and provisions of the Series 2020 Bonds and certain other matters related to the Series 2020 Bonds are set forth in the Certificate of Determination executed by the Designated Financial Officer, which is incorporated into and made a part of the Supplemental Resolution. The Original Resolution, as supplemented and amended, including as supplemented by the Supplemental Resolution, is referred to as the "*Resolution*." The Series 2020 Bonds and any other series of Bonds outstanding under the Resolution are called the "*Revenue Bonds*."

The University of Hawaii

The University of Hawaii (the "*University*") is the sole public higher education system in Hawaii. The University is a multi-institutional system comprised of three University campuses, seven community college campuses, and nine university and educational centers distributed across six islands throughout the State. The affairs of the University are under the general management and control of the Board, composed of eleven regents who volunteer to serve without compensation, and are nominated by the Candidate Advisory Council, appointed by the Governor and confirmed by the Hawaii State Senate.

For additional information on the University, see "**THE UNIVERSITY OF HAWAII**" and **APPENDIX A – "THE UNIVERSITY OF HAWAII**" herein.

The Series 2020 Bonds; Purpose and Security

The Resolution authorizes the issuance of one or more series of Revenue Bonds in order to accomplish any purpose of the University. The Series 2020 Bonds are being issued to provide funds to: (i) pay costs of University Projects, including improvements to parking facilities, (ii) refund the Board's University Revenue Bonds, Series 2010A-1 (Taxable – Build America Bonds) (the "*Series 2010A Bonds*") and University Revenue Bonds, Series 2010B-1 (Taxable – Build America Bonds) (the "*Series 2010B Bonds,*" and, together with the Series 2010A Bonds the "*Series 2010 Bonds*"), and (iii) pay costs relating to the issuance of the Series 2020 Bonds, as set forth in the

Resolution and as more fully described below. A portion of the proceeds of the Series 2020 Bonds will be applied to the redemption of the Series 2010 Bonds (the "*Refunded Bonds*") on or about October 28, 2020. See "**PLAN OF FINANCE – The Refunding**"

In addition to the Series 2010 Bonds, the University has previously issued its University Revenue Bonds, Series 2015A (Taxable), its University Revenue Bonds, Series 2015B (R), its University Revenue Bonds, Series 2015C (Taxable) (R), its University Revenue Bonds, Series 2015D (Taxable) (R) and its University Revenue Bonds, Series 2015E (Forward Delivery) (R) (collectively, the "*Series 2015 Bonds*", and its University Revenue Bonds, Series 2017A (the "*Series 2017A Bonds*"), its University Revenue Bonds, Series 2017B (Refunding) (the "*Series 2017B Bonds*"), its University Revenue Bonds, Series 2017C (Taxable Refunding) (the "*Series 2017C Bonds*"), its University Revenue Bonds, Series 2017D (Refunding) (the "*Series 2017D Bonds*"), its University Revenue Bonds, Series 2017E (Taxable Refunding) (the "*Series 2017E Bonds*"), its University Revenue Bonds, Series 2017F (Refunding) (the "*Series 2017F Bonds*") and its University Revenue Bonds, Series 2017G (Taxable Refunding) (the "*2017G Bonds,"* and together with the Series 2017A Bonds, the Series 2017B Bonds, the Series 2017C Bonds, the Series 2017D Bonds, the Series 207E Bonds and the Series 2017F Bonds, the "*Series 2017 Bonds*"). Prior to giving effect to the refunding of the Refunded Bonds and the issuance of the Series 2020 Bonds, as of September 1, 2020, there was $487,490,000 in aggregate principal amount of Revenue Bonds outstanding under the Resolution. After giving effect to the refunding of the Refunded Bonds as currently contemplated and the issuance of the Series 2020 Bonds, it is anticipated that $454,005,000 principal amount of Revenue Bonds will be outstanding under the Resolution.

Pursuant to the Act and the Resolution, the Board formally created the Network comprised of: (1) projects designated as "university projects" under the Act ("*University Projects*") and (2) any other action, undertaking or improvement, whether or not capable of producing revenue, constructed, maintained, or both, by the Board, to further the purposes of the University and for the use and services for which fees are imposed or charges made or Legislative Appropriations (defined below) or other moneys shall have been dedicated and committed ("*University Purposes*," and together with University Projects, the "*Network*"). Some of the University Projects currently included in the Network are the student housing and connecting food service facilities on the Mānoa campus, the bookstores located on any of the University's campuses, the University's student union on the Mānoa campus known as the Campus Center, including its dining facilities, the telecommunication system located on the Mānoa campus, those parking operations for the Mānoa campus which were financed with revenue bonds and/or in whole or in part from certain general obligation bonds, the student housing and connecting food service facilities on the Hilo campus, and faculty housing operated by the Mānoa campus. See "**THE UNIVERSITY OF HAWAII – The University Network**" for additional information regarding the Network.

All Revenue Bonds issued under the Resolution, including the Series 2020 Bonds, are limited obligations of the Board payable from and secured solely by the Revenues, subject to the application of the Revenues to the payment of the Current Expenses of the Network, which include costs and estimated costs of operation, maintenance and repair. See "**SECURITY FOR THE BONDS – Pledge of Revenues**." "*Revenues*" consist of two primary elements (i) the income derived by the University from its ownership or operation and management of the Network, including the rates, rents, fees and charges imposed by the Board for the use or enjoyment of or the services furnished by University Projects, University Purposes, and other properties and facilities constituting the Network (collectively, the "*University System Revenues*"), and (ii) moneys in any special fund or revolving fund, which include, but are not limited to, the tuition and fees special fund, community colleges special fund, intercollegiate athletics special fund, auxiliary enterprises special fund, student activities revolving fund, student health center revolving fund, real property and facilities use revolving fund, commercial enterprises revolving fund, and research and training revolving fund, unless otherwise restricted, appropriated or allocated by the Legislature of the State of Hawaii (the "*State*") to the Board, the University, the University System or the Network and permitted to be expended for Current Expenses or for Debt Service (collectively, the "*Legislative Appropriations*"). Additional information relating to the University System Revenues and Legislative Appropriations can be found under the subheadings "**THE UNIVERSITY OF HAWAII – Revenues – *University System Revenues*** and ***The University Special and Revolving Funds***" respectively.

The Series 2020B Bonds and Series 2020C Bonds are additionally secured by a pledge of collections of a portion of the excise tax on cigarettes. See "**SECURITY FOR THE BONDS – Additional Security for Certain Revenue Bonds**" below.

The University had previously issued its Refunding Series 2006A University Bonds ("*University Bonds*") under a separate resolution of the Board adopted May 17, 2002, as amended and supplemented (the "*University Bonds Resolution*"), that had a prior and paramount claim to the Legislative Appropriations. There are no University Bonds outstanding under the University Bonds Resolution. The Board has covenanted not to issue any additional bonds under the University Bonds Resolution.

Limited Obligations

The Revenue Bonds, including the Series 2020 Bonds, are limited obligations of the Board payable from and secured solely by a lien on and security interest in the moneys pledged therefor under the Resolution. See "SECURITY FOR THE BONDS." Neither the State nor any department or political subdivision thereof, including the Board, is obligated to pay the Series 2020 Bonds from any source other than the moneys pledged under the Resolution. The Series 2020 Bonds are not a general or moral obligation or an indebtedness of the State within the meaning of any limitation of law or a charge upon the general fund of the State, nor is the full faith and credit of the State or any political subdivision thereof pledged to the payment of the principal of or interest on the Series 2020 Bonds. No holder of any Series 2020 Bonds shall ever have the right to compel any exercise of the taxing power of the State or any political subdivision thereof for the payment of principal of or interest on the Series 2020 Bonds.

Additional Information

This introduction is not a summary of this Official Statement. It is only a brief description of, and is qualified by, more complete and detailed information contained in the entire Official Statement, including the cover page and appendices hereto, and the documents summarized or described herein. A full review should be made of the entire Official Statement. The offering of the Series 2020 Bonds to potential investors is made only by means of the entire Official Statement.

Certain capitalized terms used in this Official Statement and not otherwise defined herein shall have the meanings given to such terms in **APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION."** The descriptions and summaries of various documents hereinafter set forth do not purport to be comprehensive or definitive, and reference is made to each document for the complete details of its terms and conditions. All statements in this Official Statement are qualified in their entirety by reference to each document. Copies of the Resolution and other documents and information are available upon request and upon payment to the Board of a charge for copying, mailing and handling, directed to the Vice President for Budget and Finance/Chief Financial Officer.

Professionals

BofA Securities, Inc. (the "*Underwriter*") is underwriting the Series 2020 Bonds. Katten Muchin Rosenman LLP is Bond Counsel to the Board. Dentons US LLP, Honolulu, Hawaii, is serving as counsel to the Underwriter. Hilltop Securities, Inc. is serving as Municipal Advisor. Accuity LLP has audited the finances of the University appearing in **APPENDIX B**, but has not been asked to review, has not reviewed, and has no responsibility for, this Official Statement.

COVID-19 EMERGENCY

The following information regarding recent developments in finances and operations of the University supplements and amends information set forth below describing University revenues and information contained in "THE UNIVERSITY OF HAWAII - Revenues" and "APPENDIX A - the University of Hawai`i," certain of which historical information predates the COVID-19 pandemic or was prepared before the outbreak of COVID-19 and should be considered in light of possible negative impacts from COVID-19.

COVID-19, a highly contagious, upper respiratory tract illness caused by a novel strain of coronavirus, is having significant adverse health and financial impacts throughout the world, including the State of Hawaii. The World Health Organization declared the spread of COVID-19 to be a pandemic, and the Secretary of Health, Education and Welfare of the United States, the Governor of the State of Hawaii and the mayors of each county have each declared states of emergency. Since the first case was reported on February 17, 2020, there have been over 12,800 confirmed cases of COVID-19 in the State of Hawai`i, the majority of confirmed cases having been identified since a "second wave" of infections began in late July 2020. Of these cases only 34 involved University faculty, students or staff.

On March 4, 2020, State of Hawaii Governor David Y. Ige proclaimed the spread of COVID-19 in Hawaii to be a disaster, declared a state of emergency in Hawaii and announced State responses, including the use of disaster relief funds, to address the spread of COVID-19. The Governor subsequently issued thirteen (13) supplemental proclamations and a series of executive orders closing non-essential business, activities and government operations for the duration of the public health emergency, which has been extended until October 31, 2020. On March 17, 2020, the Governor asked visitors to postpone their trips to Hawaii. The State then implemented a mandatory fourteen (14) day self-quarantine requirement for all persons entering the State, as well as for inter-island travelers, as a majority of the early-detected infected persons in Hawaii were visitors and returning residents. All arriving passengers are subject to health screenings, temperature scans and reporting requirements. The quarantine requirement for persons traveling inter-island in the State was cancelled effective on June 16, 2020, but reinstated effective August 11, 2020 for people traveling from Oahu to Hawaii island, Kauai and the islands comprising Maui County. The quarantine requirement for persons entering the State has also been extended until October 31, 2020, but the Governor has announced that effective October 15, 2020, under a pre-travel testing program travelers who have had an FDA-approved nucleic acid amplification test conducted within 72 hours of departure and can produce a negative test result may enter the State without self-quarantining. There can be no assurance that the pre-testing quarantine exception program will not be modified prior to October 15, 2020.. In addition counties are authorized to approve enhanced movement quarantine areas, such as self-contained resorts, in which self-quarantined persons may freely move within the entire quarantine area.

On July 17, 2020, the State modified this order to permit out-of-state travelers arriving in Hawai`i prior to October 15, 2020, to attend university campuses on Oahu and Kauai who have had a negative test results within 72 hours of departure or 48 hours of arrival to modify self-quarantine. These students and other university related personnel may leave self-quarantine to attend classes and other official University activities during the 14 day self-quarantine period.

The State presently has 288 contact tracers, each with a capacity to trace 20 people per day, and is currently training several hundred additional contact tracers. The City and County of Honolulu has announced that it will hire additional contract tracers. The State is currently conducting 1,300-1,600 tests daily and has conducted over 265,000 tests in total. The State has implemented federally-funded "surge testing" on Oahu, which provided 47,000 tests from August 27, 2020 to September 16, 2020.

Also on March 4, 2020, the county mayors issued proclamations declaring a state of emergency in each county. They subsequently issued supplemental proclamations and a series of orders ("Emergency Orders") closing all non-essential business, including bars, restaurants and most retail stores, and banning public gatherings for the duration of the emergency. The Emergency Orders prohibited all non-essential travel and business activity, except designated businesses and operations in each county. The Emergency Orders initially required everyone except essential workers to shelter in place and work from home through June 2020. The Emergency Orders were modified, and most medium risk non-essential businesses had gradually been permitted to re-open in phases beginning in mid-May 2020. Shopping malls were closed for two months, except for markets, drug stores and take-out food service, until reopening was allowed with conditions and restrictions on May 15, 2020. Non-essential interisland travel was permitted between mid-June 2020 until August 11, 2020. Certain higher risk businesses such as gyms were permitted to open at restricted capacities in late June 2020. The Mayor of the City and County of Honolulu reinstated the prohibition on non-essential business activity for a four week period beginning August 27, 2020. This measure required businesses such as retail stores, malls, non-medical personal care and gyms, that had reopened to close for a four week period before reopening on September 24, 2020. All businesses and operations permitted to reopen have been ordered to comply with social distancing requirements by requiring wearing of face masks and maintaining six feet social distancing or other safety measures for employees and members of the public. The Emergency Orders also mandate face coverings for indoor businesses and government buildings, as well as outdoors where physical distancing is not practical. Effective September 24, 2020, a new City and County of Honolulu order was issued implementing a Tier 1 recovery framework. This order has allowed parks, beaches, retail business and restaurants to re-open with restrictions. The four stage tiered recovery framework is intended to use benchmark data (new cases and percentage of positive tests) as a basis to loosen restrictions and progress through the tiers.

The spread of COVID-19 and responsive measures have had a negative impact on the State's economy. Economic activity in the State has slowed significantly, due to the closure of non-essential businesses, traveler quarantine requirements and substantial reduction in visitors to Hawaii. Airlines have suspended nearly all flights to and from the State and the US Mainland and Asia, resulting in about a 91% reduction in air seat capacity. Visitor arrivals to Hawaii dropped from an average of 30,000 to 35,000 people a day to 200 people a day in March 2020, and have risen slightly to approximately 700-plus people a day beginning in June 2020. In April 2020, 4,564 visitors came to Hawaii, as compared to 856,250 visitors in April 2019. In August 2020, 22,334 visitors arrived in Hawaii, as compared to 926,417 visitors in July 2019. In the first eight months of 2020, total visitor arrivals dropped 69.0% to 2,201,141. Many of Waikiki's major hotels have closed for the duration of the Emergency Orders through October 2020. Oahu's hotel occupancy rate in April 2020, the first full month of the quarantine, was 8.0%, a 72% decline from April 2019. Waikiki's hotel occupancy rate in April 2020 was 5.4%. In May 2020, Oahu's hotel occupancy rate was 13%, an 84% decline from May 2019. Hawaii's seasonally adjusted unemployment rate has increased from less than 3% before the COVID-19 pandemic to 13.4% in June 2020, before decreasing slightly to 13.1% in July 2020.

The impact on State finances has been severe. The State's expenditures to respond to the COVID-19 pandemic were not budgeted, and State tax revenues have declined with the suspension of economic activity. The State Department of Taxation has reported that May 2020 tax collections were likely to be less than 50% of May 2019 tax collections. On May 15, the State Department of Business, Economic Development and Tourism predicted that Hawaii's economic growth would decline by 12.1 % in the next year. On May 28, 2020, the State's Council on Revenues predicted that State tax revenues would decrease by 7% for the fiscal year ending June 30, 2020 from the fiscal year ended June 30, 2019, and State tax revenues would decrease an additional 12% for the fiscal year ending June 30, 2021. On September 9, 2020, the Council on Revenues reduced the projected decrease for the fiscal year ending June 30, 2021 from 12% to 11%. The amount of the decrease was originally estimated to be approximately $2.3 billion.

UNIVERSITY'S RESPONSE TO COVID 19 EMERGENCY

In March 2020 the University suspended in person classes for the balance of the Spring 2020 semester. Summer 2020 classes were primarily conducted in a distance learning format. The University commenced fall 2020 semester classes with a mixture of on-line lectures and seminars, and in person laboratory, clinics, art studio classes and shops and practicum work in technical education where necessary. University attendance and research are considered essential activities under the Emergency Orders, and in person attendance is not prohibited. The University is offering approximately 9% of its courses as in-person classes in fall 2020, and 8% of its courses in a hybrid in person and on-line combination. Notwithstanding the University has requested students to take as many courses on-line as possible while staying on-track for on-time achievement of degrees and certificates. The University has extensive experience with distance learning and on-line attendance. For years the University has permitted students on one campus to enroll in classes at other campuses and to view lectures in real time and participate in class discussions remotely. Athletics and most extracurricular activities have been paused for the Fall 2020 semester. However, the Mountain West Conference of which UH Mānoa is a member recently announced a resumption of its football season the weekend of October 23-24, 2020.

With the impact of COVID-19, fall 2020 enrollment of full time students and total students on a University-wide basis is down from fall 2019. Mānoa and West Oahu undergraduate enrollment has increased, while Hilo undergraduate and graduate, and overall community college enrollment has decreased. The mix of students appears to have changed slightly as there are fewer international and non-resident students, but more resident students and students from the mainland US. As the educational plans for many individuals continue to evolve due to the coronavirus pandemic, such as declines in the current job market, the University continues its efforts in encouraging students to pursue a post-secondary education, and has taken actions such as extending admissions deadlines to accommodate students seeking this opportunity.

The impact on University finances is expected to be substantial. University administration projects that the State general fund will contribute $443.3 million to the University in the fiscal year ending June 30, 2021, compared to $507.6 million in the fiscal year ended June 30, 2020, or a decline of $64.3 million. The University expects tuition and fees collected in fiscal year 2021 will be $305.2 million in fiscal year 2021 compared to $331.4 million in fiscal year 2020, a $26.2 million decline. Total general fund and tuition and fee revenues, the two major sources of University revenues, are expected to decline from $839.0 million in fiscal year 2020 to $748.5 million in fiscal year 2021, a $90.5 million decline. Total revenues are expected to decline by $138.3 million to $915 million.

In response to the projected decline in revenues, the University administration predicts it must reduce general fund personnel expenditures by $47.7 million, non-personnel expenditures by $10.75 million and utilities expenditures by $7.5 million, for a total decrease of $65.8 million in general fund expenditures. Conversely, University administration anticipates personnel expenditures from tuition and fees revenues to increase by $68.7 million in 2021, with a total increase in tuition and fees expenditures of $71.1 million in fiscal year 2021. The University projects an operating budget of $981.8 million, which represents a net fiscal operating deficit of $66.9 million. The University anticipates using cash reserves to fund a portion of the operating deficit, limited to an amount not to exceed 50% of the current balance above the 5% minimum reserve amount in cash and unencumbered funds to be maintained pursuant to Board policy.

On August 20, 2020, the Board of Regents approved Resolution 20-03 authorizing University Administration to provide budgetary restrictions and freezing operating funds, new hires and expenditures. The Administration was required to develop a short term plan for fiscal year 2021 to address the financial shortfall that may use budgetary reserves. The Administration was also required to prepare a long term plan to re-envision the University's priorities while achieving greater effectiveness and efficiencies in operations. Effective November 1, 2020, 216 University executive-managerial employees will take 9.23% salary reductions. Any remaining portion of annual salaries above $200,000 will be reduced by an additional 11%.

In response to the COVID-19 pandemic, the federal government recently enacted the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"), which created the Coronavirus Relief Fund for State and Local Governments. The U.S. Treasury Department is distributing $150 billion to state and local governments under a population-based formula to reimburse state and local governments for COVID-19-related medical, public health, economic support, and other emergency response costs incurred and spent between March 1, 2020 and December 30, 2020, provided that such costs were not included in the most recently approved local government budget.

The University received $44.9 million in direct CARES Act funding in three tranches. Tranche 1 funds of $12 million are for aid awarded and paid directly to students. Tranche 2 funds of $12 million may be used to cover costs associated with changes to the delivery of instruction such as the purchase of equipment or software for distance learning. The University may use Tranche 3 funds of $20.9 million to defray institutional expenses, including loss of revenue and costs associated with the transition to distance learning.

The University also received $20.13 million from the State's allocation of CARES Act funds. The University is using these funds primarily for COVID-19 related expenses, including cleaning, janitorial and face protection supplies for COVID-19 related response and overtime for after-hours cleaning. The University has received $3 million from the City and County of Honolulu's allocation of CARES Act funds to provide job training for approximately 2,000 unemployed individuals under the newly-created Oahu Back to Work Program.

As of June 30, 2020, the University's portfolio of unencumbered cash, U.S. government securities and certificates of deposit totaled $425 million (unaudited), primarily in liquid investments maturing in less than one year. The balance of cash reserves in the Tuition and Fees Special Fund was $165 million. The University anticipates that it will be able to apply some cash reserves to fund the deficit in anticipated revenues while maintaining target of two months of operating expenses (16% of annual operating budget) and a minimum of 5% of budget in unencumbered cash from the Tuition and Fees Special Fund, and other special and revolving funds.

It is likely that the fiscal impact of the COVID-19 pandemic on the University will continue to change as the situation further develops. The fiscal impact will depend on future events outside of the University's control, including actions of the federal government and the State.

PLAN OF FINANCE

The Project

The proceeds of the Series 2020A Bonds will be applied to the renovation and repair of parking facilities at the University's Mānoa campus (the "Project"). This Project constitutes a University Project pursuant to the Resolution. This Project is anticipated to cost approximately $10 million.

The Refunding

The Series 2020B Bonds, Series 2020C Bonds, Series 2020D Bonds and Series 2020E Bonds are being issued to provide for the prepayment and redemption of the Refunded Bonds. The Series 2020B Bonds and the Series 2020C Bonds will provide for the refunding of the Series 2010A Bonds. The Series 2020D Bonds and the Series 2020E Bonds will provide for the refunding of the Series 2010B Bonds. The Refunded Bonds all have a redemption price of par and consist of the following:

REFUNDED BONDS

Series	Maturity Date	Amount Outstanding($)	Interest Rate (%)	Redemption Date	CUSIPs†
Series 2010A University Revenue Bonds	10/01/2021	3,755,000	4.361	10/28/2020	91428LFD3
Series 2010A University Revenue Bonds	10/01/2022	3,870,000	4.561	10/28/2020	91428LFE1
Series 2010A University Revenue Bonds	10/01/2023	3,985,000	4.711	10/28/2020	91428LFF8
Series 2010A University Revenue Bonds	10/01/2024	4,110,000	4.861	10/28/2020	91428LFG6
Series 2010A University Revenue Bonds	10/01/2025	4,245,000	5.011	10/28/2020	91428LFH4
Series 2010A University Revenue Bonds	10/01/2030	23,765,000	5.834	10/28/2020	91428LFJ0
Series 2010A University Revenue Bonds	10/01/2040	63,880,000	6.034	10/28/2020	91428LFK7
Series 2010B University Revenue Bonds	10/01/2021	4,305,000	4.361	10/28/2020	91428LFM3
Series 2010B University Revenue Bonds	10/01/2022	4,430,000	4.561	10/28/2020	91428LFN1
Series 2010B University Revenue Bonds	10/01/2023	4,570,000	4.711	10/28/2020	91428LFP6
Series 2010B University Revenue Bonds	10/01/2024	4,710,000	4.861	10/28/2020	91428LFQ4
Series 2010B University Revenue Bonds	10/01/2025	4,865,000	5.011	10/28/2020	91428LFR2
Series 2010B University Revenue Bonds	10/01/2030	27,240,000	5.834	10/28/2020	91428LFS0
Series 2010B University Revenue Bonds	10/01/2040	73,225,000	6.034	10/28/2020	91428LFT8

SOURCES AND USES OF FUNDS

	Series 2020A	Series 2020B	Series 2020C	Series 2020D	Series 2020E	Total
SOURCES OF FUNDS						
Par Amount	$10,045,000.00	$44,555,000.00	$54,300,000.00	$77,135,000.00	$31,130,000.00	$217,165,000.00
Net Original Issue Premium	-0-	9,637,992.90	-0-	16,071,611.70	-0-	25,709,604.60
Total Sources	$10,045,000.00	$54,192,992.90	$54,300,000.00	$93,206,611.70	$31,130,000.00	$242,874,604.60
USES OF FUNDS						
Deposit to Project Fund	$10,000,000.00	-0-	-0-	-0-	-0-	$10,000,000.00
Refund Refunded Bonds	-0-	54,025,115.94	54,048,494.53	92,896,838.76	30,979,566.42	231,950,015.65
Costs of Issuance*	45,000.00	167,876.96	251,505.47	309,772.94	150,433.58	924,588.95
Total Uses	$10,045,000.00	$54,192,992.90	$54,300,000.00	$93,206,611.70	$31,130,000.00	$242,874,604.60

*Includes underwriter's discount and other costs of issuance.

THE SERIES 2020 BONDS

General Terms of the Series 2020 Bonds

The Series 2020 Bonds will mature in the amounts and on the dates, and bear interest at the rates, set forth on the inside cover of this Official Statement. Interest on each Series 2020 Bonds will be payable on April 1 and October 1 of each year, commencing April 1, 2021, in the case of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds, and October 1, 2021, in the case of the Series 2020B Bonds and the Series 2020D Bonds at the rates per annum, and will mature on October 1 of the years and in the principal amounts, as set forth on the inside cover. The Series 2020 Bonds are issuable in fully registered form in the denomination of $5,000 or any integral multiple of $5,000. Interest on the Series 2020 Bonds will be calculated on the basis of a 360-day year consisting of twelve 30-day months.

The Series 2020 Bonds as initially issued will be available only in book-entry form. The Depository Trust Company, New York, New York ("*DTC*") will act as securities depository for the Series 2020 Bonds, and the ownership of one fully registered Series 2020 Bond for each maturity, in the principal amount of such maturity, of the Series 2020 Bonds will be registered in the name of Cede & Co., as nominee of DTC as the sole registered owner of the Series 2020 Bonds, and will be deposited with DTC (provided that if the aggregate principal amount of any single maturity exceeds $500,000,000, separate bond certificates shall be issued for each $500,000,000 and any amount in excess thereof and subject to any DTC restrictions on the maximum principal amount of a bond certificate). Except under the caption "**TAX MATTERS**," references herein to holders (the registered owners) shall be to DTC and not the beneficial owners. Beneficial interests in the 2020A Bonds may be held through DTC, Clearstream Banking, S.A. or Euroclear Bank SA/NV as operator of the Euroclear System, directly as a participant or indirectly through organizations that are participants in such system. See "**APPENDIX D - PROVISIONS FOR BOOK-ENTRY ONLY SYSTEM AND GLOBAL CLEARANCE PROCEDURES**" for a description of DTC, Clearstream Banking, S.A., Euroclear Bank SA/NV as operator of the Euroclear System, and certain of their responsibilities, and the provisions for registration and registration of transfer of the 2020A Bonds if the book-entry only system of registration is discontinued.

U.S. Bank National Association will serve as the paying agent for the Series 2020 Bonds (in such capacity, the "*Paying Agent*"). Principal of and interest on the Series 2020 Bonds will be paid by check or draft payable to the registered owner and mailed by first class mail, postage prepaid, to the address of such holder shown on the registry books kept pursuant to the provisions of the Resolution. The principal and redemption price, if any, of any Series 2020 Bond will be payable at the office of the Paying Agent.

Optional Redemption

The Series 2020 Bonds maturing on and after October 1, 2031 are subject to redemption prior to the stated maturity thereof at the option of the Board at any time and from time to time on or after October 1, 2030, in whole or in part (if in part, the maturities or portions thereof to be redeemed to be selected by the Board in its sole discretion), in each case at a redemption price equal to the principal amount of such Series 2020 Bonds or portions thereof to be redeemed plus accrued interest to the date of redemption.

In addition, the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds are subject to redemption on any date prior to October 1, 2030 at the option of the Board, in whole or in part (and if in part on a pro rata basis), at a redemption price equal to the greater of:

(1) 100% of the principal amount of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds to be redeemed; or

(2) the sum of the present value of the remaining scheduled payments of principal and interest to the maturity date of such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds to be redeemed, not including any portion of those payments of interest accrued and unpaid as of the date on which such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds are to be redeemed, discounted to the date on which such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds are to be redeemed on a semi-annual basis,

assuming a 360-day year consisting of twelve 30-day months, at the Comparable Treasury Yield (defined below) plus 25 basis points,

plus, in each case, accrued interest on such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds to be redeemed to the redemption date.

"Calculation Agent" means a commercial bank or an investment banking institution of national standing that is a primary dealer of United States government securities in the United States and designated by the Board (which may be the Underwriter for the Series 2020 Bonds).

"Comparable Treasury Issue" means the United State Treasury security selected by the Calculation Agent as having a maturity comparable to the remaining term to maturity of the Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds being redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term to maturity of the Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds being redeemed.

"Comparable Treasury Price" means, with respect to any date on which a Series 2020A Bond, Series 2020C Bond and Series 2020E Bond or portion thereof is being redeemed, either (a) the average of five Reference Treasury Dealer quotations for the date fixed for redemption, after excluding the highest and lowest such quotations, and (b) if the Calculation Agent is unable to obtain five such quotations, the average of the quotations that are obtained. The quotations will be the average, as determined by the Calculation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of principal amount) quoted in writing to the Calculation Agent, at 5:00 p.m. New York City time no later than the third business day nor earlier than the twentieth calendar day preceding the applicable date fixed for redemption.

"Comparable Treasury Yield" means the yield that represents the average yield to maturity for the period appearing in the most recently published statistical release designated "H.15(519) Selected Interest Rates" under the heading "Treasury Constant Maturities," or any successor publication selected by the Calculation Agent that is published weekly by the Board of Governors of the Federal Reserve System and that establishes yields on actively traded United States Treasury securities adjusted to constant maturity, for the maturity corresponding to the remaining term to maturity of the Series 2020A Bonds, the Series 2020C Bonds and the Series 20120E Bonds being redeemed. The Comparable Treasury Yield will be determined no later than the third business day nor earlier than the twentieth calendar day preceding the applicable date fixed for redemption. If the H.15(519) statistical release sets forth a weekly average yield for United States Treasury securities that have a constant maturity that is the same as the remaining term to maturity of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds being redeemed, then the Comparable Treasury Yield will be equal to such weekly average yield. In all other cases, the Comparable Treasury Yield will be calculated by interpolation on a straight-line basis between the weekly average yields on the United States Treasury securities that have a constant maturity (i) closest to and greater than the remaining term to maturity of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds being redeemed; and (ii) closest to and less than the remaining term to maturity of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds being redeemed. Any weekly average yields calculated by interpolation will be rounded to the nearest 1/100th of 1%, with any figure of 1/200th of 1% or above being rounded upward. If, and only if, weekly average yields for United States Treasury securities for the preceding week are not available in the H.15(519) statistical release or any successor publication, then the Comparable Treasury Yield will be the rate of interest per annum equal to the semiannual equivalent yield to maturity of the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price (each as defined herein) as of the date fixed for redemption.

"Reference Treasury Dealer" means a primary dealer of United States Government securities in the United States (which may be one of the institutions that served as an underwriter for the Series 2020 Bonds) appointed by the Board and reasonably acceptable to the Calculation Agent.

Selection for Redemption

If less than all of the Series 2020 Bonds of a series are called for redemption, the Board will designate the maturities from which the Series 2020 Bonds of such series are to be redeemed. For so long as the Series 2020 Bonds are registered in book-entry form and DTC or a successor securities depository is the sole registered owner of such Series 2020 Bonds, if fewer than all of the Series 2020 Bonds of the same maturity and bearing the same interest rate are to be redeemed, the particular Series 2020 Bonds to be redeemed shall be selected: (i) by lot, in the case of the Series 2020B Bonds or the Series 2020D Bonds, and (ii) on a pro rata pass-through distribution of principal basis in accordance with DTC procedures, in the case of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds; provided that, so long as the Series 2020 Bonds are held in book-entry form, the selection for redemption of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds will be made in accordance with the operational arrangements of DTC then in effect, and if the DTC operational arrangements do not allow for redemption on a pro rata pass-through distribution of principal basis, all Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds will be selected for redemption in accordance with DTC procedures by lot; provided further that any such redemption must be performed such that all Bonds remaining outstanding will be in authorized denominations. See **APPENDIX D**, "**BOOK-ENTRY ONLY SYSTEM**."

In connection with any repayment of principal of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds, including payments of scheduled mandatory sinking fund payments, the Paying Agent will direct DTC to make a pass-through distribution of principal to the owners of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds. A form of Pro Rata Pass-Through Distribution of Principal Notice will be provided to the Paying Agent that includes a table of factors reflecting the relevant scheduled redemption payments, based on the current schedule of mandatory sinking fund payments, which is subject to change upon certain optional redemptions, and DTC's currently applicable procedures, which are subject to change.

For purposes of calculating pro rata pass-through distributions of principal, "pro rata" means, for any amount of principal or interest to be paid, the application of a fraction to such amounts where (a) the numerator is equal to the amount due to the owners of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds on a payment date and (b) the denominator is equal to the total original par amount of such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds.

It is the Board's intent that redemption allocations made by DTC with respect to such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds be made on a pro rata pass-through distribution of principal basis as described above. However, neither the Board nor the Underwriter can provide any assurance that DTC, DTC's direct and indirect participants, or any other intermediary will allocate the redemption of such Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds on such basis.

If the Series 2020 Bonds are not registered in book-entry form and if fewer than all of the Series 2020 Bonds of the same maturity and bearing the same interest rate are to be redeemed, the particular Series 2020A Bonds, Series 2020C Bonds and Series 2020E Bonds of such maturity and bearing such interest rate to be redeemed will be selected on a pro rata basis, and the particular Series 2020B Bonds or Series 2020D Bonds of such maturity and bearing such interest rate to be redeemed will be selected by lot, provided that any such redemption must be performed such that all Series 2020 Bonds remaining outstanding will be in authorized denominations.

Mandatory Redemption

The Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds identified below are also subject to redemption prior to maturity, in part, on each of the dates and in the respective principal amounts set forth below, at a Redemption Price of 100% of the principal amount thereof, plus accrued interest to the date of redemption, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem the principal amount of Series 2020 Bonds specified for October 1 of each of the years shown below:

Series 2020A Bonds
Maturing October 1, 2040*

Year (October 1)	Principal Amount
2036	$560,000
2037	$580,000
2038	$595,000
2039	$615,000
2040	$635,000

* *Final Maturity.*

Series 2020C Bonds
Maturing October 1, 2040*

Year (October 1)	Principal Amount
2036	$5,920,000
2037	$6,105,000
2038	$6,295,000
2039	$6,490,000
2040	$6,695,000

* *Final Maturity.*

Series 2020E Bonds
Maturing October 1, 2040*

Year (October 1)	Principal Amount
2036	$1,975,000
2037	$6,955,000
2038	$7,175,000
2039	$7,400,000
2040	$7,625,000

* *Final Maturity.*

Notice of Redemption

Notice of redemption of any Series 2020 Bond is required to be mailed not less than 30 days prior to the redemption date to the holder of such Series 2020 Bond at its address as it appears on the registry books kept pursuant to the provisions of the Bond Resolution. Notice of redemption of Series 2020 Bonds will be given by the Paying Agent.

Each notice of redemption is required to state: (i) the title of the Series 2020 Bonds to be redeemed, the subseries designation thereof (if any), the redemption date, the place or places of redemption and the redemption price payable upon such redemption; (ii) if less than all the Series 2020 Bonds are to be redeemed, the distinctive number of the Series 2020 Bonds to be redeemed, (iii) that the interest on the Series 2020 Bonds, or on the principal amount thereof to be redeemed, designated for redemption in such notice shall cease to accrue from and after such redemption date; and (iv) that on such date there will become due and payable on each such Series 2020 Bond the principal amount thereof to be redeemed at the then applicable redemption price and the interest accrued on such principal amount to the redemption date. Each notice of redemption mailed to the holder of a Series 2020 Bond to be redeemed must, if less than the entire principal sum thereof is to be redeemed, also state the principal amount thereof to be redeemed and, if less than the entire principal sum of a Series 2020 Bond all of the principal of which matures on the same day is called for redemption, that such Series 2020 Bond must be surrendered to the Paying Agent in exchange for the payment of the principal amount thereof to be redeemed and the issuance of a new Series 2020 Bond or Bonds equaling in principal amount that portion of the principal sum not to be redeemed of the Series 2020 Bond to be surrendered.

Any notice of optional redemption may state that such redemption may be conditional upon the receipt by the Paying Agent on the date fixed for redemption of moneys sufficient to pay in full the redemption price of the Series 2020 Bonds proposed to be redeemed. If the notice contains such condition, and moneys sufficient to pay in full the redemption price of the Series 2020 Bonds proposed to be redeemed shall not be received on or prior to the date fixed for redemption, such notice of redemption shall be null and void and of no force and effect, the Board shall not redeem or be obligated to redeem any Series 2020 Bonds, and the Paying Agent at the Board's direction shall give notice, in the same manner as notice of redemption is given, that moneys sufficient to pay in full the redemption price of the Series 2020 Bonds proposed to be redeemed were not received on or prior to the date fixed for redemption and such redemption did not occur. In the event of the failure to redeem, all Series 2020 Bonds surrendered for redemption shall be promptly returned to the holder or holders by the Paying Agent.

For so long as a book-entry only system is in effect with respect to the Series 2020 Bonds, notice of redemption, or notice of rescission of any conditional notice of redemption, of Series 2020 Bonds to be redeemed is to be mailed by the Paying Agent to the Securities Depository or its nominee. Any failure of the Securities Depository or of its nominee, or of a direct or indirect participant, to notify a beneficial owner of Series 2020 Bonds of any redemption will not affect the sufficiency or validity of the redemption of the Series 2020 Bonds to be redeemed. See **APPENDIX D**, "**BOOK-ENTRY ONLY SYSTEM**" for a description of the book-entry only system. Neither the Board nor the Paying Agent can give any assurance that the Securities Depository, or direct or indirect participants, will distribute such redemption notices to the beneficial owners of the Series 2020 Bonds, or that they will do so on a timely basis.

Transfer or Exchange of the Bonds

Any Series 2020 Bond may, in accordance with its terms, be transferred upon the registry books required to be kept pursuant to the provisions of the Resolution, by the person in whose name it is registered, in person or by its duly authorized attorney, upon surrender of such Series 2020 Bond to the Paying Agent for cancellation, accompanied by delivery of a written instrument of transfer duly executed and in form satisfactory to the Paying Agent.

Whenever any Series 2020 Bond is surrendered for transfer, the Board shall deliver, or cause to be delivered, at the principal office of the Paying Agent (or cause to be sent by registered mail to the holder thereof at its request, risk and expense), in exchange for the fully registered Series 2020 Bond surrendered, a new duly executed Series 2020 Bond, as appropriate, of the same series, interest rate and maturity for a like aggregate principal sum as the Series 2020 Bond surrendered.

Any Series 2020 Bond may be surrendered for exchange for a new fully registered Series 2020 Bond, as appropriate of a like aggregate principal amount, series, interest rate and maturity and in authorized principal sums aggregating the principal sum or sums of the Series 2020 Bond or Bonds delivered in exchange.

The Paying Agent may charge a sum not exceeding the actual cost of each new fully registered Series 2020 Bond and may require the payment by the holder of the Series 2020 Bond requesting such transfer of any tax or other governmental charges required to be paid with respect to such transfer. The Paying Agent shall require the payment of such tax or governmental charges from the holder requesting an exchange.

SECURITY FOR THE BONDS

Pledge of Revenues

The Revenue Bonds, including the Series 2020 Bonds, are limited obligations of the Board payable from and secured solely by amounts pledged under the Resolution. Under the Resolution, the Board has pledged Revenues of the Network for the punctual payment of the principal, premium, if any, and interest on the Revenue Bonds in accordance with their terms and the provisions of the Resolution, and such pledge constitutes a lien on the Revenues, subject to the application of the Revenues to the payment of the Current Expenses of the University System as provided in the Resolution. Such Revenues are deposited, when received, in the University System Revenue – Undertakings Fund for credit to the University Network Revenue Account. The Revenues are more fully described under "**THE UNIVERSITY OF HAWAII – Revenues**" below. The Network is more fully described under "**THE UNIVERSITY OF HAWAII – The University Network**" below. The Revenue Bonds are additionally secured by a pledge of the University Bond Available Moneys subject to the prior and paramount lien thereon of the University Bonds all as described under "**Separate Resolution Financing**" below. There are no bonds outstanding under the University Bonds Resolution. The Board has covenanted not to issue any additional bonds under the University Bonds Resolution.

"*Revenues*" consist of two primary elements (i) the income derived by the University from its ownership or operation and management of the Network, including the rates, rents, fees and charges imposed by the Board for the use or enjoyment of or the services furnished by University Projects, University Purposes, and other properties and facilities constituting the Network (collectively, the "*University System Revenues*"), and (ii) moneys in any special fund or revolving fund, which include, but are not limited to, the tuition and fees special fund, community colleges special fund, intercollegiate athletics special fund, auxiliary enterprises special fund, student activities revolving fund, student health center revolving fund, real property and facilities use revolving fund, commercial enterprises revolving fund, and research and training revolving fund, unless otherwise restricted, appropriated or allocated by the Legislature of the State of Hawaii (the "*State*") to the Board, the University, the University System or the Network and permitted to be expended for Current Expenses or for Debt Service (collectively, the "*Legislative Appropriations*"). Additional information relating to the University System Revenues and Legislative Appropriations can be found under the subheadings "**THE UNIVERSITY OF HAWAII – Revenues – *University System Revenues***" and "**THE UNIVERSITY OF HAWAII – Revenues – *The University Special and Revolving Funds***" respectively.

See **APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION."**

The Series 2020 Bonds and all other Revenue Bonds are and will be equally and ratably secured by such lien and pledge, without priority by reason of series, number, date, maturity, date of sale, issuance and execution, or delivery thereof, except as described below under "**Additional Security for Certain Revenue Bonds**."

Neither the State nor any department or political subdivision of the State, including the Board, is obligated to pay the Series 2020 Bonds from any source other than the Revenues pledged under the Resolution. The Series 2020 Bonds are not a general or moral obligation or an indebtedness of the State within the meaning of any limitation of law or a charge upon the general fund of the State, nor is the full faith and credit of the State or any political subdivision of the State pledged to the payment of the principal or interest on the Series 2020 Bonds. No holder of any Series 2020 Bonds shall ever have the right to compel any exercise of the taxing power of the State or any political subdivision thereof for the payment of principal of or interest on the Series 2020 Bonds.

Additional Security for Certain Revenue Bonds

Series 2020B Bonds and Series 2020C Bonds. The Series 2010A Bonds, outstanding in the principal amount of $111,265,000 as of September 1, 2020, are Cancer Center Bonds (as defined in the Resolution), and secured by the Revenues on a parity with the other Revenue Bonds, including the Series 2020 Bonds, and are additionally secured by amounts on deposit in the Hawaii Cancer Research Special Fund established within the State treasury pursuant to Section 304A-2168, Hawaii Revised Statutes. The Hawaii Cancer Research Special Fund is funded primarily from collections of an excise tax imposed on each cigarette sold, used, or possessed by a wholesaler or dealer in the State pursuant to Section 245-3, Hawaii Revised Statutes. Currently, 2.0 cents per cigarette from these collections are deposited to the credit of the Hawai`i Cancer Research Special Fund, and the cash balance in the fund as of June 30, 2020, was $20,690,732. After giving effect to the refunding of the Refunded Bonds and the issuance of the Series 2020 Bonds, the Series 2020B Bonds and the Series 2020C Bonds will be the only Cancer Center Bonds outstanding under the Resolution. As long as any Cancer Center Bonds remain Outstanding, the amounts on deposit in the Hawaii Cancer Research Special Fund shall be allocated to the University's Cancer Center, and shall be used solely for payment of debt service on the Cancer Center Bonds, including the Series 2020B Bonds and the Series 2020C Bonds and current expenses and capital expenditures of the Cancer Research Center. **Such amounts only secure the Series 2020B Bonds and the Series 2020C Bonds, and are not available for the repayment of any other Bonds, including the Series 2020A Bonds, the Series 2020D Bonds and the Series 2020E Bonds.**

Outstanding and Additional Parity Revenue Bonds

Pursuant to the Resolution, the University has previously issued the Series 2001A Bonds, the Series 2001B Bonds, the Series 2006A Bonds, the Series 2009A Bonds, the Series 2010 Bonds, the Series 2012A Bonds and the Series 2015 Bonds and the Series 2017 Bonds. The Series 2001A Bonds, the Series 2001B Bonds, the Series 2006A Bonds, the Series 2009A Bonds, the Series 2010A-2 Bonds, the Series 2010B-2 Bonds and the Series 2012A Bonds are no longer outstanding and all of the Outstanding Series 2010 Bonds are being refunded with the proceeds of the Series 2020 Bonds. As of September 1, 2020, prior to giving effect to the issuance of the Series 2020 Bonds or the refunding of Refunded Bonds, $487,490,000 aggregate principal amount of Bonds are outstanding under the Resolution. The Resolution authorizes the issuance of Additional Bonds secured equally and ratably with the Series 2020 Bonds (except for the Cancer Center Bonds and the Series 2015D Bonds, the Series 2015E Bonds, the Series 2017B Bonds and the Series 2017C Bonds which are secured by certain additional pledges as described under the subheading "**Additional Security for Certain Revenue Bonds**" above), subject to satisfaction of the requirements of the Resolution. See **APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION – THE RESOLUTION – Authorization and Issuance of Additional Bonds**" herein.

Separate Resolution Financing

Pursuant to the University Bonds Resolution, the Board has financed university projects not constituting a part of the Network, which have a prior and paramount claim on the Legislative Appropriations pledged to the Revenue Bonds. University Bonds issued under the University Bonds Resolution are equally and ratably secured by moneys credited to the University Revenue-Undertaking Fund appropriated by the Legislature of the State for the purpose of the payment of the principal of and interest on the University Bonds and a pledge of moneys from time to time on deposit in any special fund or revolving fund of the University derived from the ownership or operation of the University, and the funds and accounts established thereunder (the "*University Bond Available Moneys*"), but not moneys deposited in the University Revenue-Undertaking Fund derived from the Network. There are no University Bonds outstanding under the University Bonds Resolution, and the Board has covenanted not to issue any additional University Bonds.

The State Legislature has previously enacted legislation annually to allocate and appropriate, for the purpose of paying debt service on the bonds secured by the University Bond Available Moneys, in addition to other allocations, a portion of the moneys in the Hawaii Tobacco Settlement Special Fund funded by receipts from the Master Settlement Agreement dated November 23, 1998. The Series 2015D Bonds, Series 2015E Bonds, Series 2017B Bonds and Series 2017C Bonds are additionally secured by a lien on the University Bond Available Moneys, including a portion of the moneys in the Hawaii Tobacco Settlement Special Fund. The State Legislature has not previously appropriated less than the amount necessary to pay principal and interest coming due on such bonds from the Hawaii Tobacco Settlement Special Fund during any fiscal year. The University received $9,399,586.81 and $9,397,426.46 from the Hawaii Tobacco Settlement Special Fund in fiscal years 2019 and 2018, respectively. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Separate Resolution Financing: University Bonds**."

Limitations on Subordinated Indebtedness

The Resolution authorizes the Board to issue bonds, notes, warrants, certificates or other obligations or evidences of indebtedness which are payable from and secured by a lien and charge on the Revenues subordinate to the payment from and lien and charge on the Revenues for payment of the principal of and interest on the Revenue

Bonds and payments from the Revenues required by the Resolution (i) to pay Current Expenses of the University System and (ii) to be deposited in the University Network Bond Account and the University Network Repair and Replacement Account.

Nothing in the Resolution prevents the State from requiring that reimbursement be made to the general fund of the State from the Revenues for the payment from the general fund of the State of the principal of or interest on any obligations or evidences of indebtedness issued to pay costs of construction of University Projects included or to be included in the University System, subordinate to the payment from the Revenues of the principal of and interest on the Revenue Bonds and subordinate to the payment from the Revenues of the payments therefrom required by the Resolution to be used to make the payments described in clauses (i) and (ii) above, or from securing any such reimbursement by a lien and charge on the Revenues of the payments therefrom required by the Resolution to be used to make the payments described in clauses (i) and (ii) above. As of June 30, 2020, no such reimbursable obligations were outstanding.

Selected Covenants of the Board

In the Resolution, the Board makes the covenants and agreements described in **APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION."** In particular, the Board has agreed with the Bondholders, among other things, as follows:

Maintenance of the Network. The Board has agreed to operate and maintain the Network and to manage the Network in the most efficient manner consistent with sound economy and public advantage and consistent with the protection of Bondholders. The Board also has agreed to maintain, preserve, keep and operate, or cause to be maintained, preserved, kept and operated, the University Projects, University Purposes, and other properties and facilities constituting the Network (including all additions, improvements and betterments thereto and expansions thereof and every part and parcel thereof) in good repair, working order and operating condition in conformity with standards customarily followed with respect to programs of like size and character, and to that end will from time to time make all necessary repairs and alterations thereof and renewals and replacements thereof.

Rates, Rents, Fees and Charges, and Legislative Appropriations. With respect to University Projects or University Purposes included in the Network capable of producing revenue sufficient to make all such University Projects or University Purposes self-sustaining, the Board has agreed to impose and collect rates, rents, fees and charges for the use or enjoyment and services of the facilities of the University Projects or University Purposes and has agreed to revise such rates, rents, fees and charges from time to time whenever necessary, so that portion of the Network will be and always remain self-sustaining. With respect to University Projects or University Purposes included in the Network not capable of producing any revenue or revenue sufficient to make such University Projects or University Purposes self-sustaining, the Board has agreed to allocate Legislative Appropriations so that portion of the Network (with such Legislative Appropriations) shall be and always remain self-sustaining. See "**SECURITY FOR THE BONDS – Pledge of Revenues**" herein.

Against Encumbrances. The Board has agreed not to cause to be created or given, or permit to be created or given, any mortgage, lien, pledge, charge or other encumbrance upon any real or personal property comprising the Network or any part thereof, or upon the Revenues and the moneys in the University Revenue-Undertakings Fund credited to any account created by the Resolution, other than the liens, pledges, charges and encumbrances specifically created or permitted by the Resolution.

The Board has further agreed not to permit the creation of or issue any bonds (other than existing and future series of Revenue Bonds pursuant to the Resolution), notes, warrants, or other obligations or evidences of indebtedness or create any additional indebtedness payable from the Revenues prior to or on a parity with the payment of principal of or interest on the Revenue Bonds or secured by a lien thereon. See "**SECURITY FOR THE BONDS – Outstanding and Additional Parity Revenue Bonds**" herein.

Against Sale or Other Disposition. The Board has agreed not to sell, lease or otherwise dispose of all or substantially all of the properties constituting the Network without simultaneously depositing cash or Governmental Securities in an amount sufficient so that no Revenue Bonds are any longer deemed outstanding under the Resolution; provided, however, that (i) the Board may exchange Network property for property of comparable value, (ii) the Board may grant leases, licenses, easements and other agreements pertaining to Network property in the normal and customary course of business, according to the Board's policy regarding rates, rentals, fees and charges of the Network, properties constituting the Network, and the revenues from such leasing shall be part of the Revenues and such properties shall remain part of the Network, but any such leasing shall not be inconsistent with the provisions of the Resolution and shall not impair or diminish the security of and payment for the Revenue Bonds, (iii) the Board may execute agreements pertaining to the acquisition of properties that are or will become a part of the Network in connection with the operation of the Network and in the normal and customary course of business thereof, and may subject such properties to a lien pending payment therefor, provided that the aggregate of the payments under all such agreements in a Fiscal Year shall not exceed three percent (3%) of the annual budget of the Board for such Fiscal Year adopted pursuant to the Resolution, and all payments under any such agreements shall constitute Current Expenses to the extent such agreements comply with this paragraph, and (iv) the Board may sell, lease or otherwise dispose of any portion of the properties and facilities (real or personal) comprising a part of the University System which are surplus. Surplus properties or facilities are those the disposal of which will not impede or prevent the use of the Network or its facilities and which the Board has determined have become unserviceable, unsafe or no longer required or which have been replaced by other property of substantially equal revenue producing capability and of substantially equal utility. Any moneys received by the Board as the proceeds of any such sale, lease or any other disposition of said surplus properties shall become Revenues. In the event any Network properties shall be taken by the exercise of the power of eminent domain, the amount of the award received by the Board as a result of such taking shall be applied to any University Purposes, including to the redemption or purchase of Revenue Bonds and to acquire or construct revenue-producing properties to constitute a part of the Network.

THE UNIVERSITY OF HAWAII

The University of Hawaii is a multi-institutional system comprised of three University campuses, seven community college campuses and nine university and educational centers distributed across six islands throughout the State. The affairs of the University are under the general management and control of the Board, consisting of eleven members appointed by the governor of the State for staggered five-year terms and confirmed by the Senate. For a detailed description of the Board, the University and certain statistical information, See **APPENDIX A – "THE UNIVERSITY OF HAWAII."**

The University Network

Act 141, originally enacted on May 16, 1947, established the University Project Fund and authorized the University (with the approval of the governor) to issue revenue bonds to finance the construction and maintenance of University housing units, athletic units and other projects. The measure was intended to enable the University to enlarge its facilities sufficiently to meet the needs of its extended educational program and increased student enrollment and to maintain its standing as one of the major institutions of learning in the Pacific area. The Act was enacted for the purpose of creating a system which would make it possible for several projects to be funded by a single issue of bonds and give the Board the means to establish a financial base for subsequent projects of the University.

The Network (as defined below) includes each University Project (as defined below) the cost of construction of which is paid in whole or in part from the proceeds of Bonds or from the Revenues, whether such University Project is located on the Mānoa Campus of the University or on any other area of any of the educational institutions under the control of or governed by the Board.

Pursuant to the Act and the Resolution, the Board formally created a Network consisting of the University System and University Purposes. The University System is comprised of various University Projects operated and maintained as a system and a portion of the Network. Some of the University Projects currently included in the Network are the student housing and connecting food service facilities on the Mānoa campus, the bookstores located on any of the University's campuses, the University's student union on the Mānoa campus known as the Campus Center, including its dining facilities, the telecommunication system located on the Mānoa campus, those parking operations for the Mānoa campus which were financed with revenue bonds and/or in whole or in part from certain general obligation bonds, the student housing and connecting food service facilities on the Hilo campus, and faculty housing operated by the Mānoa campus.

The University System and any University Purposes which at the election of the Board have been included as part of the Network pursuant to a Supplemental Resolution constitute the Network so long as the inclusion of the University Purposes in the Network is not in violation of law or in violation of the terms of any grant, gift, bequest or devise. University Purposes are defined in the Resolution as any action, undertaking or improvement by the Board reasonably related to the development and promotion of the University as an institution of higher learning or an action or undertaking related thereto.

Revenues

University System Revenues. The University System Revenues include, among other things, the rates, rents, fees and charges imposed by the Board for the use or enjoyment of or the services furnished by certain Network facilities which constitute the University System (the "*University System*"). See "**THE UNIVERSITY OF HAWAII – The University Network**" herein. Such rates, rents, fees and charges are primarily derived from the imposition of room rentals, bookstore sales, parking revenues, and the like. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Student Enrollment – Student Tuition, Housing Costs and Financial Aid"** for a description of tuition, fees and room and board charges at each campus.

The University Special and Revolving Funds. The Legislative Appropriations include certain moneys in any special fund or revolving fund, which include, but are not limited to, the tuition and fees special fund, community colleges special fund, intercollegiate athletics special fund, auxiliary enterprises special fund, student activities revolving fund, student health center revolving fund, real property and facilities use revolving fund, commercial enterprises revolving fund, and research and training revolving fund, unless otherwise restricted, appropriated or allocated by the Legislature of the State to the Board, the University, the University System or the Network and permitted to be expended for Current Expenses or for Debt Service. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Outstanding Indebtedness**" and **APPENDIX C – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION."** As described under "**Separate Resolution Financing**" above, the University Bonds have a prior and paramount claim to the Legislative Appropriations.

A special fund, which for accounting purposes is actually composed of several separate accounts, is generally dedicated or set aside by law for a specified object or purpose, but excludes revolving funds and trust funds. Special funds are designed to be self-sustaining through revenues earmarked from specified sources. The distinguishing characteristic of a special fund is that accounts in a special fund have legislative or other limitations imposed on their use. The types of moneys credited to an account in a special fund are user taxes, receipts and revenues from public undertakings, improvements or systems.

A revolving fund is one from which is paid the cost of goods and services rendered or furnished to or by an entity, such as the University, and which is replenished through charges made for the goods or services or through transfers from other accounts or funds. A revolving fund is often established with an appropriation of seed money from the State. Activities financed by revolving funds at the University include student activities, facilities usage, and services provided to facilitate instructional, research, and public service missions at the University. The activities are replenished through fees and charges for admission to events, rental, and services provided to users or the general public.

University System Revenues and Special and Revolving Funds. The following table shows University System Revenues and Current Expenses of the Network, amounts deposited to special and revolving funds and the University System Unrestricted Current Fund and Special and Revolving Funds prior year accumulated net position for the fiscal years ended June 30, 2015 through 2019:

Table 1
UNIVERSITY SYSTEM REVENUES AND SPECIAL AND REVOLVING FUNDS
FOR THE FISCAL YEAR ENDED JUNE 30
(in thousands of dollars)

	2015	**2016**	**2017**	**2018**	**2019**
University System Revenues	$ 100,303	$ 102,063	$ 102,532	$ 103,640	$ 104,687
Less Current Expenses (Network)	(57,055)	(56,090)	(54,007)	(55,688)	(53,713)
Deposits to Special and Revolving Funds[1]	428,081	423,552	416,985	412,892	418,525
Less Amounts Received from Hawaii Tobacco Settlement Special Fund[2]	(11,631)	(9,549)	(11,799)	(9,397)	(9,400)
Less Cigarette Tax Received from State[3]	(14,803)	(14,242)	(14,420)	(13,782)	(13,186)
Net University System Revenues and Deposits to Special and Revolving Funds	$ 444,895	$ 445,734	$ 439,291	$ 437,665	$ 446,913
University System Unrestricted Current Fund Prior Year Accumulated Net Position	$ 8,811	$ 9,981	$ 12,001	$ 15,862	$ 17,403
Special and Revolving Funds Prior Year Accumulated Net Position[1]	118,366	121,479	148,447	159,620	189,413
Less University Revenue-Undertakings Fund Tobacco Settlement Prior Year Accumulated Net Position[2]	(7,292)	(7,388)	(8,425)	(10,724)	(10,900)
Less Hawaii Cancer Research Special Fund Prior Year Accumulated Net Position[3]	(17,806)	(24,846)	(15,612)	(16,738)	(17,452)
University System Unrestricted Current Fund and Special and Revolving Funds Revenues and Prior Year Accumulated Net Position[1]	$ 546,974	$ 544,960	$ 575,702	$ 585,685	$ 625,377

Source: University of Hawaii (unaudited).

1 Amounts on deposit in the special and revolving funds are available to the extent appropriated or allocated by the Legislature of the State to the Board, the University, the University System or the Network and permitted to be expended for Current Expenses of the Board, the University, the University System or the Network or for Aggregate Debt Service or Debt Service or a combination thereof; provided, however, that such amounts are subject and subordinate to the prior and paramount lien of the University Bonds Resolution as described under the subheading "**SECURITY FOR THE BONDS – Separate Resolution Financing**" above.

2 Such amounts are only available for debt service on the University Bonds, Series 2015D Bonds, Series 2015E Bonds, Series 2017B Bonds and Series 2017C Bonds and to pay medical school operating expenses.

3 Such amounts are only available for debt service on the Series 2010A Bonds and to pay operating expenses and capital expenditures for the cancer research center.

State Employees' Retirement System

For information relating to the University's share of the State Employees' Retirement System and the system itself see **APPENDIX A – "THE UNIVERSITY OF HAWAII – State Employees' Retirement System.**"

DEBT SERVICE REQUIREMENTS

Set forth below are the debt service requirements for the Revenue Bonds after giving effect to the refunding of the Refunded Bonds and the issuance of the Series 2020 bonds. Certain other indebtedness payable from the Revenues of the Network and described in **"Outstanding Indebtedness"** in **APPENDIX A** is excluded. Debt Service requirements for the Revenue Bonds for each fiscal year ending June 30 includes interest payments on April 1 of such year and principal and interest payments on October 1 of the prior calendar year. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Outstanding Indebtedness"** hereto for a discussion of the University's other outstanding obligations.

Fiscal Year Ending June 30	Outstanding University Revenue Bonds Debt Service	Series 2020 Bonds			Total Bonds Debt Service
		Principal	Interest	Total Debt Service	
2021	$37,143,966	$-0-	$1,190,334	$1,190,334	$38,334,300
2022	22,506,194	4,795,000	10,648,873	15,443,873	37,950,067
2023	22,502,783	7,450,000	7,987,806	15,437,806	37,940,589
2024	22,498,897	7,810,000	7,624,228	15,434,228	37,933,125
2025	22,505,557	8,175,000	7,241,734	15,416,734	37,922,291
2026	22,501,651	8,570,000	6,839,614	15,409,614	37,911,265
2027	21,502,208	8,985,000	6,416,539	15,401,539	36,903,748
2028	22,409,462	9,425,000	5,971,450	15,396,450	37,805,912
2029	22,410,488	9,885,000	5,503,167	15,388,167	37,798,655
2030	21,803,890	10,360,000	5,010,893	15,370,893	37,174,783
2031	21,790,222	10,860,000	4,494,181	15,354,181	37,144,403
2032	21,404,796	11,340,000	4,007,165	15,347,165	36,751,960
2033	21,413,159	11,735,000	3,597,783	15,332,783	36,745,942
2034	11,612,366	12,100,000	3,214,664	15,314,664	26,927,029
2035	11,609,465	12,455,000	2,844,840	15,299,840	26,909,305
2036	11,614,310	12,825,000	2,458,117	15,283,117	26,897,428
2037	11,614,053	13,230,000	2,038,027	15,268,027	26,882,080
2038	5,812,975	13,640,000	1,612,550	15,252,550	21,065,525
2039	5,803,377	14,065,000	1,168,855	15,233,855	21,037,232
2040	523,771	14,505,000	711,306	15,216,306	15,740,077
2041	524,503	14,955,000	239,504	15,194,504	15,719,007
2042	524,194	-0-	-0-	-0-	524,194
2043	522,841	-0-	-0-	-0-	522,841
2044	525,432	-0-	-0-	-0-	525,432
2045	521,967	-0-	-0-	-0-	521,967
Total*	$363,602,528	$217,165,000	$90,821,629	$307,986,629	$671,589,156

*Columns may not total due to rounding.

LEGALITY OF BONDS FOR INVESTMENT

The State and any of its political subdivisions, or any political or public corporations, including the employees' retirement system of the State, or any instrumentality of the State, or any insurance company or building and loan association, or any savings bank or trust company, or any bank or other financial institution operating under the laws of the State or any personal representative, guardian, trustee or other fiduciary in the State may legally invest any moneys or funds belonging to them or within their control and available for investment under other provisions of law, in bonds issued by the Board under the Act.

FINANCIAL STATEMENTS

The financial statements of the University as of and for the fiscal year ended June 30, 2019 have been audited by Accuity LLP, independent auditors, and are attached as **APPENDIX B** to this Official Statement. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Financial Information"** and **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

PENDING LITIGATION

The University has been named as a defendant or codefendant in numerous lawsuits and claims arising in the normal course of operations. Counsel is presently unable to express an opinion as to the probable outcome of any of these lawsuits and claims, and accordingly, no provision for losses has been made for such matters. Any losses arising from such lawsuits and claims are expected to be paid from moneys in certain special or revolving funds of the University or from legislative appropriations obtained for such purpose and are not expected to have a material adverse effect on the University's financial position or the Revenues.

There is no pending litigation seeking to restrain or enjoin the sale, issuance, execution or delivery of the Series 2020 Bonds or in any other manner affecting the validity of such Bonds or the proceedings or authority pursuant to which they are to be sold and issued.

TAX MATTERS

TAX-EXEMPT BONDS

Summary of Bond Counsel Opinion

Katten Muchin Rosenman, LLP, bond counsel to the Board ("*Bond Counsel*"), is of the opinion that under existing law, interest on the Series 2020B Bonds and Series 2020D Bonds (collectively, the "*Tax-Exempt Bonds*") is not includable in the gross income of the owners thereof for federal income tax purposes. If there is continuing compliance with the applicable requirements of the Internal Revenue Code of 1986 (the "*Code*"), Bond Counsel is of the opinion that interest on the Tax-Exempt Bonds will continue to be excluded from the gross income of the owners thereof for federal income tax purposes. Interest on the Tax-Exempt Bonds is not an item of tax preference for purposes of the federal alternative minimum tax. Interest on the Tax-Exempt Bonds is exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes is not exempt from Illinois income taxes.

The Code contains certain requirements that must be satisfied from and after the date of issuance of the Tax-Exempt Bonds in order to preserve the exclusion from gross income for federal income tax purposes of interest on the Tax-Exempt Bonds. These requirements relate to the use and investment of the proceeds of the Tax-Exempt Bonds, the payment of certain amounts to the United States, the security and source of payment of the Tax-Exempt Bonds and the ownership and use of the property financed and refinanced with the proceeds of the Tax-Exempt Bonds.

Tax-Exempt Bonds Purchased at a Premium or at a Discount

The difference (if any) between the initial price at which a substantial amount of each maturity of the Tax-Exempt Bonds is sold to the public (the "*Offering Price*") and the principal amount payable at maturity of such Tax-Exempt Bonds is given special treatment for Federal income tax purposes. If the Offering Price is higher than the maturity value of a Tax-Exempt Bond, the difference between the two is known as "bond premium," if the Offering price is lower than the maturity value of a bond, the difference between the two is known as "original issue discount."

Bond premium and original issue discount are amortized over the term of a Tax-Exempt Bond on the basis of the Tax-Exempt Bond yield from the date of purchase to the date of maturity, compounded at the end of each accrual period of one year or less with straight line interpolation between compounding dates, as provided more specifically in the Income Tax Regulations. The amount of bond premium accruing during each period is treated as a reduction in the amount of tax-exempt interest earned during such period and is subtracted from the owner's tax basis in the Tax-Exempt Bond. The amount of original issue discount accruing during each period is treated as interest that is excludable from the gross income of the owner of such Tax-Exempt Bond for federal income tax purposes, to the same extent and with the same limitations as current interest, and is added to the owner's tax basis in the Tax-Exempt Bond. A Tax-Exempt Bond's adjusted tax basis is used to determine whether, and to what extent, the owner realizes taxable gain or loss upon the disposition of the Tax-Exempt Bond (whether by reason of sale, acceleration, redemption prior to maturity or payment at maturity of the Tax-Exempt Bond).

Owners who purchase Tax-Exempt Bonds at a price other than the Offering Price, after the termination of the initial public offering or at a market discount should consult their tax advisors with respect to the tax consequences of their ownership of the Tax-Exempt Bonds. In addition, owners of Tax-Exempt Bonds should consult their tax advisors with respect to the state and local tax consequences of owning the Tax-Exempt Bonds; under the applicable provisions of state or local income tax law, bond premium and original issue discount may give rise to taxable income at different times and in different amounts than they do for Federal income tax purposes.

Exclusion from Gross Income: Requirements

The Code sets forth certain requirements that must be satisfied on a continuing basis in order to preserve the exclusion from gross income for federal income tax purposes of interest on the Tax-Exempt Bonds. Among these requirements are the following:

Limitations on Private Use. The Code includes limitations on the amount of Tax-Exempt Bond proceeds, and the facilities financed or refinanced by such proceeds, that may be used in the trade or business of, or owned by, or used to make or finance loans to, persons other than governmental units.

Investment Restrictions. Except during certain "temporary periods," proceeds of the Tax-Exempt Bonds and investment earnings thereon (other than amounts held in a reasonably required reserve or replacement fund, if any, or as part of a "minor portion") may generally not be invested in investments having a yield that is "materially higher" (1/8 of one percent) than the yield on the Tax-Exempt Bonds.

Rebate of Arbitrage Profit. Unless the Tax-Exempt Bonds qualify for an exemption, earnings from the investment of the "gross proceeds" of the Tax-Exempt Bonds in excess of the earnings that would have been realized if such investments had been made at a yield equal to the yield on the Tax-Exempt Bonds are required to be paid to the United States at periodic intervals. For this purpose, the term "gross proceeds" includes the original proceeds of the Tax-Exempt Bonds, amounts received as a result of investing such proceeds and amounts to be used to pay debt service on the Tax-Exempt Bonds.

Covenants to Comply

The Board has covenanted to comply with the requirements of the Code relating to the exclusion from gross income for federal income tax purposes of interest on the Tax-Exempt Bonds.

Risks of Non-Compliance

In the event that the Board fails to comply with the requirements of the Code, interest on the Tax-Exempt Bonds may become includable in the gross income of the owners thereof for federal income tax purposes retroactively to the date of issue. In such event, the Resolution requires neither acceleration of payment of principal of, or interest on, the Tax-Exempt Bonds nor payment of any additional interest or penalties to the owners of the Tax-Exempt Bonds.

Federal Income Tax Consequences

Pursuant to Section 103 of the Code, interest on the Tax-Exempt Bonds is not includable in the gross income of the owners thereof for federal income tax purposes to the extent and with the limitations described above. However, the Code contains a number of other provisions relating to the treatment of interest on the Tax-Exempt Bonds that may affect the taxation of certain types of owners, depending on their particular tax situations. Some of the potentially applicable federal income tax provisions are described in general terms below. **PROSPECTIVE PURCHASERS SHOULD CONSULT THEIR TAX ADVISORS CONCERNING THE PARTICULAR FEDERAL INCOME TAX CONSEQUENCES OF THEIR OWNERSHIP OF THE TAX-EXEMPT BONDS.**

Cost of Carry. Owners of the Tax-Exempt Bonds will generally be denied a deduction for otherwise deductible interest on any debt which is treated for federal income tax purposes as incurred or continued to purchase or carry the Tax-Exempt Bonds. As discussed below, special allocation rules apply to financial institutions.

Corporate Owners. Interest on the Tax-Exempt Bonds is generally taken into account in computing the earnings and profits of a corporation and consequently may be subject to federal income taxes based thereon. Thus, for example, interest on the Tax-Exempt Bonds is taken into account not only in computing the corporate alternative minimum tax but also the branch profits tax imposed on certain foreign corporations, the passive investment income tax imposed on certain S corporations, and the accumulated earnings tax.

Individual Owners. Receipt of interest on the Tax-Exempt Bonds may increase the amount of social security and railroad retirement benefits included in the gross income of the recipients thereof for federal income tax purposes.

Certain Blue Cross or Blue Shield Organizations. Receipt of interest on the Tax-Exempt Bonds may reduce a special deduction otherwise available to certain Blue Cross or Blue Shield organizations.

Property or Casualty Insurance Companies. Receipt of interest on the Tax-Exempt Bonds may reduce otherwise deductible underwriting losses of a property or casualty insurance company.

Financial Institutions. Financial institutions may be denied a deduction for their otherwise allowable interest expense in an amount determined by reference, in part, to their adjusted basis in the Tax-Exempt Bonds.

Foreign Personal Holding Company Income. A United States shareholder of a foreign personal holding company may realize taxable income to the extent that interest on the Tax-Exempt Bonds held by such a company is properly allocable to the shareholder.

TAXABLE BONDS

The following is a summary of the principal United States federal income tax consequences of ownership of the Series 2020A Bonds, the Series 2020C Bonds and the Series 2020E Bonds (collectively, the "*Taxable Bonds*"). This summary deals only with the Taxable Bonds held as capital assets by initial purchasers, and not with special classes of holders, such as dealers in securities or currencies, banks, tax-exempt organizations, life insurance companies, persons that hold the Taxable Bonds as a hedge or as hedged against currency risks or that are part of a straddle or conversion transaction, or persons whose functional currency is not the United States dollar.

The Code contains a number of provisions relating to the taxation of the Taxable Bonds (including but not limited to the treatment of and accounting for interest, premium, and market discount thereon, gain from the disposition thereof and withholding tax on income therefrom) that may affect the taxation of certain owners, depending on their particular tax situations. Prospective purchasers of the Taxable Bonds should consult their own tax advisors concerning the consequences, in their particular circumstances, under the Code and the laws of any other taxing jurisdiction, of ownership of the Taxable Bonds.

United States Federal Income Tax Considerations for United States Holders of Taxable Bonds

Payments of Interest to United States Holders. Interest on the Taxable Bonds will be taxable to a United States Holder (as defined below) as ordinary income at the time it is received or accrued, depending on the holder's method of accounting for tax purposes in accordance with generally applicable principles.

The term "*United States Holder*" refers to a beneficial owner of a Taxable Bond for United States federal income tax law purposes and that is:

- a citizen or resident of the United States;

- a corporation or other entity taxable as a corporation which is created or organized in or under the laws of the United States or of any political subdivision thereof;

- an estate the income of which is subject to United States federal income taxation regardless of its source; or

- a trust if (1) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons have the authority to control all substantial decisions of the trust or (2) the trust was in existence on August 10, 1996 and properly elected to continue to be treated as a United States person.

The term "*Non-U.S. Holder*" refers to any beneficial owner of a Taxable Bond who or which is not a United States Holder.

If a partnership holds the Taxable Bonds, the United States federal income tax treatment of a partner will generally depend on the status of the partner and the tax treatment of the partnership. A partner in a partnership holding Taxable Bonds should consult its tax advisor regarding the consequences to the United States federal income tax treatment of an investment in the Taxable Bonds.

Sale or Other Disposition of the Taxable Bonds. Unless a nonrecognition provision of the Code applies, a United States Holders of the Taxable Bonds must recognize any gain or loss on the sale, exchange, redemption, retirement or other disposition of their Taxable Bonds. The gain or loss is measured by the difference between the amount realized on the disposition of a Taxable Bond and the United States Holder's adjusted tax basis in the Taxable Bond. Such gain or loss is capital gain or loss, except to the extent of accrued market discount not previously included in income, and is long term capital gain or loss if at the time of disposition such Taxable Bond has been held for more than one year.

Unearned Income Medicare Contribution Tax. A 3.8% Medicare contribution tax is imposed on the "net investment income" of certain United States individuals and on the undistributed "net investment income" of certain estates and trusts. Among other items, "net investment income" generally includes interest and certain net gain from the disposition of property (such as the Taxable Bonds), less certain deductions.

United States Federal Income Tax Considerations for Non-U.S. Holders of Taxable Bonds

Withholding Tax on Payments of Principal and Interest on Series 2020 Bonds. Generally, subject to the discussion of FATCA below, payments of principal and interest on a Taxable Bond will not be subject to United States federal withholding tax, provided that in the case of an interest payment:

- the beneficial owner of the Taxable Bond is not a bank to which the Taxable Bonds constitute an extension of credit made pursuant to a loan agreement entered into in the ordinary course of its trade or business; and

- either (A) the beneficial owner of the Taxable Bond certifies to the applicable payor or its agent, under penalties of perjury on an IRS Form W-8BEN, IRS Form W-8BEN-E or a suitable substitute form, that such owner is not a United States person and provides such owner's name and address or (B) a securities clearing organization, bank or other financial institution, that holds customers' securities in the ordinary course of its trade or business (a "financial institution") and holds the Taxable Bond, certifies under penalties of perjury that such an IRS Form W-8BEN, IRS Form W-8BEN-E or suitable substitute form has been received from the beneficial owner by it or by a financial institution between it and the beneficial owner and furnishes the payor with a copy thereof.

If the beneficial owner is entitled to the benefit of an income tax treaty to which the United States is a party, such owner can obtain an exemption from or reduction of income and withholding tax (depending on the terms of the treaty) by providing to the withholding agent a properly completed IRS Form W-8BEN, IRS Form W-8BEN-E, or any successor form, before interest is paid. However, neither exemption nor reduced withholding will be available if the withholding agent has actual knowledge or reason to know that the form is false.

Except to the extent otherwise provided under an applicable tax treaty, a beneficial owner of a Taxable Bond generally will be taxed in the same manner as a United States Holder with respect to interest payments on a Taxable Bond if such interest is effectively connected with such owner's conduct of a trade or business in the United States. Effectively connected interest received by a corporate Non-U.S. Holder may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate (or, if applicable, a lower treaty rate), subject to certain adjustments. Such effectively connected interest will not be subject to withholding tax if the holder delivers an IRS Form W-8ECI to the payor.

Gain on Disposition of the Taxable Bonds. A beneficial owner of a Taxable Bond generally will not be subject to United States federal income tax on gain realized on the sale, exchange or redemption of a Taxable Bond unless:

- such owner is an individual present in the United States for 183 days or more in the year of such sale, exchange or redemption and either (A) such owner has a "tax home" in the United States and certain other requirements are met, or (B) the gain from the disposition is attributable to such owner's office or other fixed place of business in the United States; or

- the gain is effectively connected with such owner's conduct of a trade or business in the United States.

Taxation of Payments under FATCA to Foreign Financial Institutions and Certain Other Non-U.S. Holders that are Foreign Entities. A 30% withholding tax may apply to payments of interest on, and after December 31, 2016, on gross proceeds from the disposition of, the Taxable Bonds that are made to Non-U.S. Holders that are financial institutions and certain non-financial entities. Such withholding tax, imposed under sections 1471 through 1474 of the Code, or FATCA, generally will not apply where such payments are made to (i) a Non-U.S. Holder that is a financial institution that enters into an agreement with the IRS to, among other requirements, undertake to identify accounts held by certain United States persons or U.S.-owned foreign entities, report annually certain information about such accounts and withhold tax as may be required by such agreement (or otherwise complies with an applicable intergovernmental agreement with respect to FATCA), or (ii) a Non-U.S. Holder that is a non-financial entity that certifies it does not have any substantial United States owners or furnishes identifying information regarding each substantial United States owner. A Non-U.S. Holder generally will be required to provide information with respect to its status for FATCA purposes, generally on the appropriate IRS Form W-8 or any successor form, to avoid withholding taxes under FATCA. Prospective investors should consult their own tax advisors regarding the application and requirements of these information reporting and withholding provisions under FATCA.

U.S. Federal Estate Tax. A Taxable Bond held by an individual who at the time of death is not a citizen or resident of the United States (as specially defined for United States federal estate tax purposes) is not subject to United States federal estate tax if at the time of the individual's death, payments with respect to such Taxable Bond are not effectively connected with the conduct by such individual of a trade or business in the United States.

Backup Withholding and Information Reporting

United States Holders. Information reporting applies to payments of interest on the Taxable Bonds, or the proceeds of the sale or other disposition of the Taxable Bonds with respect to certain non-corporate United States holders, and backup withholding may apply unless the recipient of such payment supplies a taxpayer identification number, certified under penalties of perjury, as well as certain other information or otherwise establishes an exemption from backup withholding. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against that holder's United States federal income tax liability provided the required information is furnished to the IRS. The current backup withholding rate is 28%.

Non-U.S. Holders. Backup withholding and information reporting on Form 1099 does not apply to payments of principal and interest on the Taxable Bonds to a Non-U.S. Holder provided the Non-U.S. Holder provides the certification described above under "United States Federal Income Tax Considerations for Non-U.S. Holders-Withholding Tax on Payments of Principal and Interest on Series 2020 Bonds" or otherwise establishes an exemption (provided that neither the payor nor its agent has actual knowledge that the holder is a United States person or that the conditions of any other exemptions are not in fact satisfied). The current backup withholding rate is 28%. Interest payments made to a Non-U.S. Holder may, however, be reported to the IRS and to such Non-U.S. Holder on Form 1042-S.

Information reporting and backup withholding generally do not apply to a payment of the proceeds of a sale of Taxable Bonds effected outside the United States by a foreign office of a foreign broker. However, information reporting requirements (but not backup withholding) will apply to a payment of the proceeds of a sale of Taxable Bonds effected outside the United States by a foreign office of a broker if the broker (i) is a United States person, (ii) derives 50% or more of its gross income for certain periods from the conduct of a trade or business in the United States, (iii) is a "controlled foreign corporation" as to the United States, or (iv) is a foreign partnership that, at any time during its taxable year is 50% or more (by income or capital interest) owned by United States persons or is engaged in the conduct of a United States trade or business, unless in any such case the broker has documentary evidence in its records that the holder is a Non-U.S. Holder (and such broker has no actual knowledge to the contrary) and certain conditions are met, or the holder otherwise establishes an exemption. Payment by a United States office of a broker of the proceeds of a sale of Taxable Bonds will be subject to both backup withholding and information reporting unless the holder certifies its non-United States status under penalties of perjury or otherwise establishes an exemption.

Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against that holder's United States federal income tax liability provided the required information is furnished to the IRS.

CHANGE OF LAW

The opinion of Bond Counsel and the descriptions of the tax law contained in this Official Statement are based on statutes, judicial decisions, regulations, rulings and other official interpretations of law in existence on the date the Series 2020 Bonds are issued. There can be no assurance that such law or the interpretation thereof will not be changed or that new provisions of law will not be enacted or promulgated at any time while the Series 2020 Bonds are outstanding in a manner that would adversely affect the value or the tax treatment of ownership of the Series 2020 Bonds.

STATE AND LOCAL CONSIDERATIONS

Interest on the Series 2020 Bonds is exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes. Ownership of the Series 2020 Bonds may result in other state and local tax consequences to certain taxpayers, and Bond Counsel expresses no opinion regarding any such consequences arising with respect to the Series 2020 Bonds. Prospective purchasers of the Series 2020 Bonds should consult their tax advisors regarding the applicability of any such state and local taxes.

LEGALITY

The validity of the Series 2020 Bonds and certain other legal matters are subject to the approving opinion of Katten Muchin Rosenman LLP, Bond Counsel to the Board. A complete copy of the proposed forms of Bond Counsel opinion is contained in **APPENDIX E**. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters will be passed upon for the Underwriter by its counsel, Dentons US LLP, Honolulu, Hawaii.

RATINGS

Fitch Ratings and Moody's Investors Service, Inc. have assigned their municipal bond ratings of "AA," with a stable outlook, and "Aa3," with a stable outlook, respectively, to the Series 2020 Bonds. Such ratings reflect only the respective views of such rating agencies, and any explanation of the significance of such ratings should be obtained from the rating agency furnishing the same. There is no assurance that any of such ratings will be retained for any given period of time or that the same will not be revised downward, suspended or withdrawn entirely by the rating agency furnishing the same if, in its judgment, circumstances so warrant. The Board undertakes no responsibility to oppose any such revision, suspension or withdrawal. Any such downward revision, suspension or withdrawal of such ratings, or any of them, may have an adverse effect on the market price of the Series 2020 Bonds.

CONTINUING DISCLOSURE

The Board will undertake to provide certain annual financial information and notices of the occurrence of certain events, if material, pursuant to a Continuing Disclosure Undertaking, a form of which is attached as **APPENDIX F – "FORM OF CONTINUING DISCLOSURE CERTIFICATE;"** provided that if the inclusion or format of such information is changed in any future official statement, annual reports provided by the Board thereafter may instead contain or include by reference information of the type included in that official statement as so changed or, if different, the type of equivalent information included in the most recent official statement.

UNDERWRITING

BofA Securities, Inc., has agreed to purchase the Series 2020 Bonds at a price equal to the par amount of $217,165,000.00, plus net original issue premium of $25,709,604.60, less an underwriting discount of $560,137.95, resulting in a purchase price of $242,314,466.65. The purchase contract relating to the Series 2020 Bonds (the "Contract of Purchase") provides that the Underwriter will purchase all the Series 2020 Bonds if any are purchased, the obligation to make such purchase being subject to certain terms and conditions set forth therein, including the approval of certain legal matters by counsel and certain other conditions. The initial public offering prices may be changed from time to time by the Underwriter. The Underwriter may offer and sell the Series 2020 Bonds to certain dealers (including dealers depositing the Series 2020 Bonds into unit investment trusts certain of which may be sponsored or managed by the Underwriter) and others at prices lower than the public offering prices stated on the first page hereof.

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

The Underwriter and its affiliates are full service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services. In the various course of their various business activities, the Underwriter and its 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 Board (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the Board. The Underwriter and its 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; provided, however, that potential investors are advised that the offering of the Bonds is made only by means of the Official Statement. No dealer, broker, salesperson or other person has been authorized by the Board to give any information or to make any representation other than as contained in the Official Statement.

MUNICIPAL ADVISOR

Hilltop Securities, Inc. is employed as Municipal Advisor to the Board in connection with the issuance of the Series 2020 Bonds. The Municipal Advisor's fee for services rendered with respect to the sale of the Series 2020 Bonds is contingent upon the issuance and delivery of the Series 2020 Bonds. Hilltop Securities, Inc. in its capacity as Municipal Advisor, does not assume any responsibility for the information, covenants and representations contained in any of the legal documents with respect to the federal income tax status of the Series 2020 Bonds, or the possible impact of any present, pending or future actions taken by any legislative or judicial bodies.

The Municipal Advisor to the Board has provided the following sentence for inclusion in this Official Statement. The Municipal Advisor has reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to the Board and, as applicable, to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Municipal Advisor does not guarantee the accuracy or completeness of such information.

MISCELLANEOUS

Any statements made in this Official Statement involving matters of opinion or estimates, whether or not expressly so stated, are set forth as such and not as representations of fact, and no representations are made that any of the estimates will be realized.

The description of the Resolution and other documents referred to herein are brief summaries of certain provisions thereof. Such summaries do not purport to be complete and reference is made to such documents for full and complete statements of such provisions.

The execution and delivery of this Official Statement has been duly authorized by the Board.

BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII

/s/ Benjamin A. Kudo
Benjamin A. Kudo
Chair, Board of Regents

APPENDIX A

TABLE OF CONTENTS

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APPENDIX A

THE UNIVERSITY OF HAWAII

General

The University of Hawaii (the "*University*" or "*UH*") is Hawaii's sole state public university system and is governed by a single Board of Regents. It is comprised of ten campuses, including three University campuses, seven community college campuses, three University Centers, multiple learning centers, and extension, research, and service programs distributed across six islands throughout the State. In addition to the flagship campus of the University at Mānoa, the University System also includes the University of Hawaii at Hilo on the island of Hawai`i, and the University of Hawaii at West O'ahu on the island of O'ahu. The community college system in the University System consists of seven community colleges. There are four community college campuses on the island of O'ahu and one community college campus on each of the islands of Maui, Kaua'i, and Hawaii, making college classes accessible and affordable and easing the transition from high school to college for many students. Nine educational centers are located in the more remote areas of the State, and support the rural communities via interactive television classrooms.

The mission of the University System is to provide quality college and university education and training; create knowledge through research and scholarship; provide service through extension, technical assistance, and training; contribute to the cultural heritage of the community, and respond to State needs. The campuses, organized under the Board, differentially emphasize instruction, research, and service. The University System's special distinction is found in its Hawaiian, Asian, and Pacific orientation and international leadership role. Common values bind the University System together: aloha; academic freedom and vigor; institutional integrity and service; quality and opportunity; diversity, fairness, equity; collaboration and respect; and accountability and fiscal integrity.

The University traces its roots to 1907, when the Hawaii Territorial Legislature established the College of Agriculture and Mechanic Arts in Honolulu. The University began classes in September 1908, with 10 students and 13 faculty members. In 1912, the founding campus was renamed the College of Hawaii and moved to its present location in O'ahu's Mānoa Valley. Six years later, the University petitioned the legislature for university status, and the campus became the University of Hawaii in 1920.

Campuses and Academic Programs

The University System provides students with one doctoral-research campus, three comprehensive baccalaureate campuses, and seven community college campuses located on the four major islands. Students of the University System can earn a variety of degrees including certificates in more than 100 fields of study, 130 associate degrees in liberal arts and career and technical education, bachelor's degrees in 152 programs, master's degrees in 96 programs, and doctoral degrees in 61 programs, including medicine, law, pharmacy and architecture degrees. In addition, the University maintains a co-operative extension program. The University also has nine educational centers which extend access to baccalaureate or higher degrees and certificates in communities beyond the physical location of campuses.

Regular credit enrollment for the fall 2020 semester was 49,594 students, of which 25,509 were full-time students and 24,085 were part-time students, with 44,278 students enrolled as undergraduates and 5,316 as graduates. A total of 10,847 degrees were awarded during fiscal year 2019-2020, of which 1,520 were graduate degrees, and 9,327 were bachelors, associates, certificates and other degrees. As of the fall 2019 semester, the University System had 9,911 full- and part-time personnel, including 4,502 faculty.

Mānoa Campus

The oldest campus and the flagship of the University System is at Mānoa on the island of O'ahu. The University was established at Mānoa in 1907 as a land-grant college of agriculture and mechanic arts. With the addition of a College of Arts and Sciences in 1920, the college became the University. In 1972, the campus became known as the University of Hawaii at Mānoa to distinguish it from the other units of the growing University System. The Mānoa campus is situated on approximately 320 acres on the island of O'ahu, seven miles east of the central business district of the City and County of Honolulu.

The campus at Mānoa remains by far the largest and most comprehensive unit in the University System, comprised of 14 schools and colleges, and offering 102 baccalaureate degrees and 146 graduate and professional degrees. Regular credit enrollment for the fall 2020 semester was 18,025, of which 13,392 were full time students and 4,633 were part-time students, with 13,203 students enrolled as undergraduates and 4,822 as graduates. A total of 4,519 degrees were awarded during fiscal year 2019-2020, of which 1,356 were graduate degrees and 3,163 were bachelors and other undergraduate degrees. Of Mānoa's student population, 73 percent are undergraduates, 57 percent are women, and 74 percent attend school full-time. As of the Fall 2019 semester, the University of Hawaii at Mānoa had 5,924 full- and part-time personnel, including 2,422 faculty.

The University of Hawai`i at Mānoa is a research university of international standing. Mānoa is classified by the Carnegie Foundation as having "Research University/Very High" research activity (RU/VH), the top classification for doctoral-research universities, and the closest to the old "Carnegie Research I University" classification no longer in use. The University is one of 32 universities or consortia in the United States designated as a land, sea and space grant college. The University is also ranked among the top world universities for its publications. According to the 2019 Performance Ranking of Scientific Papers for World Universities, Mānoa is 249th overall, and 79th in the United States. As a major research university, the University at Mānoa has the capability of serving not only the State but the nation and the international community as well.

The University of Hawai`i at Mānoa has widely recognized strengths in tropical agriculture, tropical medicine, oceanography, astronomy, electrical engineering, volcanology, evolutionary biology, comparative philosophy, comparative religion, Hawaiian studies, Asian studies, Pacific Islands studies, and Asian and Pacific region public health. The University at Mānoa offers instruction in more languages than most American institutions. Languages taught include Arabic, Cambodian, Chamorro, Chinese, Filipino, French, German, Greek, Hawaiian, Hindi, Ilokano, Indonesian, Italian, Japanese, Korean, Latin, Maori, Portuguese, Russian, Samoan, Sanskrit, Spanish, Tahitian, Thai, Tongan, and Vietnamese. Other languages are taught on an as-needed basis, including Burmese, Classical Tibetan, Dutch, Khmer, Manchu, Pali, Prakrit, Tagalog, and Welsh. In addition to the University faculty expertise in benthic and pelagic oceanography, the Hawaii Institute of Marine Biology leads global research in coral reefs and zooxanthellae.

A number of specialized schools and colleges are located at the University of Hawai`i at Mānoa, including Law, Medicine, Agriculture, Business Administration, Hawaiian Knowledge, Pacific and Asian Studies, and Ocean and Earth Sciences and Technology. The University at Mānoa also sponsors an NCAA Division I intercollegiate sports program.

Hilo Campus

The campus of the University of Hawaii at Hilo on the island of Hawaii was established in 1970 as a four-year, residential liberal arts undergraduate campus in the University System, with baccalaureate and associate degrees in arts and sciences. The major emphasis is on undergraduate education. The campus of UH Hilo also has a College of Agriculture, Forestry, and Natural Resource Management, a College of Business, a College of Hawaiian Language and a College of Pharmacy.

While UH Hilo actively recruits residents of Hawaii Island, its programs are also attractive to prospective students from other islands, the mainland U.S., and internationally. Students across the State may select Hilo not only for its distinctive undergraduate programs, but for its rural setting, its intimate character, or for an interest in leaving home without leaving the State. UH Hilo offers 39 undergraduate programs and 11 graduate programs, including two Ph.D. programs, the Doctor of Pharmacy, and three master's programs that are unique in the UH system, and the Doctorate of Nursing Practice program with a rural focus.

Students may select majors in the natural sciences, humanities, social sciences, agriculture and Hawaiian language, as well as professional programs such as business, education, nursing, and pharmacy. As of the fall 2019 semester, the campus had 298 faculty (616 faculty and staff). Regular credit enrollment for the fall 2020 semester was 3,165, of which 2,461 were full-time and 704 were part-time, with 2,671 students enrolled as undergraduates and 494 as graduates. A total of 801 degrees were awarded during fiscal year 2019-2020, of which 164 were graduate degrees and 637 were bachelor's degrees. With an average of 20 students per class, faculty and students interact closely in the learning environment. The University of Hawaii at Hilo also sponsors an NCAA Division II intercollegiate sports program.

West O‘ahu Campus

The University of Hawaii–West O‘ahu is the most recent addition to the University System. It began operation in January 1976 as West O‘ahu College, and in August 2012, the University opened a state-of-the-art baccalaureate campus in Kapolei on the island of O‘ahu. The name of the institution was changed to the University of Hawaii–West O‘ahu by the Board in 1989. Formerly an upper division campus, the University of Hawaii–West O‘ahu became a four-year campus and admitted its first class of freshmen in the fall semester of 2007.

The campus at West O‘ahu was established to support the region’s substantial growth. University of Hawaii–West O‘ahu permits students to pursue their educational and professional goals through a curriculum that places major emphasis on workforce development with selected professional programs (such as elementary education, accounting and health care administration) as well as the humanities and social sciences. Courses are scheduled to accommodate student schedules, including evening, weekend and online courses.

As of the fall 2019 semester, the campus had 231 faculty (369 faculty and staff). Regular credit enrollment for the fall 2020 semester was 3,168 undergraduates, of which 1,759 were full-time and 1,409 were part time. During fiscal year 2019-2020, 709 degrees were awarded, all of which were bachelor’s degrees.

The first phase of the new campus was built on 41 acres and consists of a classroom building, laboratory building, administration building, library/resource center, campus center and maintenance building. The architectural design of the new campus has and continues to incorporate the latest trends in environmental sustainability and strives to achieve a Leadership in Energy and Environmental Design (LEED) certification by following strict standards established by the U.S. Green Building Council. The construction of the entire campus and adjacent business and retail community is being developed in phases. When completed, the University of Hawaii–West O‘ahu is expected to accommodate 7,600 students and 1,000 faculty and staff.

The Community Colleges and Outreach Programs

The community college system in the University System consists of seven campuses (Hawaii, Honolulu, Kapi‘olani, Kauai, Leeward, Maui and Windward) throughout the state. In the fall 2020 semester, the community college system served 25,236 full- and part-time credit students, which is approximately 51% of the enrollment of the entire University System. In fiscal year 2019-20, 4,818 degrees were awarded by the community college system. The community college system is comprehensive, offering liberal arts and sciences courses leading to the Associate of Arts degree (for students preparing to transfer to baccalaureate institutions). The community colleges also offer courses in career and technical training leading to an Associate in Science (transferable to applicable baccalaureate programs), an Associate in Applied Science, or an Associate in Technical Studies degree. These courses may also lead to either a Certificate of Achievement or Certificate of Completion. Developmental instruction for students needing to improve their basic skills and a variety of non-credit courses and activities are also available.

Table A-1
COMMUNITY COLLEGES
2019-2020 Academic Year

College	Island	FTE Enrollment*	Faculty/Staff*	Degrees Awarded**
Hawaii	Big Island	1,522	303	552
Honolulu	O‘ahu	2,004	387	922
Kapi‘olani	O‘ahu	3,590	545	1,100
Kaua‘i	Kaua‘i	681	195	290
Leeward	O‘ahu	3,662	450	1,087
Maui	Maui	1,639	346	593
Windward	O‘ahu	1,141	219	274
Total:		14,239	2,445	4,818

* *Fall 2019, FTE enrollment rounded to nearest whole number*
** *Fiscal year 2020*
Source: University of Hawaii Institutional Research, Analysis and Planning Office.

In addition to the community college subsystem, the University System provides educational, training and research centers across the Hawaiian Islands including centers located in Wai‘anae, O‘ahu, Hāna, Maui, Lāna‘i Moloka‘i and West Hawaii.

Accreditation and Membership

All ten campuses of the University of Hawai`i system are separately and regionally accredited by the Western Association of Schools and Colleges (WASC). The Community Colleges are accredited by the WASC Accrediting Commission for Community and Junior Colleges (ACCJC). UH Mānoa, UH Hilo, UH West O‘ahu and UH Maui College are accredited by the WASC Senior College and University Commission (WSCUC). All campuses meet or exceed their accreditation requirements. The most recent reaffirmation of accreditations at the Mānoa and Hilo campuses were for 10 years each, and for seven years at the West O‘ahu campus. Each community college is separately accredited and the most recent reaffirmation of accreditation for each campus was for six years, the maximum allowed by ACCJC policy. Professional programs in curriculum are individually accredited by appropriate agencies. Regional accreditation means that, as the result of an external review process, the university is judged to be fulfilling its stated purposes and can be expected to continue to do so. Students and the public can be assured that University of Hawai‘i campuses have met standards of quality across the entire range of institutional activities. Regional accreditation is a basic criterion whereby U.S. higher education institutions accept transfer credit from other accredited U.S. universities.

Research and Sponsored Programs

The University of Hawai‘i at Mānoa, the flagship campus, was ranked by National Science Foundation (“NSF”) as 80th among 1,050 public and private universities for research and development expenditures in fiscal year 2017. The University has research partnerships with local, mainland and international universities, research institutions and business organizations. The extramural awards totaled $422 million in fiscal year 2019, an increase from the previous year’s tally. The University’s extramural fund awards include a mix of research and non-research programs that provide financial stability and balance to the University. About 40 to 50 percent of the projects are non-research in nature and are intended for training, workforce development, outreach and community services, clinical trials, and others. The University also secures research funding from various other sources, including the State, the National Science Foundation, National Institutes of Health, Department of Defense, Department of Agriculture, National Aeronautics and Space Administration, Department of Energy and the Environmental Protection Agency.

University Capital Improvements and Future Capital Plans

Improvement and modernization of the University’s physical assets are vital to delivering the University’s strategic directions that strives for 21st century facilities for learning, teaching and research. The University has developed a six-year plan for fiscal years 2020–2025 (the “6-Year CIP Plan”) that sets forth a vision of a physical environment that supports and augments the high-quality education and research that takes place at our University. It also presents a coordinated, long-term strategy that (1) prioritizes classrooms, laboratories and student spaces with a focus on improving the learning and research environment, (2) targets those facilities with the highest utility and poorest conditions through upgrades to the interior/exterior structures, building roofs, mechanical and electrical systems, pedestrian pathways, and roadways, and (3) changes the paradigm on how the University manages its space.

In the past eight years the University has completed a significant number of capital projects including new campuses at West Oʻahu and West Hawaiʻi, a new cancer research center, a new information technology building at the Mānoa Campus serving all ten campuses, a new Life Sciences building on the Mānoa Campus, a new Allied Health and Administration building on the West Oʻahu campus, a new Daniel K. Inouye College of Pharmacy at the Hilo campus, a new Culinary Institute of the Pacific at Kapiʻolani Community College in Honolulu, new facilities at the Leeward Community College, Maui College and Windward Community College and a Community College Energy Conservation Project.

The Legislature continued its strong financial support to the University's capital improvement program and provided general obligation bond appropriations for the 2019–2021 and 2017–2019 fiscal biennia that were approximately $282.2 million and $269.7 million, respectively. The University currently has bond issuance authorization through June 30, 2021 for $100 million for strategic capital projects, $9.6 million for land acquisition, and $38 million for parking structure improvements at UH-Mānoa.

Administrative Organization

The University System is governed by a Board, the members of which are appointed by the Governor and confirmed by the State Senate. At least part of the membership of the Board represents geographic subdivisions of the State. The Board has the power, as provided by law, to formulate policy and to exercise control over the University through its executive officer, the President of the University, who is appointed by the Board. The Board has exclusive jurisdiction over the internal structure, management and operation of the University.

The President of the University System also serves as the Chief Executive Officer of the Board and the University of Hawai`i at Mānoa campus. Chief executive officers for the other University campuses are Chancellors.

Members of the Board of Regents

The affairs of the University System are under the general management and control of the Board, consisting of eleven members nominated by the Candidate Advisory Council for the Board of Regents, appointed by the governor, and confirmed by the Senate. At least part of the membership of the Board represents geographic subdivisions of the State. Regents serve staggered five-year terms. The current Regents of the University are:

Name	**Term Expires (June 30)**	**Profession**
Benjamin Asa Kudo, Chair	2022	Counsel, Ashford & Wriston
Wayne Higaki, Vice Chair	2021	Assistant Administrator, North Hawai`i Community Hospital
Randolph G. Moore, Vice Chair	2023	Retired, Assistant Superintendent for School Facilities, Department of Education
Alapaki Nahale-a	2023	Senior Director of Community Engagement and Resources, Kamehameha Schools
Jan Naoe Sullivan	2021	Chief Operating Officer, Oceanit
Eugene Bal III	2023	Former Executive Director, Maui High Performance Computing Center
Michelle A. Tagorda	2021	Undergraduate Advisor, UH Office of Public Health Studies
Simeon R. Acoba, Jr.	2022	Retired, Associate Justice, Hawai`i Supreme Court
Ernest K. Wilson	2025	Retired executive and Army Officer

Robert Frank Westerman	2022	Retired, Chief Administrator, Kauai Fire Department
Kelli K.K. Acopan	2022	Student Regent

Administration

Administrative personnel of the University System include the following individuals:

David Lassner, President. David Lassner is the 15th president of the University of Hawaii, effective July 1, 2014. In that capacity he leads the University of Hawaii 10-campus system as well as the flagship research university, UH Mānoa. Lassner's current agenda includes a focus on helping more Hawaii residents earn college credentials and developing an innovation sector to strengthen the state's economy while creating high-quality jobs. He is also advancing UH's commitments to sustainability and becoming a model indigenous-serving university.

Lassner began working at UH in information technology 1977, eventually becoming UH's first chief information officer and vice president for IT. He was appointed interim president in September 2013 and the interim was removed in June 2014. Lassner is also a member of the university's cooperating graduate faculty and has taught both online and in-person in computer science, communications, business and education.

Lassner is currently a commissioner of the Western Interstate Commission on Higher Education (WICHE), a board member for the National Association of System Heads, and a member of the Board of Governors of the East-West Center. He also serves on the boards of Aloha United Way and the Blood Bank of Hawaii.

In his prior positions Lassner played an active leadership role in a variety of local, national and international information and communications technology organizations. He served on the boards of Hawaii's High Technology Development Corporation and Public Broadcasting Service affiliate and he chaired the state's Broadband Task Force. Lassner also served on the board of Internet2 and was a co-founder and board member of the Kuali Foundation, a founding steering committee member and past-chair of WICHE's Cooperative for Educational Technologies (WCET) and past-chair of the boards of the Pacific Telecommunications Council and of EDUCAUSE, the major professional association for information technology in higher education.

An active principal investigator, Lassner led Hawaii's major statewide project funded by the U.S. Department of Commerce that interconnected all public schools, libraries and campuses on six islands with fiber optics. He has had support from the National Science Foundation over 20 years focused on research and education networking and cyberinfrastructure. He is principal investigator for the Maui High Performance Computing Center and for the Pacific Disaster Center, major U.S. Department of Defense programs on Maui. In all, Lassner has served as a principal investigator for more than $400 million in extramural funding.

Lassner earned an AB in economics summa cum laude and Phi Beta Kappa followed by an MS in computer science with a University Fellowship from the University of Illinois at Urbana-Champaign (UIUC). He earned his PhD in communication and information sciences from the University of Hawaii.

Lassner has been recognized with Internet2's Richard Rose Award, WCET's Richard Jonsen Award, the Corporation for Education Network Initiatives in California's inaugural Christine Haska Distinguished Service Award, as a Distinguished Alumni Educator by the UIUC Department of Computer Science, and as a Distinguished Alumnus of the University of Hawaii.

Donald Straney, Vice President for Academic Planning and Policy. As Vice President for Academic Planning and Policy, Donald O. Straney serves as the Chief Academic Officer for the UH System with overall responsibility for leadership, planning and intercampus coordination of academic affairs, student affairs, policy and planning, institutional research and analysis, international and strategic initiatives and Hawaii P–20 Partnerships for Education.

From 2010 to 2017, Straney served as Chancellor at the University of Hawaii at Hilo. He served on the board of directors of the Hawaii Island Chamber of Commerce and the Hawaii County Workforce Development Board. He was also on the National Advisory Board of the Center for the Integration of Teaching, Research and Learning, a National Science Foundation initiative at the University of Wisconsin.

Previously, he served eight years as dean of the College of Science and professor of biology at California State Polytechnic University, Pomona. While there, he was on the board of directors of the Desert Studies Center, the Ocean Studies Institute, and the Strategic Planning Council of the California State University Program for Education and Research in Biotechnology.

Before that, he spent 23 years at Michigan State University as chair of the Department of Zoology and assistant to the provost for faculty development.

Straney currently serves on the board of directors of the Pacific International Space Center for Exploration Systems (PISCES) and the Hawaii Aeronautics Advisory Committee.

An evolutionary biologist by training, Straney studied patterns of change in a variety of organisms. He earned his Ph.D. in zoology from the University of California, Berkeley, and his MS in zoology from Michigan State University.

Jan Gouveia, Vice President for Administration. As Vice President for Administration, Jan Gouveia is responsible for overseeing and managing systemwide operational programs in procurement, risk management, capital improvements, human resources, and internal and external communications.

Gouveia brings more than 15 years of administrative and leadership experience in the public and private sectors, including four years with the University of Hawaii. She previously served as Hawaiian Airlines' managing director for training and development and manager of strategy and transformation with the strategic goal of increasing efficiency and effectiveness. She has previously held cabinet level positions in state government, served as chief legal counsel for the Honolulu Board of Water Supply and was the inaugural director of risk management at the University.

Gouveia holds a BA in political science from the University of Hawaii at Mānoa and a juris doctorate and master's in business administration from Gonzaga University.

Erika Lacro, Vice President for Community Colleges. As vice president for community colleges, Erika Lacro is responsible for executive leadership, policy decision-making, resource allocation and development of support services for the University of Hawaii's seven community colleges. A key focus of her work is to further support the community college student success agenda.

Lacro served as Honolulu Community College chancellor from July 2012 and is the first woman to hold the chief executive position at that campus. She served as vice chancellor of academic affairs at Honolulu CC from 2007 through 2012 and before that held several executive and management positions at the UH Mānoa School of Travel Industry Management, including assistant dean, director of academic advising and director of internship and career development. Before joining UH, she held several management roles at the Hilton Hawaiian Village.

At the statewide level, Lacro has led academic affairs initiatives in the Achieving the Dream Initiative, Complete College America and the Reverse Transfer Initiative. She was successful in working to gain funding through EDUCAUSE to upgrade the STAR Academic Journey for the entire UH System and also served as the principal investigator for a UH Community Colleges consortium, a multi-year $24.6 million grant from the U.S. Department of Labor's Trade Adjustment Assistance Community College and Career Training grants program to develop and support training programs that lead to jobs in the agriculture, energy and health industries. She serves as a commissioner on the Northwest Commission on Colleges and Universities and has chaired several comprehensive accreditation visits for the Accrediting Commission for Community and Junior Colleges of the Western Association.

She holds a master's and bachelor's degree in travel industry management, and a PhD in communication and information sciences from UH Mānoa.

Carrie K. S. Okinaga, Vice President for Legal Affairs and University General Counsel. As Vice President for Legal Affairs and University General Counsel, Carrie K. S. Okinaga serves as a member of the President's executive leadership team and is responsible for overseeing the provision of legal services to the Board of Regents, the President, the University administration and its operating units. Okinaga joined the University System in June 2015, with legal experience gained in both the private and public sectors.

Following 12 years in private practice in Honolulu, Okinaga worked with three mayors as the City and County of Honolulu's corporation counsel from 2005 to 2011. From 2012 to 2015, she served as senior vice president, general counsel and corporate secretary of First Hawaiian Bank. Okinaga also served on the board for the Honolulu Authority for Rapid Transportation from its inception until June 2015, serving as HART's first board chair for two years until 2013.

Born and raised in Hawaii, Okinaga attended the University of Hawaii at Mānoa, participating in the honors program. She received her bachelor of arts degree in government/public policy from Pomona College in 1989, graduating magna cum laude. She graduated from Stanford Law School in 1992, and served on its Board of Visitors from 2006 to 2014.

Kalbert K. Young, Vice President for Budget and Finance/Chief Financial Officer. Kalbert K. Young joined the University of Hawaii System in January 2015. As the University's Vice President for Budget and Finance/Chief Financial Officer, Young is responsible for leading and directing the university's systemwide financial management, budgetary and real property functions.

He previously served as the State of Hawaii's Director of Budget and Finance. As the Director of Budget and Finance, he administered the state budget to develop near- and long-term financial plans and strategies and to provide programs for the improvement of state agencies' management and financial management. Young has served as a trustee to the State of Hawaii Employees' Retirement System and as a trustee on the State of Hawaii Deferred Compensation Plan.

Prior to serving as the Director of Budget and Finance for the State, Young served as the Director of Finance for the County of Maui. His professional experience and background includes government service work in the State House of Representatives on the staff of the chair of the House Committee on Economic Development.

His private sector experience includes government relations, budget and financial planning and internal audit at Kamehameha Schools—a private non-profit educational trust in Hawaii. He has also worked in the area of land planning and development for the Kapalua Land Company, a subsidiary of Maui Land and Pineapple.

Young holds a bachelor of arts degree in American history and a master of business administration degree from the University of Hawaii at Mānoa.

Garret Yoshimi, Vice President for Information Technology/Chief Information Officer. As the University of Hawaii's Vice President for Information Technology and Chief Information Officer (VPIT/CIO), Garret Yoshimi is responsible for the University's systemwide information technology systems and services. Yoshimi provides executive leadership in collaboratively setting forth the overall vision, goals, strategies and plans for the effective and appropriate use of information technologies to advance the University System.

Yoshimi joined the University in January 2015. Prior to serving as the University's VPIT/CIO, Yoshimi was Vice President and Chief Operating Officer for eWorld Enterprise Solutions. He brings to the university more than 35 years of experience in information technology in both the public and private sectors in Hawaii. He has served as the first CIO for the Hawaii Judiciary, senior technology executive for the East-West Center and CIO for DTRIC Insurance.

Yoshimi also previously served as telecommunications manager before being promoted to director of technology infrastructure for the University of Hawaii. He actively represented the University of Hawaii in state and national venues as a member of EDUCAUSE, Internet2 and the Association for College and University Technology Advancement, which awarded him the Bill D. Morris award for individual leadership.

A native of Honolulu, Yoshimi earned a bachelor of science degree in electrical engineering from Purdue University and a graduate certificate in telecommunications and information resource management from the University of Hawaii at Mānoa.

Vassilis L. Syrmos, Vice President for Research and Innovation. As Vice President for Research and Innovation of the University of Hawaii System, Vassilis Syrmos is charged with providing critical leadership and coordination of systemwide research and innovation efforts, including management and direction of the University's research support, technology transfer and many compliance functions. One of his priorities will be to support significant growth in research through the University of Hawaii Innovation Initiative (HI²), which seeks to double the state's research enterprise to $1 billion annually over the next decade.

Syrmos previously served as the Associate Vice Chancellor for Research at the University of Hawaii at Mānoa where he worked on a range of projects including developing major research facilities such as the Daniel K. Inouye Center for Microbial Oceanography: Research and Education (C-MORE Hale), the state's only laboratory to be rated LEED Platinum and, since 1991, has been a professor with the department of electrical engineering at the University of Hawaii Mānoa. He has also served as the associate dean of the College of Engineering and spent a sabbatical leave at The Boeing Company as a research fellow.

Syrmos is the author/coauthor of more than 100 journal and conference papers and the book *Optimal Control* (2nd edition, John Wiley, 1995). He was an associate editor of Circuits, Systems and Signal Processing and has served in numerous international conferences in technical program committees, editorial boards and organizing committees. His research has been funded by the National Science Foundation, the Defense Advanced Research Projects Agency, the Office of Naval Research, the Naval Air Systems Command, the Naval Sea Systems Command, the Air Force Research Labs at Wright Patterson, the Army Research Labs, The Boeing Company, Hawaiian Electric Company and Hamamatsu Photonics.

Syrmos has been a consultant for the Canada France Hawaii Telescope, Innovative Solutions, Science Technology International and others. He is a Boeing AD Welliver Fellow, a member of the Sigma Xi research organization, a senior member of the Institute of Electrical and Electronics Engineers and was a member of the board of the Hawaii Technology Development Venture program. He is a board member of the Research Corporation of the University of Hawaii (RCUH), the Pacific International Center of High Technology Research (PICHTR), Natural Energy Laboratory of Hawaii Authority (NELHA), the Hawaii Academy of Sciences and XLR8UH, the University of Hawaii's first proof of concept accelerator.

Syrmos obtained his Ph.D. at Georgia Institute of Technology in electrical engineering and a diploma in electrical engineering from Democritus University of Thrace, Greece.

Tim Dolan, Vice President of Advancement. Tim Dolan joined the University of Hawaii on February 1, 2019, as vice president of advancement and chief executive officer of the UH Foundation. He is responsible for increasing fundraising totals and launching the university's next comprehensive campaign. He is also charged with continuing to enhance the collaborative relationship between UH Foundation and the university with a focus on alumni relations and development.

Dolan previously served as vice principal of advancement at the University of Sydney, leading that university's historic $1 billion campaign. Earlier in his career, Dolan served as director of development at UH's John A. Burns School of Medicine and UH Cancer Center, and also worked at Chaminade University.

Prior to the University of Sydney and after leaving Hawaii, Dolan spent nearly seven years at UCLA providing fundraising leadership for the division of humanities before overseeing development for the College of Letters and Science and directing the university-wide leadership gift program. Dolan is a former chair of Australia's G08 Advancement Group. He earned a bachelor's degree in political science at UCLA.

Council of Chancellors

Leaders of the University System's three university and seven community college campuses comprise the Council of Chancellors, which reports to the University president. The University of Hawai`i at Mānoa provost and chancellors for the other University campuses are:

Michael Bruno, Mānoa	Louise Pagotto, Kapi'olani
Bonnie D. Irwin, Hilo	Joseph Daisy, Kaua'i
Maenette Benham, West O'ahu	Carlos Penaloza, Leeward
Rachel Solemsaas, Hawaii	Lui Hokoana, Maui
Karen Lee, Honolulu	Ardis Eschenberg, Windward

Student Enrollment

Enrollments

The following table sets forth the University System's full-time equivalent enrollment, by campus, for the fall semester of each of the past five academic years:

Table A-2
FTE ENROLLMENT BY CAMPUS
Fall Semester 2016 to 2020

Fall	Total University System	UH Mānoa	UH Hilo	UH West O'ahu	Community Colleges
2016					
Undergraduate	32,551	11,657	2,617	2,002	16,275
Graduate	4,150	3,536	614	0	0
Total:	36,701	15,193	3,231	2,002	16,275
2017					
Undergraduate	31,633	11,487	2,542	2,082	15,522
Graduate	3,976	3,387	589	0	0
Total:	35,609	14,874	3,131	2,082	15,522
2018					
Undergraduate	30,786	11,448	2,424	2,129	14,785
Graduate	3,988	3,382	606	0	0
Total:	34,774	14,830	3,030	2,129	14,785
2019					
Undergraduate	29,932	11,216	2,397	2,081	14,238
Graduate	4,068	3,506	562	0	0
Total:	34,000	14,722	2,959	2,081	14,238
2020					
Undergraduate	29,503	11,604	2,286	2,204	13,409
Graduate	4,062	3,558	504	0	0
Total:	33,565	15,162	2,790	2,204	13,409

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Applications and New Enrollments

The following tables list the applications and new full time enrollments of undergraduates, by campus, for the fall semester for the past five years:

Table A-3
MĀNOA CAMPUS
APPLICATIONS AND NEW ENROLLMENTS
UNDERGRADUATE

	Applications			New Enrollments		
Fall	Received	Accepted	Percent Accepted	Freshman (1)	Transfer	Total Enrolled
2016	11,810	9,881	83.7	1,972	1,694	3,666
2017	13,197	10,734	81.3	1,959	1,586	3,545
2018	14,231	11,693	82.2	2,209	1,691	3,900
2019	21,311	13,206	62.0	2,020	1,510	3,530
2020	21,885	18,012	82.3	2,184	1,714	3,898

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Table A-4
HILO CAMPUS
APPLICATIONS AND NEW ENROLLMENTS
UNDERGRADUATE

	Applications			New Enrollments		
Fall	Received	Accepted	Percent Accepted	Freshman (1)	Transfer	Total Enrolled
2016	3,053	2,261	74.1	369	533	902
2017	3,055	2,468	80.8	415	511	926
2018	3,077	2,485	80.8	413	415	828
2019	5,427	3,169	58.4	449	464	913
2020	4,559	3,431	75.3	462	313	775

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Table A-5
WEST OʻAHU CAMPUS
APPLICATIONS AND NEW ENROLLMENTS
UNDERGRADUATE

	Applications			New Enrollments		
Fall	Received	Accepted	Percent Accepted	Freshman (1)	Transfer	Total Enrolled
2016	2,795	2,153	77.0	292	599	891
2017	2,649	2,296	86.7	282	586	868
2018	2,516	2,134	84.8	242	562	804
2019	2,345	2,005	85.5	217	506	723
2020	2,453	2,325	94.8	232	600	832

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Table A-6
COMMUNITY COLLEGES
APPLICATIONS AND NEW ENROLLMENTS
UNDERGRADUATE

	Applications			New Enrollments		
Fall	Received	Accepted	Percent Accepted	Freshman (1)	Transfer	Total Enrolled
2016	20,485	18,802	91.8	4,428	2,708	7,136
2017	20,162	17,713	87.9	4,379	2,457	6,836
2018	20,713	17,854	86.2	4,089	2,482	6,571
2019	23,161	19,758	85.3	4,160	2,588	6,748
2020	20,494	18,126	88.4	3,713	2,698	6,411

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

As the sole provider of public higher education in the State of Hawaii with ten campuses throughout the State, including a flagship doctoral-research campus, three comprehensive baccalaureate campuses and seven community colleges, transfers play a key role in providing access to higher education for many students in the State. The majority of undergraduate transfers into the University System's four-year campuses are from the University System's community colleges, and transfers in to the community colleges are primarily from other UH campuses, including other community colleges.

Strategic Outcomes and Performance Measures

The University is committed to improving the social, economic and environmental well-being of current and future generations. To that end, the University developed and implemented the University of Hawai'i Strategic Directions, 2015–2021, built upon previous work outlined in the Strategic Outcomes and Performances Measures, 2008–2015. This will guide the University's priorities for the next three biennia to achieve the outcomes directed by the Board of Regents. The strategic directions for the University were updated in October 2018 to reflect the institutional priorities through 2021 through the following initiatives and priorities:

*Hawaiʻi Graduation Initiative
*Hawaiʻi Innovation Initiative
*21st Century Facilities
*Mission Focused System
*High Performing System

The State of Hawai'i has set goals to increase the percentage of working age adults with two-or four-year degrees to 55 percent by 2025 (55 by ’25 Campaign). The University is doing its part to increase the number of educated citizens within the State. In 2010, the Hawai'i Graduation Initiative (“HGI”) was established with a set of goals to increase the graduation rate between 4 percent and 5 percent annually. Because of the focused efforts, the University of Hawaiʻi increased its degrees and certificates of achievement earned by 36 percent between fiscal years 2008 and 2020.

Strategies to Increase Enrollment

Enrollment at the University of Hawai'i’s ten campuses has decreased by about four percent a year over the last five academic years, reflecting the national trend of declining enrollment since peak highs following the 2008 recession. The overall enrollment decline was no surprise, but in spite of that challenge, UH performed well in many key areas. Freshman applications have steadily increased at Mānoa, and undergraduate enrollment at Mānoa has increased by 3.1 percent in fall 2020 over fall 2019. Four-year graduation rates have gradually increased.

The University’s 2017–2020 Enrollment Management Plan was developed to steadily grow enrollment over the next five years. This framework will continue to guide the University’s overall enrollment, retention and degree efforts in a time of a tight local labor market experiencing extraordinarily low unemployment. Specific initiatives and strategies are:

- Focus on retention and persistence initiatives with campus specific strategies.
- Use of financial aid to positively impact enrollment.
- Initiatives targeting transfer, returning and adult students.
- Research best practices and maintain national engagement in enrollment management.
- Set enrollment target to increase enrollment between three percent and eight percent system wide for the next four years.

With the goal to reverse the enrollment decline and address the higher education gaps for the underserved regions and populations, the Community Colleges, working with the State legislators, secured $2.5 million to establish the Hawaii Promise scholarship program that provides free in-state tuition for qualified community college students with financial needs in fiscal year 2018 and 2019. The Hawaiʻi Promise Program supported 1,378 UH community college students in the 2018-2019 academic year. The program is currently structured as a “last dollar” scholarship that would provide financial assistance towards unmet financial need not satisfied by other forms of financial aid, such as federal grants, University scholarships, and other private sources.

System-wide fall 2020 enrollment decreased slightly from fall 2019, notwithstanding the impact of COVID-19. Freshman enrollment increased at the Mānoa, Hilo and West Oahu campuses. As the educational plans for many individuals continue to evolve due to a number of factors caused by the coronavirus pandemic, such as declines in the current job market, the University continues its efforts in encouraging students to pursue a post-secondary education and has taken actions such as extending admissions deadlines to be as welcoming and accommodating as possible to students seeking this opportunity.

The University awarded 10,847 degrees and certificates in the 2019-2020 fiscal year, 4 percent lower than the previous fiscal year. Graduation rates within four years have doubled in eight years at the four-year campuses, accounting for some of the reductions in campus enrollments. UH-Mānoa welcomed its third straight class of more than 2,000 first-time freshmen, including an eight percent increase in first-time freshman.

Student Tuition, Housing Costs and Financial Aid

After several years of moderate tuition increases, on May 16, 2019 the Board of Regents approved a three-year freeze of undergraduate tuition rates at all ten campuses beginning with the 2020–2021 academic year. The new tuition schedule also decreases general graduate student tuition rates at UH-Mānoa. The intent of the freeze is to ensure affordable higher education for the people of Hawaiʻi while providing stability that will aid student recruitment and retention. It will also increase the competitiveness in the broader higher education landscape.

The University is committed to providing affordable yet quality education to its students. To accomplish this goal, student aid is provided in the form of scholarships and fellowships, including tuition and fee waivers applied to student accounts and reflected as reductions and allowances to student tuition and student housing revenues, and scholarship and fellowship payments (mostly academic and athletic) made directly to students.

The University has increased its institutional financial aid for students from $34.8 million in academic year 2007-2008 to $61.2 million in academic year 2018-2019. The share of students receiving aid in the 2019–2020 academic year ranged from 34% (Kapiʻolani CC) to 72% (University of Hawaiʻi at Hilo) for all undergraduate students and 55% (Kapiʻolani CC) to 74% (University of Hawaiʻi at Hilo) for first-time, full-time freshmen.[1] [2] On average, financial aid recipients receive $10,013 in financial assistance from the University. Further, first-time full-time freshmen financial aid recipients receive an average of $10,198 in financial assistance.[3] Concurrent with the new tuition schedule, executive policy requires the allocation of tuition revenues for financial assistance to be at least 10% at Mānoa, 12% at Hilo and West Oʻahu and 8.8% at the community colleges by the end of the tuition schedule in academic year 2016-2017. In addition, non-need-based aid shall be not less than what was awarded in academic year 2013-2014. Further, students receive various federal and other, non-institutional financial assistance. For example, undergraduate students received $52.7 million from 12,859 Pell Grants in academic year 2018-19.

The following tables set forth the annual tuition and fee charges to each full-time undergraduate student, together with the average annual room and board charges, for the current year and each of the past four years.

Table A-7
MĀNOA CAMPUS
Annual Tuition, Fees and Room and Board Charges

	Tuition and Fees		
Academic Year	**Resident**	**Non-resident**	**Average Room and Board**
2016-2017	$11,732	$33,764	$13,030
2017-2018	11,754	33,786	13,673
2018-2019	11,970	34,002	13,689
2019-2020	12,186	34,218	13,366
2020-2021	12,186	34,218	13,583

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Table A-8
HILO CAMPUS
Annual Tuition, Fees and Room and Board Charges

	Tuition and Fees		
Academic Year	**Resident**	**Non-resident**	**Average Room and Board**
2016-2017	$7,650	$20,610	$10,418
2017-2018	7,648	20,608	11,064
2018-2019	7,720	20,680	8,248
2019-2020	7,792	20,752	8,248
2020-2021	7,838	20,798	8,248

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

[1] 2019-2020 aid year data is preliminary as of August 3, 2020

[2] Aid includes scholarships and grants

[3] Financial assistance includes scholarships, grants, federal work study and loans

Table A-9
WEST O‘AHU CAMPUS
Annual Tuition and Fees

Academic Year	Tuition and Fees	
	Resident	Non-resident
2016-2017	$7,440	$20,400
2017-2018	7,440	20,400
2018-2019	7,512	20,472
2019-2020	7,584	20,544
2020-2021	7,584	20,544

Source: University of Hawai`i Institutional Research, Analysis and Planning Office.

Table A-10
COMMUNITY COLLEGES
Annual Tuition and Fees

Academic Year	Tuition and Fees (a)	
	Resident	Non-resident
2016-2017	$3,093	$8,229
2017-2018	3,094	8,230
2018-2019	3,154	8,290
2019-2020	3,228	8,364
2020-2021	3,228	8,364

(a) Average community college tuition and fees -.
AY 2020-2021 mandatory fees at the community colleges range from $30 per academic year to $140 per academic year.

Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Degrees Awarded by School

The following table shows the number of degrees awarded, by campus, for the five fiscal years shown:

Table A-11
DEGREES AWARDED BY CAMPUS
ASSOCIATE/BACHELOR/GRADUATE*

Fiscal Year/Degree	Total UH System	UH Mānoa	UH Hilo	UH West O‘ahu	Community Colleges
2015-2016					
Associate/Certificate	5,192	0	0	0	5,192
Bachelor/Other Undergraduate	4,890	3,649	750	474	17
Graduate/Professional Practice	1,598	1,455	143	0	0
Total:	11,680	5,104	893	474	5,209
2016-2017					
Associate/Certificate	5,102	0	0	0	5,102
Bachelor/Other Undergraduate	4,784	3,347	798	623	16
Graduate/Professional Practice	1,522	1,365	157	0	0
Total:	11,408	4,712	955	623	5,118
2017-2018					
Associate/Certificate	4,912	0	0	0	4,192
Bachelor/Other Undergraduate	4,755	3,335	785	613	22
Graduate/Professional Practice	1,548	1,391	157	0	0
Total:	11,215	4,726	942	613	4,934
2018-2019					
Associate/Certificate	5,191	0	0	0	5,191
Bachelor/Other Undergraduate	4,761	3,325	774	643	19
Graduate/Professional Practice	1,347	1,226	121	0	0
Total:	11,299	4,551	895	643	5,210
2019-2020					
Associate/Certificate	4,800	0	0	0	4,800
Bachelor/Other Undergraduate	4,527	3,163	637	709	18
Graduate/Professional Practice	1,520	1,356	164	0	0
Total:	10,847	4,519	801	709	4,818

* *The University of Hawai`i Institutional Research, Analysis and Planning Office maintains the information contained in this table only for fiscal years.*
Source: University of Hawaii Institutional Research, Analysis and Planning Office.

Faculty

The full-time equivalent faculty in the University System for Fall 2019 totaled approximately 3,716. Of the total headcount of faculty, approximately 55% are tenured or on the tenure track.

Scores of faculty members have been elected to distinguished academic societies such as the American Academy of Arts and Sciences, the American Philosophical Society, the National Academy of Sciences, and the National Academy of Engineering.

Cybersecurity

The University's Information Technology Services ("ITS") provides governance for information technology projects and supports the management and operation of computer and telecommunication services within the University, including programs in fulfillment of statutorily mandated cybersecurity duties outlined under Hawaii Revised Statutes. ITS is led by the Vice President for Information Technology and Chief Information Officer. This office is responsible for establishing cybersecurity standards for the University and ensuring that system operations stay current with best practices.

Information technology systems, including those operated or utilized by the University may be vulnerable to breaches, hacker attacks, computer viruses, physical or electronic break-ins or similar actions which can result in the unintended release and distribution of private or confidential data or other information. The University has taken, and continues to take, measures to protect its information technology systems from the threat of such "cyberattacks," but there can be no assurance that the University or any department thereof or any of their vendors will not experience a breach. If such a breach occurs, the financial consequences could have an economic impact on the University, or on its ability to efficiently perform routine functions, or on the ability of the University or one or more of its component units to deliver services.

Financial Information

General. The University has a diversified stream of revenues to support its operations. State appropriations and tuition and fees are the core components that support the University's instructional and academic programs. Government and nongovernmental grants and contracts provide opportunities for under-graduate and graduate students to participate in basic research with renowned researchers. Private gifts contribute toward the support of the University's instructional and academic initiatives. Sales and services revenues include revenues from educational departments and auxiliary enterprises, including bookstores, student and faculty housing, food services, parking, and athletics. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Financial Information – *Results of Operations*"** below.

Financial Statements. The University's consolidated financial statements are prepared in accordance with Governmental Accounting Standards Board ("GASB") principles, which establish standards for external financial reporting for public colleges and universities. The audited financial statements of the University as of and for the year ended June 30, 2019 are included in **APPENDIX B** to this Official Statement to provide general information. Accuity LLP has not reviewed this Official Statement and has no responsibility with respect to this Official Statement. See "**FINANCIAL STATEMENTS**" in the forepart of this Official Statement.

The University maintains close relationships with two other entities, considered to be component units, whose financial information is blended into the University's accompanying consolidated financial statements. The University of Hawai'i Foundation (the "Foundation") is a not-for-profit corporation organized to solicit, manage and invest gifts, contributions and grants for the benefit of the University. The Research Corporation of the University of Hawai'i (the "Research Corporation") is a public corporation chartered to provides administrative support services for research and training programs of the University. Both of the University's component units prepare stand-alone financial statements with footnotes, which are audited by independent auditors. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Financial Information – The University of Hawaii Foundation"** and "**– Financial Information Concerning Foundations and Other Entities.**"

Tables A-12 and A-13 present the University's balance sheet and statement of operations for the past five fiscal years. The financial statements for fiscal years ending June 30, 2015 through 2019 were audited by Accuity LLP. Total net position has decreased over the past five fiscal years, due in large measure to changes in accounting rules.

Table A-12
SUMMARY BALANCE SHEET
AS OF JUNE 30
(in thousands of dollars)

	2015 *	2016	2017 **	2018 ***	2019 ****
Assets and Deferred Outflows of Resources					
Total Assets	$ 3,517,218	$ 3,445,565	$ 3,646,939	$ 3,786,216	$ 3,798,875
Total Deferred Outflows of Resources	140,099	146,098	567,220	528,173	506,467
Total Assets and Deferred Outflows of Resources	$ 3,657,317	$ 3,591,663	$ 4,214,159	$ 4,314,389	$ 4,305,342
Liabilities, Deferred Inflows of Resources and Net Position					
Total Liabilities	$ 2,663,734	$ 2,783,848	$ 3,419,461	$ 4,363,084	$ 4,405,341
Total Deferred Inflows of Resources	151,162	111,364	65,171	53,497	69,780
Net Position					
Invested in Capital Assets, Net of Related Debt	1,503,902	1,504,935	1,541,725	1,598,660	1,625,457
Restricted					
Nonexpendable	235,894	244,396	342,071	360,553	301,890
Expendable	644,743	561,093	586,825	606,866	633,393
Unrestricted	(1,542,118)	(1,613,973)	(1,741,094)	(2,668,271)	(2,730,519)
Total Net Position	842,421	696,451	729,527	(102,192)	(169,779)
Total Liabilities, Deferred Inflows of Resources and Net Position	$ 3,657,317	$ 3,591,663	$ 4,214,159	$ 4,314,389	$ 4,305,342

* In 2015, the University adopted GASB Statement No. 68, *Accounting and Financial Reporting for Pensions.* This Statement revises and establishes new *financial* reporting requirements for most governments that provide their employees with pension benefits. Management has adopted the new standard as presented in the University's consolidated financial statements. Due to the adoption of GASB Statement No. 68 in fiscal year *2015*, beginning net position was restated. The beginning net position as of July 1, 2014 was restated by $1,112,792 from $1,961,526 to $848,734.

** In 2017, the University implemented GASB Statement No. 82, *Pension Issues-an amendment of GASB Statements No. 67, 68, and 73.* The objective of this Statement is to address certain issues that have been raised with respect to Statements No. 67, *Financial Reporting for Pension Plans,* No. 68, *Accounting and Financial Reporting for Pensions,* and No. 73, *Accounting and Financial Reporting for Pensions and Related* Assets *That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68.* The adoption of Statement No. 82 has resulted in the restatement of the University's beginning net position to reflect the new calculation of deferred outflows of resources in accordance with the provisions of Statement No. 82. The beginning net position as of July 1, 2015 was restated by $28,000 from $842,421 to $814,421.

*** In 2018, the University implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.* This Statement establishes standards of accounting and financial reporting for defined benefit OPEB and defined contribution OPEB that are provided to the employees of state and local governmental employers through OPEB plans that are administered through trusts or equivalent arrangements in which:

- Contributions from employers and non-employer contributing entities to the OPEB plan and earnings on those contributions are irrevocable.
- OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms.
- OPEB plan assets are legally protected from creditors of employers, non-employer contributing entities, and the OPEB plan administrator. If the plan is a defined benefit OPEB plan, plan assets, also are legally protected from creditors of the plan members.
- Statement No. 75 replaces GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions,* as amended, and Statement No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans.* The adoption of Statement No. 75 has resulted in the restatement of the University's beginning net position as of July 1, 2017 by $880,591 from $729,527 to a net deficit of $151,064 which reflects the retrospective effect of Statement No. 75.

**** In 2019, the University implemented GASB Statement No. 83, *Certain Asset Retirement Obligations.* The objective of this Statement is to address accounting and financial reporting for certain AROs related to tangible capital assets. This statement requires recognition of a liability for legal obligations to perform asset retirement activities related to tangible capital assets. The adoption of Statement No. 83 resulted in the restatement of the University's beginning net position as of July 1, 2017 by $2,861, which reflected the retrospective effect of Statement No. 83. In addition, certain amounts in the 2018 consolidated financial statements have been revised due to the adoption of GASB Statement No. 83

Source: University of Hawaii

A change in the accounting and recognition methodology for the University’s allocated share of the State’s actuarial determined total net pension and OPEB liability resulted in a reduction in the University’s unrestricted net position at the end of each fiscal year, as compared to the prior methodology. Annual required OPEB contribution payments on a pay as you go basis, relating to such liability are paid directly by the State Department of Budget and Finance from its general fund appropriation and not out of the University's operating budget appropriation. See **"STATE EMPLOYEES' RETIREMENT SYSTEM"** below and **"APPENDIX B - AUDITED FINANCIAL STATEMENTS."**

Results of Operations. The following table provides a summary of the results of operations summarized to match revenues supporting core activities with expenses associated with core activities and other changes for the past five fiscal years.

Table A-13
RESULTS OF OPERATIONS SUMMARIZED TO MATCH REVENUES SUPPORTING CORE ACTIVITIES WITH EXPENSES ASSOCIATED WITH CORE ACTIVITIES FOR THE FISCAL YEAR ENDED JUNE 30,
(in thousands of dollars)

	2015 *	2016	2017 **	2018 ***	2019 ****
Revenues:					
Tuition and fees, net	$262,660	$272,306	$270,123	$258,887	$ 261,844
State appropriations	413,148	441,373	471,453	485,153	506,399
Grants and contracts	456,944	451,669	424,593	437,586	443,786
Sales and services	135,315	134,787	130,867	130,011	131,753
Investment income, net	4,659	679	42,509	37,129	(31,513)
Private gifts	32,600	32,382	31,233	39,895	37,956
Other revenue	2,568	2,211	1,648	1,628	1,703
Revenues Supporting Core Activities	1,307,894	1,335,407	1,372,426	1,390,289	1,351,928
Expenses Associated with Core Activities Before Depreciation	1,373,768	1,357,367	1,474,215	1,411,647	1,443,526
Income (Loss) from Core Activities Before	(65,874)	(21,960)	(101,789)	(21,358)	(91,598)
Depreciation	121,378	124,937	122,841	127,842	131,034
Expenses Associated with Core Activities Including Depreciation	1,495,146	1,482,304	1,597,056	1,539,489	1,574,560
Income (Loss) from Core Activities	(187,252)	(146,897)	(224,630)	(149,200)	(222,632)
Other Non-operating Income, net	180,939	28,927	257,706	200,933	155,045
Increase (Decrease) in Net Position	(6,313)	(117,970)	33,076	51,733	(67,587)
Net Position, Beginning of Year	848,734	814,421	696,451	(153,925)	(102,192)
Net Position, End of Year	$842,421	$696,451	$729,527	$ (102,192)	$ (169,779)

* In 2015, the University adopted GASB Statement No. 68, *Accounting and Financial Reporting for Pensions.* This Statement revises and establishes new financial reporting requirements for most governments that provide their employees with pension benefits. Management has adopted the new standard as presented in the University's consolidated financial statements. Due to the adoption of GASB Statement No. 68 in fiscal year 2015, beginning net position was restated. The beginning net position as of July 1, 2014 was restated by $1,112,792 from $1,961,526 to $848,734.

** In 2017, the University implemented GASB Statement No. 82, *Pension Issues-an amendment of GASB Statements No. 67, 68, and 73.* The objective of this Statement is to address certain issues that have been raised with respect to Statements No. 67, *Financial Reporting for* Pension *Plans,* No. 68, *Accounting and Financial Reporting for Pensions,* and No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68.* The adoption of Statement No. 82 has resulted in the restatement of the University's beginning net position to reflect the new calculation of deferred outflows of resources in accordance with the provisions of Statement No. 82. The beginning net position as of July 1, 2015 was restated by $28,000 from $842,421 to $814,421.

*** In 2018, the University implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. This* Statement establishes standards of accounting and financial reporting for defined benefit OPEB and defined contribution OPEB that are provided to the employees of state and local governmental employers through OPEB plans that are administered through trusts or equivalent arrangements in which:

- Contributions from employers and non-employer contributing entities to the OPEB plan and earnings on those contributions are irrevocable.
- OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms.

- OPEB plan assets are legally protected from creditors of employers, non-employer contributing entities, and the OPEB plan administrator. If the plan is a defined benefit OPEB plan, plan assets, also are legally protected from creditors of the plan members.
- Statement No. 75 replaces GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions,* as amended, and Statement No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans.* The adoption of Statement No. 75 has resulted in the restatement of the University's beginning net position as of July 1, 2017 by $880,591 from $729,527 to a net deficit of $151,064 which reflects the retrospective effect of Statement No.75.

**** In 2019, the University implemented GASB Statement No. 83, *Certain Asset Retirement Obligations.* The objective of this Statement is to address accounting and financial reporting for certain AROs related to tangible capital assets. This statement requires recognition of a liability *for* legal obligations to perform asset retirement activities related to tangible capital assets. The adoption of Statement No. 83 resulted in the restatement of the University's beginning net position as of July 1, 2017 by $2,861, which reflected the retrospective effect of Statement No. 83. In addition, certain amounts in the 2018 consolidated financial statements have been revised due to the adoption of GASB Statement No. 83.

Source: University of Hawaii

Operating Budget Process. In accordance with State law, the University submits a biennial budget request, program and financial plan, and program performance reports to the Governor and Legislature for consideration by the Legislature when it convenes in regular session in every odd-numbered year. A supplemental budget request to amend any appropriation for the current fiscal biennium may also be submitted to the Legislature for approval when it convenes in regular session in even-numbered years. Operating and capital funds for the University are appropriated by major organizational units (UH-Mānoa, UH-Hilo, UH-West O‘ahu, UH Community Colleges, Systemwide Support, as well as several program areas, including the John A Burns School of Medicine, Waikiki Aquarium, and Hawaii Small Business Development Center). Operating funds are generally organized and discussed in three functional categories: current service requirements that are necessary to support and maintain the current level of services, workload and program change requests to meet increases in workload and implementation of new program initiatives, and the University's share of various overhead type costs that are administered on a statewide basis (debt service, fringe benefits, risk management, etc.).

Upon approval by the Board, the University's operating and capital improvements budget requests are submitted simultaneously to the Governor for review and incorporation into the executive budget request for the State and to the Legislature for informational purposes. The executive budget request for the State is submitted to the Legislature in December for consideration in the regular session of the Legislature in mid-January. Appropriations by the Legislature (General or Supplemental Appropriations Act) are usually passed in May and transmitted to the Governor for approval. Upon approval by the Governor, generally not later than mid-June, allocation notices are transmitted to all State agencies, which may include any restrictions imposed by the Governor on legislative appropriations.

With the exception of the Community Colleges, lump sum allocations are made to each campus in the University System and are generally equal to legislative appropriations less any restrictions imposed by the Governor. Due to the declining level of State general fund support, however, it has become necessary to assess each campus for a pro rata share of certain unfunded costs that are administered on a systemwide basis. These costs include but are not limited to: legal settlements, risk management costs, private fundraising costs, and workers compensation/unemployment insurance premiums.

As a result of several statutory changes and a State constitutional provision that authorizes the Board of Regents and the President to maintain exclusive jurisdiction over the internal organization and management of the University system, the University enjoys a much greater degree of discretion over its operating budget priorities than other State departments.

State Appropriations. The State continues to provide strong financial support to the University as the sole public higher education system within the State. General state appropriations increased by $21.2 million, or 4.4 percent, to $506.4 million in fiscal year 2019 over fiscal year 2018, and increased by $13.7 million, or 2.9 percent, to $485.2 million in fiscal year 2018 over fiscal year 2017. The increase in fiscal year 2019 was primarily attributable to an increased allotment of $19.5 million for salary increases of 2.82 percent as negotiated by the collective bargaining agreements. The increase in fiscal year 2018 was primarily attributable to a $10.1 million allotment for salary increases of 2.13 percent as negotiated by collective bargaining agreements, which is a $20.8 million increase from the fiscal year 2017 allotment of $38.4 million.

The State also pays for fringe expense for the University's general and federal employees. The transfers for fringe expense amounted to $286.5 million, $255.3 million and $179.7 million in fiscal years 2019, 2018 and 2017, respectively. The year-over-year increases were due to rising fringe benefit rates.

General fund State appropriations to the University for the past five fiscal years are summarized in the table below. See Note 16 to the University's audited financial statements in **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

Table A-14
GENERAL FUND STATE APPROPRIATIONS
FOR THE FISCAL YEAR ENDED JUNE 30
(in thousands of dollars)

	2015	2016	2017	2018	2019
`General Fund State Appropriations	$413,148	$441,373	$471,453	$485,153	$506,399

Source: University of Hawaii.

Prior to the start of the 2020 legislative session, the University submitted a supplemental operating budget request of $28.1 million in general funds. However, due to COVID-19, the decrease in State tax revenues and the uncertainty of Hawaii's economic recovery, statewide fiscal reductions were implemented and none of the board's requests were approved by the Legislature. Additionally, the Legislature eliminated 625 full-time equivalent (FTE) positions from the University's position inventory. While the vast majority of the eliminated FTE positions were vacant, some currently filled positions were affected. See "**—The State's Finances and its Impact on the University**" herein for additional information.

State Support for Capital Improvements. Improvement and modernization of the University's physical assets are vital to delivering the University's strategic directions that strives for 21st century facilities for learning, teaching and research. The University has developed a six-year plan for fiscal years 2020–2025 (the "6-Year CIP Plan") that sets forth a vision of a physical environment that supports and augments the high-quality education and research that takes place at our University. It also presents a coordinated, long-term strategy that (1) prioritizes classrooms, laboratories and student spaces with a focus on improving the learning and research environment, (2) targets those facilities with the highest utility and poorest conditions through upgrades to the interior/exterior structures, building roofs, mechanical and electrical systems, pedestrian pathways, and roadways, and (3) changes the paradigm on how the University manages its space.

The State of Hawai'i Legislature continued its strong financial support to the University's capital improvement program and provided general obligation bond appropriations for the 2019–2021 and 2017–2019 fiscal biennia that were approximately $294.8 million and $269.7 million, respectively. The University currently has bond issuance authorization through June 30, 2021 for $100 million for strategic capital projects, $9.6 million for land acquisition, and $38 million for parking structure improvements at UH-Mānoa.

The following table shows amounts provided by the State to the University for capital improvements for the fiscal years ended June 30, 2011 through June 30, 2020. Over that 10-year period, the State provided over $1.568 billion, for an average of $157 million annually.

Fiscal Year	Total UH CIP GO Bond Funds & General Funds (in Thousands of Dollars)
2011	209,889
2012	135,217
2013	140,964
2014	173,994
2015	173,700
2016	92,884
2017	182,750
2018	149,770
2019	119,973
2020	189,721
10 Year Total	**$1,568,862**
Average	**$ 156,886**

Tuition and Fees. Tuition and fees revenue, net of scholarship allowances, remained relatively consistent in fiscal year 2019 as a result of tuition rate increases exceeding enrollment declines. The decrease in fiscal year 2018 was primarily attributable to the continued decline in enrollment. Scholarship allowances amounted to $133.1 million, $134.6 million and $133.1 million in fiscal years 2019, 2018 and 2017, respectively.

Grants and Contracts. Grants and contracts are the second largest source of revenues supporting the University's core activities. Grants and contracts comprised 32.83% of the University's revenues in fiscal year 2019. Total grants and contracts revenue increased by $6.2 million, or 1.4 percent in fiscal year 2019. The increase was primarily due to a net increase of federal awards of approximately $4.0 million. The University received a new Federal award from the U.S. Army Corps of Engineers Fort Worth District in fiscal year 2019 for approximately $3.6 million. There was also an increase in nongovernmental sponsored programs of $2.8 million. In fiscal year 2018, the increase was mainly from a net increase of federal awards of approximately $11.3 million. The top six federal sponsors over the last five fiscal years are the Department of Health and Human Services, Department of Defense, Department of Education, National Science Foundation, Department of Energy and National Aeronautics and Space Administration.

Grants and contracts are awarded to the University on behalf of faculty members. The administration of these funds is through the research departments and the Office of Research Services of the University in accordance with the policies of the sponsors and the University. The revenues from these awards are reimbursed by the funding agency on a periodic basis.

Table A-15
GRANTS AND CONTRACTS
FOR THE FISCAL YEAR ENDED JUNE 30
(in thousands of dollars)

	2015	**2016**	**2017**	**2018**	**2019**
Federal Grants and Contracts	$391,675	$383,704	$351,045	$362,735	$364,166
Other	65,269	67,965	73,548	74,851	79,620
Total Grants and Contracts	$456,944	$451,669	$424,593	$437,586	$443,786

Source: University of Hawaii.

Auxiliary Enterprises Sales and Services. The University operates auxiliary enterprises to provide important goods and services to students, faculty, staff, and others. These self-supporting activities generate sales and services revenues that are used to fund their operations. Auxiliary enterprises include dormitories, bookstores, campus food service, parking, faculty housing, and others. Sales and services revenues, which are mainly comprised of bookstores, student and faculty housing, food services, parking, and athletics remained relatively consistent in fiscal years 2019 and 2018.

Gifts and Fund Development.

The University of Hawaii Foundation. The University of Hawaii Foundation ("UHF") is a nonprofit corporation that was established in 1955, legally separate from the University, to encourage and manage private support for the University. UHF is governed by a self-perpetuating Board of Trustees primarily consisting of elected volunteers. UHF is considered to be a component unit of the University, and its financial information is blended into the University's consolidated financial statements. See **APPENDIX A – "THE UNIVERSITY OF HAWAII – Financial Information – Financial Statements**" above.

UHF endowment consists of approximately 1,490 individual funds established for a variety of purposes. The endowment includes both donor-restricted endowment funds and funds designated by the Board of Trustees to function as endowments. As required by U.S. GAAP, net assets associated with endowment funds, including funds designated by the Board of Trustees to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions. At June 30, 2019 and 2018, the endowment net assets amounted to $327.0 million and $321.0 million, respectively.

UHF invests in various types of investment securities. Investment securities are exposed to various risks, such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of financial position. Investments are generally pooled and managed under various asset diversification strategies, depending upon the investment objectives and to avoid significant concentrations of market risk. Earnings on endowment contributions, which the donor designates as being available for program operations, are considered restricted until the specific restrictions have been met. Endowment investments classified as net assets with donor restrictions were $266.0 million and $266.69 million at June 30, 2019 and 2018, respectively. Under UHF's endowment spending policy, certain amounts (based on a percentage of the adjusted fair value of the investment pool) are appropriated and are available to support operations. In 2019 and 2018, $11.9 million and $11.3 million, respectively, was made available to support programs. Investment management fees amounted to $1.0 million in 2019 and $1.1 million in 2018.

UHF has a policy of appropriating for distribution each year up to 6% of its endowment fund's average fair value over the prior 12 quarters through the calendar year-end preceding the fiscal year in which the distribution is planned. In establishing this policy, UHF considered the long-term expected return on its endowment. Accordingly, over the long term, UHF expects the current spending policy to allow its endowment to grow at an average of 5.5% annually. This policy is consistent with the organization's objective to maintain the purchasing power of the endowment assets held in perpetuity or for a specified term, as well as to provide additional real growth through new gifts and investment return.

UHF's results generally are based on two components: investment returns and donor contributions. In the fiscal year ended June 30, 2019, UHF's investments generated a positive return of 4.8% and donors contributed more than $10.1 million. As of June 30, 2019, UHF's endowment was valued at approximately $327.0 million and allocated as follows:

Table A-16
UNIVERSITY OF HAWAII FOUNDATION
ENDOWMENT ASSET ALLOCATION PERCENTAGES
(as of June 30, 2019)

Investment	Percentage
Global Equity	20%
United States Equity	21%
Marketable Alternative Assets	16%
Fixed Income	12%
Real Assets	11%
Emerging Market Equity	7%
Private Equity / Venture Capital	12%
Cash	1%
Total	100%

Source: University of Hawaii

The University and UHF maintain separate investment policies. See "**– The University's Investment Policy**" herein. The Investment Committee of UHF's Board of Trustees makes the decisions regarding the investment of the endowment, with the goal of obtaining high investment returns through a diversified, professionally managed portfolio. UHF retains an independent consulting firm, Cambridge Associates, with expertise in investment policy development, spending policy analysis, manager evaluation and performance evaluation.

University Endowment. The University also maintains a separate endowment pool. In the fiscal year 2019, the University's endowment pool generated a positive return of 6.4%. As of June 30, 2019, the University's endowment was valued at approximately $75.0 million and allocated as follows:

Table A-17
UNIVERSITY OF HAWAII
ENDOWMENT ASSET ALLOCATION PERCENTAGES
(as of June 30, 2019)

Investment	Percentage
US Equity	33%
International Equity	26
US Fixed Income	37
Global Fixed Income	2
Cash	2
Total	100%

Source: University of Hawaii.

The University's endowment and UHF's endowment are presented in the University's financial statements. See Note 2 to the University's audited financial statements in **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

The following table summarizes the performance of the endowment funds of the University and UHF as of June 30, 2015 to June 30, 2019.

Table A-18
UNIVERSITY OF HAWAII AND UNIVERSITY OF HAWAII FOUNDATION
ENDOWMENT FUND PERFORMANCE
AS A PERCENTAGE OF THE ENDOWMENT FUND
(as of June 30)

	2015	2016	2017	2018	2019
University of Hawaii[(1)]	2.3%	0.4%	12.3%	7.6%	6.4%
University of Hawaii Foundation[(2)]	0.8%	-2.0%	11.8%	8.1%	4.8%

(1) Information provided by the University.
(2) Information provided by UHF.

Investments. The University's endowment provides funds to support University academic programs and student-related activities. Historically, the University does not rely heavily on income from its investments as a source of revenue for the University. The University's net investment income for fiscal year 2019, as compared to fiscal year 2018, decreased by \$68.6 million. The fiscal year 2019 decrease was mainly due to a decrease in the Foundation's investment income of \$78.5 million. The University's net investment income for fiscal year 2018, as compared to fiscal year 2017, decreased by \$5.4 million mainly due to smaller market growth. See Note 2 to the University's audited financial statements in **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

University Endowment Spending Policy. Pursuant to the University's investment policy, the Board is required to adopt investment goals and comprehensive guidelines to ensure the preservation of capital and adequate growth and income. The long-range investment objective of the University is to achieve the highest risk-adjusted total return, maintain the purchasing power of the corpus over five- and ten-year periods to produce current income to meet spending needs of 4.25% while preserving the real value of the endowment principal.

The investment goal of the University's endowment fund is to seek the highest risk-adjusted total return (resulting from income from dividends, interest and option writing, and from realized and unrealized appreciation in securities and other investments) within reasonable levels of annual volatility to insure the long-term growth of the fund and to generate an annual distribution of up to 4.25% of a rolling 20-qurter average value of the fund, with the value determined at the end of each calendar quarter and the actual distribution to be determined by the University administration. The University shall provide the investment advisors with a schedule of payouts to be made during the year. The payouts will be scheduled as close to the actual expenditures as practicable to maximize the amounts retained and invested by the fund. In fiscal years 2017-2018 and 2018-2019, the University instituted a 4.5 percent distribution rate on restricted and unrestricted endowments. The total restricted and unrestricted distributions available to the University amounted to \$2.7 million and \$2.8 million in fiscal years 2017-2018 and 2018-2019, respectively.

The University's Investment Policy. The University and UHF maintain separate comprehensive investment policies. See "**—Gifts and Fund Development**" above and **APPENDIX B** "**Audited Financial Statements**" hereto for additional information regarding the University's investment policies.

Investment Monitoring. The endowment pool maintained by the University is managed through a contract with UBS Financial Services, Inc. (the "Investment Advisor"). The Investment Advisor is responsible for the investment and overall performance of the endowment pool and for compliance with the University's investment policy. The Investment Advisor reports quarterly to University management and meet regularly with the Board of Regents on the performance and compliance of the endowment pool.

The following table summarizes the University's cash and investments as of June 30 of each of the past five fiscal years.

Table A-19
UNIVERSITY CASH AND INVESTMENTS
FOR THE FISCAL YEAR ENDED JUNE 30
(in thousands of dollars)

	2015	2016	2017	2018	2019
Current Assets:					
Cash and cash equivalents	$ 89,811	$ 103,179	$ 69,096	$ 122,877	$ 131,839
Operating investments	285,241	298,702	355,180	315,050	361,376
Noncurrent Assets:					
Restricted cash and cash equivalents	119	162	65	64	75
Endowment and other investments	477,124	474,878	507,548	535,431	542,422
Total Cash and Investments	$852,295	$876,921	$931,889	$973,422	$1,035,712

Source: University of Hawaii.

The University and UHF have no direct exposure to derivative or other structured products.

Additional information regarding the University's investments is provided in the accompanying notes to the financial statements of the University included in **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

Capital Assets. Capital assets consist of land, land improvements, infrastructure, buildings, equipment, library materials, and construction in progress. Construction in progress ("CIP") additions represent costs for new projects, net of the amount of capital assets placed in service. CIP is not depreciated until the asset is placed in service. Assets acquired are recorded at cost, or if donated, at appraised value at the date of the gift. Land parcels comprising 1,206 acres, or 22 percent of the University's property, are recorded at the State's value of $1 per parcel. Assets owned by the federal government, although in the custody of the University, are not included in the capital asset total. At June 30, 2019, 2018 and 2017, total capital assets, net of accumulated depreciation, remained relatively constant at $2.2 billion, which represented approximately 57 percent of the University's total assets. Capital asset additions totaled $180.9 million, $179.2 million and $173.1 million in fiscal years 2019, 2018 and 2017, respectively, while depreciable capital asset disposals, net of accumulated depreciation, amounted to $5.6 million, $10.9 million and $15.9 million, respectively. Capital asset additions remained consistent in the past three fiscal years due to the number of ongoing strategic capital projects.

Table A-20

UNIVERSITY CAPITAL ASSETS
AS OF JUNE 30,
(in thousands of dollars)

	2015	2016	2017	2018	2019
Capital assets not being depreciated:					
Land	$37,596	$45,354	$55,195	$55,222	$56,972
Construction in progress	249,788	182,872	170,027	221,921	240,255
Total capital assets not being depreciated	287,384	228,226	225,222	277,143	297,227
Capital assets being depreciated:					
Land improvements	129,013	128,969	131,745	139,520	153,096
Infrastructure	174,376	218,284	243,030	253,346	260,899
Buildings	2,248,626	2,340,153	2,421,881	2,490,824	2,595,274
Equipment	377,355	382,445	397,471	402,707	409,511
Library books	164,410	168,836	171,605	174,303	176,996
Total capital assets being depreciated	3,093,780	3,238,687	3,365,732	3,460,700	3,595,776
Less accumulated depreciation	1,312,473	1,413,528	1,503,221	1,609,428	1,729,678
Capital assets, net	$ 2,068,691	$ 2,053,385	$ 2,087,733	$ 2,128,415	$ 2,163,325

Source: University of Hawaii.

Financial Information Concerning Foundations and Other Entities. The Governmental Accounting Standards Board ("*GASB*") Statement No. 14, The Financial Reporting Entity, as amended by GASB Statement No. 39, Determining Whether Certain Organizations are Component Units, as amended by GASB Statement No. 61, The Financial Reporting Entity: Omnibus and amendment of GASB Statement No. 14 and No. 34, establishes standards for defining and reporting on the financial reporting entity. The basic criterion for including a potential component within the reporting entity is financial accountability. Other criteria include fiscal dependency and the nature and significance of the relationship such that exclusion would cause the financial statements of the University to be misleading. Accordingly, the financial information of UHF and the RCUH are blended in the University's financial statements. See Note 1 to the University's audited financial statements in **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

RCUH is a public corporation created for the purpose of promoting, encouraging, initiating, developing, and conducting scientific research and investigation. RCUH provides administrative support services to projects of the University, the State and other organizations. For the fiscal year ended June 30, 2019, RCUH reported in its financial statements revenues of $8.2 million and expenses of $8.6 million.

The State's Finances and its Impact on the University

The State of Hawaiʻi continues to provide strong support to the University as the sole provider of public higher education in Hawaiʻi. When compared to other universities in the nation, the University is well supported by the State and was ranked 6th in the category of higher education operating appropriation per full-time equivalent in 2019 according to State Higher Education Finance fiscal year 2019 report. The Hawaiʻi Governor supported, and the State Legislature appropriated, an increase of $35 million to $517.5 million in general funds to the University's fiscal year 2019 - 2020 operating budget. These funds were allocated throughout the campuses primarily to fund collective bargaining agreements as well as student mentors and tutors at the Community Colleges, Teacher Education program at Leeward Community College, and Ornamental Breeding and Clean Export Practices at the College of Tropical Agriculture and Human Resources.

Chapter 37-111, Hawaii Revised Statutes, creates a Council on Revenues ("COR") which creates quarterly reports to the Governor and Legislature for their utilization in estimating revenues available to the state. Chapter 37-112, Hawaii Revised Statutes, states that should either the Governor or the Legislature use a revenue estimate that differs than that of the COR, they must publicly state that fact in addition to the reasons for using a differing revenue estimate. The practical implication is that COR revenue estimates are highly regarded in the formulation and execution of the state's general fund operating budget. The following is a summary of the Council's actions since March 2020.

In March 2020, the Council lowered its growth rate for fiscal year 2020 from 4.1% to 3.8%, based on deterioration of the economic outlook due to the COVID-19 virus. The Council also lowered the fiscal year 2021 forecast from 4.0% to 0% on an expectation of an economic downturn.

On May 28, 2020, the Council further lowered its forecast to -7.0% for fiscal year 2020 and -12.0% for fiscal year 2021 in light of the economic downturn prompted by the COVID-19 virus. The Council forecasted a rebound in revenues of 12.0% in FY 2022 and a growth rate of 3.0% for FYs 2023-2026.

The Council based its FY 2020 forecast on the sharp decline in revenues in the April General Fund statement and the May daily cash report as of May 25, 2020 that resulted from the sudden stop in tourism arrivals and the Governor's Stay-At-Home order. The Council also considered the impacts of the delay in the filing deadline for 2019 income taxes from April 20, 2020 to July 20, 2020, which will shift some revenue collections from FY 2020 to FY 2021. The estimated revenue to be shifted for the balance of taxes due in April 20, 2020 is expected to be less than amounts paid with the April 20, 2019 returns since taxes paid then incorporated the 2018 tax rate increases from 8.25% to 11.0% for the highest individual income tax rate bracket. For 2019 tax returns, taxpayers would have increased their 2019 quarterly estimated taxes to take into account the increased tax rates in order to avoid underpayment tax penalties

On September 9, 2020, the Council raised its forecast for General Fund revenue growth for fiscal year 2021 from -12.0% to -11.0%. The Council lowered its forecast for FY 2022 from 12.0% to 8.5%. The Council forecasted that General Fund revenues will grow by 6.0% in FY 2023, 4.0% in FY2024 and 3% for FY 2025-2027.

The Council acknowledged the great amount of uncertainty surrounding the forecast figures for FY 2021 and FY 2022 due to questions surrounding the nature of the disease and the government's response to stop the virus in Hawaii. For the FY 2021 estimate, the Council expressed concerns about the prolonged closure of the Hawai`i tourism economy and the effects of shutdowns of non-essential businesses due to spikes in the COVID-19 infection rates. The Council discussed the implications of the expiration of the Federal fiscal stimulus known as the CARES Act.

The Council discussed the significant role that tourism plays in Hawaii's economy and why other industries could not replace tourism in generating significant business revenue and Hawaii General Fund tax revenues in the next two years. Given the prominent role of tourism in Hawaii's economy, extended delays in the return of visitors will have major impacts on the economy and tax collections. The Council noted that the State government's role in facilitating visitor arrivals in a safe and orderly manner is vital for the return of economic growth.

The new forecasts for the State General Fund tax revenues FY 2021 through FY 2027 are shown in the table below.

General Fund Tax Revenues

Fiscal Year	General Fund Tax Revenues (in Thousands of Dollars)	Growth From Previous Year
2021	$5,958,379	-11.0%
2022	6,464,841	8.5%
2023	6,852,731	6.0%
2024	7,126,840	4.0%
2025	7,340,645	3.0%
2026	7,560,864	3.0%
2027	7,787,690	3.0%

The Council adopted specific adjustments recommended by the Department of Taxation to reflect effects on General Fund tax revenues due to tax law changes enacted by the 2019 Legislature"

Future general fund appropriations supporting the University are subject to legislative appropriations and dependent upon the financial health of the State, future COR projections, and priorities yet to be articulated by the Governor and State legislature. As a result of the COVID-19 pandemic, the impact to the economy of the State of Hawai'i has been significant and could potentially result in a steep reduction of general fund support for the continued operation of the University, which may be compounded by an overall decline in student enrollment and associated tuition and fee revenues.

Collective Bargaining

The Hawaii State Constitution under Article XIII, Section 2, grants public employees in the State the right to organize for the purpose of collective bargaining as provided by law. Chapter 89, HRS, provides for 14 recognized bargaining units ("Units") for all public employees throughout the State, including State, county and municipal employees. Each Unit is represented by an employee organization otherwise known as the exclusive bargaining representative of all employees within such unit which negotiates with the public employer. For the purpose of negotiating a collective bargaining agreement ("CBA"), the public employer of an appropriate Unit is statutorily defined by law under HRS §89-6. In Units with employees in multiple jurisdictions (i.e. State, Counties, Judiciary, Hawaii Health Systems Corporation), the public employer includes the Governor and an employer representative from each applicable jurisdiction to include the Mayors, the Chief Justice, the Hawaii Health Systems Corporation board, the President of the University of Hawaii, the Superintendent of Education, the Board of Regents of the University of Hawaii, and the Board of Education. In the case of the University's Unit 7 and 8 employees, the public employers are the Governor, the Board of Regents, and the President of the University of Hawaii.

Decisions by the employer representatives of the State and county employees are determined by simple majority vote with the Governor having varying numbers of votes depending on the Unit involved. Decisions by the public employer of the Board of Regents appointed employees (Units 7 and 8) are determined by simple majority vote with the Governor having three votes, the Board of Regents having two votes, and the University President having one vote. By statute, if an impasse in any negotiation is declared, the parties may attempt to resolve the impasse through mediation, fact finding, and, if mutually agreeable to the parties, final and binding arbitration. Although the statute characterizes arbitration as "final and binding," it also provides that all cost items are subject to appropriations by the appropriate legislative bodies. If final and binding arbitration is not agreed upon, either party may take other lawful action to end the dispute, which, in the case of blue collar workers, public school teachers and university professors, could include an employee strike. In the case of the remaining eleven bargaining units, including fire fighters and police officers, a strike is prohibited by law, and negotiation impasses are subject to mandatory final and binding arbitration, subject to appropriation of cost items, as described above.

Employees of the University belong to one of eight Units: Unit 1 (Nonsupervisory employees in blue collar positions), Unit 2 (Supervisory employees in blue collar positions), Unit 3 (Nonsupervisory employees in white collar positions), Unit 4 (Supervisory employees in white collar positions), Unit 7 (Faculty of the University of

Hawaii and the community college system), Unit 8 (Personnel of the University of Hawaii and the community college system, other than faculty), Unit 9 (Registered professional nurses) or Unit 10 (Institutional health, and correctional workers). Employees in executive/managerial positions, as well as certain other personnel designated as excluded from collective bargaining pursuant to HRS §89-6(f), are not represented by any union, and some employees (e.g., certain contractual hires) are not parties to any recognized Unit.

The status of negotiations and awards for wages and health benefits for the period from July 1, 2019 to June 30, 2021 is as follows:

Unit 1 (blue collar workers): The United Public Workers ("UPW") and the employer reached a four-year (July 1, 2017 – June 30, 2021) agreement that was ratified in August 2017. The last two years of the agreement provides for across the board increases of 2% July 1, 2019 and 2% July 1, 2020. An agreement for additional across the board increases of 1.2% January 1, 2020 and January 1, 2021 was ratified in April 2019. Initial proposals for a successor agreement were exchanged August 31, 2020. No negotiation meetings have been scheduled at this time.

Unit 2 (blue collar supervisors): The current contract expired June 30, 2019. An agreement for a new contract was ratified by the Hawaii Government Employees Association ("HGEA") on October 24, 2019, providing for a $2,000 lump sum payment for all employees July 1, 2019; across-the-board increases and/or step adjustments of 5.29% July 1, 2020; and an across-the-board increase of 1.20% January 1, 2021. The agreement also provides for adjustments to uniform allowances, and meal allowances. Funding for the agreement has been approved by the State legislature and county councils, and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged June 30, 2020. No negotiation meetings have been scheduled at this time.

Unit 3 (white collar workers): The current contract expired June 30, 2019. An agreement for a new contract was ratified by HGEA on January 8, 2020, providing a $2,800 lump sum payment for all employees July 1, 2019. The agreement also provides for a one-step adjustment for most employees or an equivalent lump sum payment for employees not eligible for the step the movement on July 1, 2020. Also, on July 1, 2020, the lowest step on the salary schedule is being eliminated and the lowest five ranges of the salary schedule are to be increased 2% - 10.1%. On January 1, 2021, an across-the-board increase of 3.46% is provided. The agreement also provides for adjustments to standby pay and time off for certain instances of overtime worked. Funding for the agreement has been approved by the State legislature and county councils, and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged June 30, 2020. No negotiation meetings have been scheduled at this time.

Unit 4 (white collar supervisors): The current contract expired June 30, 2019. An agreement for a new contract was ratified by HGEA on March 3, 2020, providing a 5.98% lump sum payment for all employees July 1, 2019. The agreement also provides for the elimination of the lowest step on the salary schedule and an across-the-board increase of 3.60% July 1, 2020. On January 1, 2021, an across-the-board increase of 3.74% is provided. The agreement also provides for adjustments to standby pay and time off for certain instances of overtime worked. Funding for the agreement has been approved by the State legislature and county councils, and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged June 30, 2020. No negotiation meetings have been scheduled at this time. .

Unit 7 (faculty of the University of Hawaii): University of Hawaii Professional Assembly and the employer reached a four-year agreement (July 1, 2017 – June 30, 2021) that was ratified in July 2017. The last two years of the agreement provide for across the board increases of 2% July 1, 2019 and 2% July 1, 2020. An agreement regarding a contract re-opener was reached May 12, 2020, providing for an additional across the board increases of 1.20% January 1, 2020 and January 1, 2021. Funding for the additional increases has been approved by the State legislature and county councils, and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged June 30, 2020. No negotiation meetings have been scheduled at this time. .

Unit 8 (University of Hawaii administrative, professional and technical staff): The current contract expired June 30, 2019. An agreement for a new contract was ratified by HGEA on October 24, 2019, providing for two step adjustments on July 1, 2020 and across the board increases of 1.24% July 1, 2020 and 1.20% January 1, 2021. The agreement also provides for lump sums of 2% for those on the second highest step, 4% for those on the highest step July 1, 2020 and a $1000 or $2,000 lump sum payment for all employees July 1, 2019, depending of years of service. The agreement also provides for adjustment to meal allowances. Funding for the agreement has been approved by the State legislature and county councils, and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged June 30, 2020. No negotiation meetings have been scheduled at this time. .

Unit 9 (registered professional nurses): The current contract expired June 30, 2019. An arbitration award was issued September 16, 2019 providing for: on July 1, 2019 a 2.5% across-the-board increase, creation of a new step L5, and lump sum payments ranging from $1,800 - $2,000; on July 1, 2020 an additional 2.50% across-the-board increase. The award also provides for step movements for eligible employees. Funding for the agreement has been approved by the State legislature and county councils, and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged June 30, 2020. No negotiation meetings have been scheduled at this time. .

Unit 10 (institutional health and correctional workers): UPW and the employer and the employer reached a four-year (July 1, 2017 – June 30, 2021) that was ratified in August 2017. The last two years of the agreement provides across the board increases of 2% July 1, 2019 and 2% July 1, 2020. Additional across the board increases of 0.74% January 1, 2020 and 1.07% January 1, 2021 were ratified in April 2019. The agreement also provides for continuation of the developmental career plan.

For additional information see Note 18 to the Audited Financial Statements attached as APPENDIX B.

State Employees' Retirement System

THIS SECTION CONTAINS CERTAIN INFORMATION RELATING TO THE EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII (THE "SYSTEM" OR "ERS"). THE INFORMATION CONTAINED IN THIS SECTION IS PRIMARILY DERIVED FROM INFORMATION PRODUCED BY THE SYSTEM, ITS INDEPENDENT ACCOUNTANT AND ITS ACTUARY. THE UNIVERSITY HAS NOT INDEPENDENTLY VERIFIED THE INFORMATION PROVIDED BY THE SYSTEM, ITS INDEPENDENT ACCOUNTANT AND ITS ACTUARY, AND MAKES NO REPRESENTATIONS NOR EXPRESSES ANY OPINION AS TO THE ACCURACY OF SUCH INFORMATION.

All regular employees of the University are covered under the Employees' Retirement System of the State (referred to as the "*State Retirement System*"), a cost sharing, multiple employer defined benefit pension plan that provides retirement, disability and death benefits funded by employee contributions and by employer contributions. This section contains certain information relating to the State Retirement System. The comprehensive annual financial report of the State Retirement System and most recent valuation report of the State Retirement System may be obtained by contacting the State Retirement System. The comprehensive annual financial reports of the State Retirement System are also available on the State's website at http://portal.ehawaii.gov/, and other information about the State Retirement System are available on the State Retirement System's website at http://ers.ehawaii.gov/. Such documents and other information are not incorporated herein by reference.

The System uses a variety of assumptions to calculate the actuarial accrued liability, actuarial value of assets and other actuarial calculations and valuations of the System. No assurance can be given that any of the assumptions underlying such calculations and valuations (including, but not limited to, the current actuarial assumptions adopted by the System's Board of Trustees, the System's benefit structure or the actuarial method used by the System) will reflect the actual results experienced by the System. Variances between the assumptions and actual results may cause an increase or decrease in, among other things, the System's actuarial value of assets, actuarial accrued liability, unfunded actuarial accrued liability or funded ratio. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions (including, but not limited to, the current actuarial assumptions, benefit structure or actuarial method used by the System), one or more or which may prove to be inaccurate or be changed in the future. Actuarial assessments will change with the future experience of the pension plans. See "—General Information" and "—Actuarial Valuation" herein for more information on the actuarial assumptions used by the System.

Much of the disclosure set forth in this "State Employees' Retirement System" section is based on the Report to the Board of Trustees on the 94th Annual Actuarial Valuation for the Year Ended June 30, 2019 (the "2019 Valuation Report"), which is the most recent valuation report of the System.

The information presented in the 2019 Valuation Report was based on actuarial assumptions adopted by the System's Board of Trustees in August 2019 effective with the June 30, 2019 valuation. This is the seventh valuation with new members under the new tier of benefits and member contribution rates. However, the liability for this group of employees represents just a small fraction of the total liabilities of the system. In addition to the new tier of benefits, employer contribution rates are also increasing. Fiscal year 2019 represented the 2nd year of a four year phase-in of increases in the employer contribution rates. Included in the 2019 Valuation Report are projections showing the long term impact of both the increased employer contributions and the change in benefits for employees first hired after June 30, 2012. In June 2012, the Governmental Accounting Standards Board ("GASB") voted to approve two new statements relating to the accounting and financial reporting for public employee pension plans by state and local governments. Statement No. 67, Financial Reporting for Pension Plans ("GASB 67"), was effective for reporting periods beginning after June 15, 2013. GASB 67 requires enhanced pension disclosures in notes and required supplementary information for financial reports of pension plans. Statement No. 68, Accounting and Financial Reporting for Pensions ("GASB 68"), was effective for fiscal years beginning after June 15, 2014. GASB 68 requires governments providing defined benefit pension plans to recognize pension obligations as balance sheet liabilities (as opposed to footnote disclosures), require more immediate recognition of certain changes in liabilities, require use of the entry age normal actuarial cost method (currently employed by the System) for reporting purposes, and limit the smoothing of differences between actual and expected investment returns on pension assets. In certain cases, a lower discount rate will be required for valuing pension liabilities. In addition, employers participating in cost-sharing, multiple employer defined benefit plans will be required to report their proportionate shares of the collective net pension liability and expense for such plans.

The State implemented GASB 68 beginning with the fiscal year ending June 30, 2015. Like most public employers, the State reflected pension liabilities directly on its Statement of Net Position, which resulted in a reduction in the State's reported net position. As allowed under GASB 68 the State is reporting its GASB 68 disclosure items one year in arrears (information measured as of June 30, 2019 is reported as of June 30, 2020). The amount of the ERS net pension liability (measured as of June 30, 2019, the most recent information available) allocated to the State (not including the University of Hawaii) is approximately $7.9 billion, or approximately 56% of the $14.17 billion net pension liability for all participating employers.

University Share of State Employee's Retirement System

The University's share of the State Retirement System costs for the four fiscal years ended June 30, 2016 through June 30, 2019 were: $97.0 million for the fiscal year ended June 30, 2016; $98.9 million for the fiscal year ended June 30, 2017, $111.4 million for the fiscal year ended June 30, 2018 and $117.6 million for the fiscal year ended June 30, 2019. In addition to the foregoing retirement benefit payments, for fiscal years 2016 through 2020 the State has appropriated, for the benefit of University employees, $143.1 million for the fiscal year ended June 30, 2016; $140.8 million for the fiscal year ended June 30, 2017; $153.3 million for the fiscal year ending June 30, 2018; $162.9 million for the fiscal year ended June 30, 2019 and $189.4 million for the fiscal year ended June 30, 2020 (unaudited).

General Information

The System began operation on January 1, 1926. The System is a cost sharing, multiple employer defined benefit pension plan. The actuarial information presented herein is provided for all employers of the System in total. The System's plan year runs from July 1 of each year through the following June 30. The System covers all regular employees of the State and each of its counties, including judges and elected officials. As it is a cost sharing plan, the System does not allocate its liabilities among participating employers. However, based on the new GASB 68 financial reporting requirements for employers, the State's share of the System, based on employer contributions, is approximately 69% (including the University of Hawaii), with the remaining 31% share as the responsibility of the four counties. Although the State's employer contributions are recorded as expenses of the General Fund, approximately 25% are reimbursed from various non general funds of the State.

The statutory provisions of HRS Chapter 88 govern the operation of the System. Responsibility for the general administration of the System is vested in a Board of Trustees, with certain areas of administrative control being vested in the Department of Budget and Finance. The Board of Trustees consists of eight members: the Director of Finance of the State, ex officio; four members of the System (two general employees, one teacher, and one retiree) who are elected by the members and retirees of the System; and three citizens of the State (one of whom shall be an officer of a bank authorized to do business in the State, or a person of similar experience) who are appointed by the Governor and may not be employees of the State or any county. All contributions, benefits and eligibility requirements are established by statute, under HRS Chapter 88, and may only be amended by legislative action.

Prior to 1984, the System consisted of only a contributory plan. Legislation enacted in 1984 created a noncontributory retirement plan for certain members of the System who are also covered under Social Security. The noncontributory plan provides for reduced benefits and covers most employees hired after June 30, 1984 and employees hired before that date who elected to join the plan. Police officers, firefighters, other enforcement officials, certain elected and appointed officials and other employees not covered by Social Security are excluded from the noncontributory plan. The minimum service required for retirement eligibility is five years of credited service under the contributory plan and ten years of credited service under the noncontributory plan. Both the contributory and noncontributory plans provide a monthly retirement allowance based on the employee's age, years of credited service, and average final compensation (the "AFC"). The AFC is the average salary earned during the five highest paid years of service, including the vacation payment, if the employee became a member prior to January 1, 1971 or the three highest paid years of service, excluding the vacation payment (whichever is higher). The AFC for members hired after that date is based on the three highest paid years of service, excluding the vacation payment.

On July 1, 2006, a new defined benefit contributory plan (the "Hybrid Plan") was established pursuant to Act 179, SLH 2004. Members in the Hybrid Plan are eligible for retirement with full benefits at age 62 with 5 years of credited service or age 55 and 30 years of credited service. Members receive a benefit multiplier of 2% for each year of credited service in the Hybrid Plan. Most new employees hired from July 1, 2006 were required to join the Hybrid Plan.

In December 2010, the System's actuary completed an Actuarial Experience Study for the five year period ended June 30, 2010 (the "2010 Experience Study"). In fiscal year 2011, based in part on the results of the Experience Study, the Legislature acted to limit the growth of the State's pension liabilities by passing Act 163, SLH 2011. This Act, effective July 1, 2012, enacts certain changes to the funding of the System and the benefit structure for new members in all plans. Funding changes include increasing the statutorily required employer contribution rates (see "—Funding Status" below). Benefit changes for new members include increasing the age and service requirements for retirement eligibility, reducing the retirement benefit multiplier and reducing the interest rate credited to employee contributions to 2%. The change in the interest rate credited to employee contributions to 2% is for new members in the Hybrid Plan and Contributory Plan hired on or after July 1, 2011. All other benefit changes are effective for new members hired on or after July 1, 2012.

Act 163, SLH 2011, also reduced the investment yield rate assumption for fiscal year 2011 from 8% to 7.75% and gave authority to the Board of Trustees to adopt all assumptions to be used for actuarial valuations of the System, including the assumed investment yield rate for subsequent fiscal years. Effective June 30, 2012 and July 1, 2012, the Legislature enacted Acts 152 and 153, SLH 2012, respectively, to define compensation for retirement purposes as normal periodic payments excluding overtime, supplemental payments, bonuses and other differentials, and to assess employers annually for all retiree pension costs attributable to non-base pay during the last years of retirement.

A subsequent five-year actuarial experience study was completed on July 5, 2016, for the five-year period which ended on June 30, 2015 (the "2015 Experience Study"). To better reflect the recent actual experience of the System, in December 2016 the Board of Trustees adopted the assumption recommendations set for in the 2015 Experience Study. The Board also adjusted the investment yield rate assumption to 7.00%.

On August 12, 2019, the System's actuary completed an Actuarial Experience Study for the three-year period ended June 30, 2018 (the "2018 Experience Study"). Based on the current capital market assumptions from ERS's investment consultant and the System's target allocation, the actuaries verified that the 7.00% investment return was close to the median expected geometric return and there were no recommended changes to the investment return assumption.

The next Actuarial Experience Study, for the three-year period ending June 30, 2021, is expected in July 2022.

In fiscal year 2011, the Legislature acted to improve and protect the System's funded status by placing a moratorium on the enhancement of benefits. Act 29, SLH 2011, provides that there shall be no benefit enhancement for any group of members until the actuarial value of the System's assets is 100 percent of the System's actuarial accrued liability.

The demographic data for each annual June 30 valuation is collected as of the March 31st preceding the valuation date. As of March 31, 2019, the contributory plan covered 5,538 active employees (which includes police and fire) or 8.4% of all active members of the System, the noncontributory plan covered approximately 11,967 active employees or 18.0%, and the Hybrid Plan covered 48,878 active members or 73.6%. The Hybrid Plan membership will continue to increase in the future as most new employees hired from July 1, 2006 will be required to join this plan.

As of March 31, 2019, the System's membership comprised approximately 66,383 active employees, 9,321 inactive vested members and 49,885 pensioners and beneficiaries. The following table shows the number of active members, inactive vested members and retirees and beneficiaries of the System as of March 31, 2017, 2018 and 2019:

Category	**March 31, 2017**	**March 31, 2018**	**March 31, 2019**
Active	65,911	66,271	66,383
Inactive, vested	9,241	9,249	9,321
Retirees and beneficiaries	46,927	48,569	49,885
Total	**122,079**	**124,089**	**125,589**

Funded Status

Net Pension Liability

Since the adoption of GASB 67 in fiscal year 2014 by the ERS and GASB 68 in fiscal year 2015 by all of its participating employers, including the State, the System's actuary has prepared separate annual actuarial valuation reports, one of which provides information for funding purposes and one of which provides the disclosures required by GASB 67 and 68 that are incorporated into the financial statements of the ERS and its participating employers (the "GASB 67/68 Report"). The most recent GASB 67/68 Report was delivered in February 2020 and presents as of June 30, 2020 the required information measured as of June 30, 2019 as permitted by GASB 68. As reported therein, the total pension liability of the System was $31,396,447,685 and the System's fiduciary net position (representing the value of the assets of the System) was $17,227,026,987, resulting in a net pension liability of the System of $14,169,420,698. Of such liability, the State's proportionate share was approximately $7,899,326,314 (not including approximately $1,791,097,596 allocated to the University of Hawaii), representing approximately 56% of the total System net pension liability. The State estimates that the General Fund portion of the State's share is 75%.

Under GASB 67, projected benefit payments by the System are required to be discounted to their actuarial present values using a single discount rate that reflects a long-term expected rate of return on System investments. Such expected rate of return, and consequently the single discount rate, is set at 7.00%. GASB 68 further requires disclosure of the sensitivity of the net pension liability to changes in the assumed single discount rate by presenting the changes to the net pension liability associated with a 1% decrease and a 1% increase in the single discount rate. Applying a 6.00% discount rate, the $14,169,420,698 net pension liability would increase to $18,460,974,101, and applying an 8.00% discount rate, it would decrease to $11,079,581,746.

Unfunded Actuarial Accrued Liability

In addition to the annual GASB 67/68 Report, the actuary provides its annual valuation report based on the provisions of Chapter 88 of the Hawaii Revised Statutes, as amended, and the actuarial assumptions adopted by the ERS Board of Trustees. This report determines whether current employer contribution rates are adequate to ensure that the unfunded actuarial accrued liability (the "UAAL") can be funded over a period not exceeding 30 years, describes the financial condition of ERS and analyzes changes in ERS's condition. The most recent such report is the 2019 Valuation Report, presenting the actuarial condition of the ERS as of June 30, 2019.

The valuation report as of June 30, 2016 (the “2016 Valuation Report”) reported that the System’s funded status had decreased compared to the prior year, which decrease was primarily attributable to the new actuarial assumptions adopted by the Board in December 2016, and, to a lesser degree, to investment and liability experience losses, resulting in a UAAL as of June 30, 2016 of $12.441 billion. Based on the then-current statutory contribution rates of 25.0% for police and fire employees and 17.0% for all other employees (see “-Funding Policy” below), and the new benefit tier for employees hired after June 30, 2012, the actuary determined in the 2016 Valuation Report that the remaining amortization period was 66 years. Because this period was not within 30 years (the maximum period specified by HRS Section 88-122(e)(1)), the financing objectives of the System were not being realized. Section 88-122(e)(1) of the Hawaii Revised Statutes provides that the employer contribution rates are subject to adjustment when the funding period is in excess of 30 years. See “Funding Policy” below for information on increases in the employer contribution rates and benefits changes.

To bring the System’s funding period to within 30 years as required by HRS Section 88-122(e)(1)), the Legislature adopted Act 17, SLH 2017 during the 2017 regular legislative session. Act 17 contains significant increases to employer contribution rates over a four-year period. The 2019 Valuation Report reported that the UAAL increased to $14.074 billion as of June 30, 2019, compared to $13.405 billion as of June 30, 2018. The investment returns on financial markets in fiscal year 2019 were less than the 7.0% assumption. Because of the lower return and the new actuarial assumptions adopted by the Board, the funded ratio remained unchanged in 2019 when compared to the prior year at 55.2% based on smoothed assets. Based on the assumptions used in preparing the 2016 Valuation Report and the future contribution rates established by the Legislature effective July 1, 2017 in Act 17, SLH 2017, the actuary determined that, as of the 2019 Valuation Report, the remaining amortization period was 26 years. Thus, the current contribution rates were sufficient to eliminate the UAAL over a period of 30 years or less as mandated by HRS Section 88-122(e)(1).

Funding Policy

Prior to fiscal year 2006, the System was funded on an actuarial reserve basis. Actuarial valuations were prepared annually by the consulting actuary to the Board of Trustees to determine the employer contribution requirement. In earlier years, the total actuarially determined employer contribution was reduced by some or all of the investment earnings in excess of the investment yield rate applied in actuarial valuations to determine the net employer appropriations to be made to the System. Act 327, SLH 1997, amended Section 88-107, HRS, so that, beginning with the June 30, 1997 valuation, the System retains all of its excess earnings for the purpose of reducing the unfunded actuarial accrued liability. However, Act 100, SLH 1999, reinstated the excess earnings credit for the June 30, 1997 and June 30, 1998 valuations. For those two valuations, the investment earnings in excess of a 10% actuarial return was to be applied as a reduction to the employer contributions. In accordance with the statutory funding provisions (Section 88-122, HRS, as amended by Act 147, SLH 2001), the total actuarially determined employer contribution to the pension accumulation fund was comprised of the normal cost plus the level annual payment required to amortize the unfunded actuarial accrued liability over a period of 29 years from July 1, 2000. The contribution requirement was determined in the aggregate for all employers in the System and then allocated to individual employers based on the payroll distribution of covered employees as of the March preceding the valuation date. The actuarially determined employer contribution derived from a valuation was paid during the third fiscal year following the valuation date, e.g., the contribution requirement derived from the June 30, 1998 valuation was paid into the System during the fiscal year ended June 30, 2001. The actuarial cost method used to calculate employer contributions was changed in 1997 by Act 327 from the frozen initial liability actuarial cost method to the entry age normal actuarial cost method effective with the June 30, 1995 actuarial valuation. Employer contributions were determined separately for two groups of covered employees: (1) police officers, firefighters, and corrections officers; and (2) all other employees who are members of the System.

Act 17, SLH 2017, which became effective on July 1, 2017, established the employer contribution rates set forth below. These contribution rates were increased from prior contribution rates enacted in 2012, to bring the funding period of the System within 30 years:

Employer Contribution effective starting	Police Officers and Firefighters (% of total payroll)	Other Employees (% of total payroll)
July 1, 2017	28.0	18.0
July 1, 2018	31.0	19.0
July 1, 2019	36.0	22.0
July 1, 2020	41.0	24.0

The Legislature also included $34.6 million in fiscal year 2017-2018 and $70.7 million in fiscal year 2018-2019 in the Executive Budget Bill (Act 49, SLH 2017), which was approved by the Legislature on May 2, 2017 to fund the contribution increases required by Act 17, SLH 2017.

Under the contributory plan, police officers, firefighters, and corrections officers are required to contribute 12.2% of their salary to the plan and most other covered employees are required to contribute 7.8% of their salary. Under the Hybrid Plan, covered employees are generally required to contribute 6.0% of their salary to the plan, with sewer workers in specified classifications, water safety officers and emergency medical technicians required to contribute 9.75% of their salary. Effective July 1, 2012, contribution rates for newly hired employees covered under the contributory and Hybrid Plan increased by 2% pursuant to Act 163, SLH 2011, such that the corresponding contribution rates for new employees as discussed in this paragraph will be 14.2%, 9.8%, 8.0% and 11.75%, respectively. Employees covered under the noncontributory plan do not make contributions.

Actuarial Methods

The System's actuary uses the entry age normal cost method. The most recent valuation was performed for the fiscal year ended June 30, 2019.

Since the State statutes governing the System establish the current employee and employer contribution rates, the actuarial valuation determines the number of years required to amortize (or fund) the UAAL. For the June 30, 2019 valuation, this determination was made using an open group projection due to the effects of the new lower tier of benefits adopted effective July 1, 2012 and the increased employer contribution rates mandated by Act 17, SLH 2017.

Because of this amortization procedure, any change in the unfunded actuarial accrued liability due to (i) actuarial gains and losses (ii) changes in actuarial assumptions or (iii) amendments, affects the funding period.

On an aggregate basis with regards to the contributory, the Hybrid, and the noncontributory plans, the total normal cost for benefits provided by the System for the fiscal year beginning July 1, 2019 was 14.13% of payroll, which was 15.72% of payroll less than the total contributions required by law (23.61% from employers plus 6.24% in the aggregate from employees). Since only 7.89% of the employers' 23.61% contribution is required to meet the normal cost (6.24% comes from the employee contribution), it is intended that the remaining 15.72% of payroll will be used to amortize any unfunded actuarial accrued liabilities over a period of years in the future, assuming that pay for new entrants increases by 3.50% per year. Due to the changes enacted in 2011 (new benefits and contribution rates for members hired after June 30, 2012) and in 2017 (increases in the employer contribution rates), the percentage of payroll available to amortize the unfunded actuarial liabilities is expected to increase each year for the foreseeable future.

The following table shows the valuation results as of June 30, 2019 plus a 30-year open group projection of ERS' assets and liabilities. The projection assumes no actuarial gains or losses in the actuarial liabilities or the actuarial value of assets. In addition, the projection reflects the changes made to the benefits and member contribution rates of employees hired after June 30, 2012, and the increased employer contributions required by Act 17, SLH 2017.

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Projection Results Based on June 30, 2019 Actuarial Valuation

Valuation as of June 30,	Employer Contribution Rate for Fiscal Year Following Valuation Date	Compensation (in Millions)	Employer Contributions (in Millions)	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2019	23.61%	$ 4,520	$ 1,067	$ 31,396	$ 17,322	$ 14,074	55.2%
2020	25.89%	4,633	1,200	32,617	18,292	14,325	56.1%
2021	25.89%	4,761	1,233	33,838	19,384	14,453	57.3%
2022	25.89%	4,893	1,267	35,061	20,504	14,557	58.5%
2023	25.89%	5,033	1,303	36,285	21,654	14,631	59.7%
2024	25.89%	5,176	1,340	37,511	22,836	14,674	60.9%
2025	25.89%	5,326	1,379	38,734	24,052	14,682	62.1%
2026	25.89%	5,483	1,420	39,954	25,303	14,651	63.3%
2027	25.89%	5,647	1,462	41,171	26,595	14,576	64.6%
2028	25.89%	5,818	1,507	42,386	27,933	14,453	65.9%
2029	25.89%	5,998	1,553	43,598	29,321	14,276	67.3%
2030	25.89%	6,186	1,602	44,810	30,770	14,041	68.7%
2031	25.89%	6,382	1,653	46,024	32,284	13,740	70.1%
2032	25.89%	6,586	1,705	47,239	33,871	13,368	71.7%
2033	25.89%	6,798	1,760	48,457	35,539	12,918	73.3%
2034	25.89%	7,019	1,818	49,679	37,296	12,383	75.1%
2035	25.89%	7,249	1,877	50,908	39,154	11,754	76.9%
2036	25.89%	7,488	1,939	52,146	41,123	11,023	78.9%
2037	25.89%	7,737	2,003	53,395	43,215	10,181	80.9%
2038	25.89%	7,997	2,071	54,661	45,444	9,217	83.1%
2039	25.89%	8,269	2,141	55,948	47,826	8,122	85.5%
2040	25.89%	8,552	2,215	57,262	50,379	6,883	88.0%
2041	25.89%	8,848	2,291	58,609	53,120	5,489	90.6%
2042	25.89%	9,155	2,371	59,996	56,070	3,926	93.5%
2043	25.89%	9,474	2,453	61,429	59,249	2,180	96.5%
2044	25.89%	9,806	2,539	62,916	62,680	236	99.6%
2045	25.89%	10,150	2,628	64,463	66,385	(1,923)	103.0%
2046	25.89%	10,507	2,721	66,075	70,388	(4,313)	106.5%
2047	25.89%	10,877	2,817	67,761	74,714	(6,953)	110.3%
2048	25.89%	11,260	2,916	69,526	79,390	(9,865)	114.2%

Projection assumes all assumptions exactly met, including a 7.00% annual return on the current actuarial value of assets.
Source: 2019 Valuation Report.

Actuarial Valuation

The actuarial value of assets is equal to the market value, adjusted for a four-year phase-in of actual investment return in excess of or below expected investment return. The actual return is calculated net of investment and administrative expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds. The actuarial value of assets has been based on a four—year smoothed valuation that recognizes the excess or shortfall of investment income over or under the actuarial investment yield rate assumption. The actuarial asset valuation method is intended to smooth out year to year fluctuations in the market return. The excess or shortfall in the actual return during the year, compared to the investment yield rate assumption, is spread over this valuation and the next three valuations.

The System's actuary uses certain assumptions (including rates of salary increase, probabilities of retirement, termination, death and disability, and an investment yield rate assumption) to determine the amount that an employer must contribute in a given year to provide sufficient funds to the System to pay benefits when due. Prior to fiscal year 2012, HRS Section 88-122(b) provided for the Board of Trustees to adopt the assumptions to be used by the System, except the investment yield rate, which was set by the Legislature. Act 163, SLH 2011, set the investment yield rate at 7.75% for fiscal year 2011 but also amended HRS Section 88-122(b) to allow the Board of Trustees to establish, for subsequent fiscal years, all assumptions to be used by the System, including the investment yield rate assumption. The Board of Trustees periodically evaluates and revises the assumptions used by the System for actuarial valuations, including by commissioning experience studies to evaluate the actuarial assumptions to be used by the System. The current assumptions were adopted by the System's Board of Trustees based on the recommendations of the System's actuary in the most recent experience study, the 2019 Experience Study. These assumptions, funding changes and benefit structure are reflected in the 2019 Valuation Report. The impact of the new actuarial assumptions was an increase in the unfunded liabilities of the System of approximately $60 million in the 2019 Valuation Report.

Act 85, SLH 2017, requires the Employees' Retirement System to conduct an annual stress test of the system and to report the results of the test to the Legislature annually. The test is to project the effect of certain unfavorable scenarios on the system's assets, liabilities, funded ratio and other specified benchmarks. The ERS' annual stress test shows that ERS can withstand a -20% return in one year followed by 20 years with annual 5% returns (2 percentage points below the assumed rate) before returning to 7%, and will require only moderate rate increases to ensure that the funding period never extends beyond 30 years in any future annual valuation. Act 93, SLH 2017, requires the Employees' Retirement System Board of Trustees to conduct an actuarial experience study of assumptions used in the actuarial valuation of the system at least once every three years. Previous statutes required an experience study once every five years. The next experience study will be performed following the June 30, 2021 valuation.

The actual investment returns of the System for fiscal years 2010 through 2020 shown below consist of a mix of gross and net of fees.

Fiscal Year	**Percentage**
2010	11.96%
2011	21.25%
2012	-0.14%
2013	12.57%
2014	17.77%
2015	4.23%
2016	-0.78%
2017	13.68%
2018	7.85%
2019	6.00%
2020	1.26%*

Source: Report on Investment Activity for the ERS prepared by The Northern Trust Company (2010 to 2013), The Bank of New York Mellon (2014 to 2019) and reported in the ERS' CAFRs.

**Estimated*

The first calendar quarter of 2020 stock market performance was the worst first quarter in history, while the second calendar quarter was one of the best second quarters. The System's Broad Growth Portfolio, which is exposed to U.S. growth and economic risk, lost 14% in the first calendar quarter (third fiscal quarter), but the Crisis Risk Offset Portfolio—designed to perform in periods of adverse market conditions, gained 10.9%. In the second calendar quarter, Broad Growth regained 6.2% and the entire System finished the fiscal year positive 1.3%. The Crisis Risk Offset Portfolio was able to redeploy performance gains back into the public equity markets to recapture some of the rally. The System maintained strong liquidity throughout the downturn and was not a forced seller of securities. The effects of the coronavirus negatively impacted institutional portfolios in their public markets portfolios in February and March, recovering in April through June. The impact to private markets, such as private real estate and private equity, demonstrated challenged performance towards the end of the fiscal year but will likely recover as global economies reopen.

The State anticipates that as the percentage of employees hired on and after July 1, 2012 increases, and increases in the employer contribution rates required by Act 17, SLH 2017, impact the System, the State will be able to fully amortize the UAAL over a 30 year period. Assuming a constant employment base, the number of employees entitled to pre–2012 retirement benefits should equal the number of employees entitled to post–2012 retirement benefits in fiscal year 2023. The combination of the higher contribution policies and new benefit structure for future employees should enable the Retirement System to absorb the prior adverse experience and the revised actuarial assumptions over the 30 year term.

The following table sets forth the schedule of funding progress of the System for the ten most recent actuarial valuation dates.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in millions)

June 30,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b)-(a)	Funded Ratio (a)/(b)	Payroll (c)	UAAL as a Percentage of Payroll ((b)-(a))/(c)
2010	11,345.6	18,483.7	7,138.1	61.4%	3,895.7	183.2%
2011**	11,942.8	20,096.9	8,154.2	59.4%	3,916.0	208.2%
2012	12,242.5	20,683.4	8,440.9	59.2%	3,890.0	217.0%
2013	12,748.8	21,243.7	8,494.9	60.0%	3,906.7	217.4%
2014	13,641.8	22,220.1	8,578.3	61.4%	3,991.6	214.9%
2015***	14,463.7	23,238.4	8,774.7	62.2%	4,171.4	210.4%
2016****	14,998.7	27,439.2	12,440.5	54.7%	4,258.9	292.1%
2017	15,720.6	28,648.6	12,928.0	54.9%	4,265.0	303.1%
2018	16,512.7	29,917.4	13,404.7	55.2%	4,383.7	305.8%
2019*****	17,322.2	31,396.4	14,074.2	55.2%	4,519.7	311.4%

Source: 2019 Valuation Report.
**Figures reflect assumption changes effective June 30, 2011.
***Reflects change in investment return assumption effective June 30, 2015.
****Reflects assumption changes effective June 30, 2016.
*****Reflects assumption changes effective June 30, 2019.

As of June 30, 2019, the UAAL of the System was $14.074 billion, an increase from the $13.405 billion as of June 30, 2018. The 2019 Valuation Report found that the UAAL will be fully amortized over a 26-year period. Assuming a constant employment base, the number of employees entitled to pre-2012 retirement benefits should equal the number of employees entitled to post-2012 retirement benefits in fiscal year 2023. The combination of the higher contribution policies and new benefit structure for future employees is expected to enable the System to absorb the prior adverse experience over the 26-year term.

The total assets of the System on a market value basis available for benefits amounted to approximately $14.5 billion as of June 30, 2015, $14.1 billion as of June 30, 2016, $15.7 billion as of June 30, 2017, $16.6 billion as of June 30, 2018, $17.2 billion as of June 30, 2019 and $17.2 billion as of June 30, 2020. Actuarial certification of assets as of June 30, 2015 was $14.5 billion, as of June 30, 2016 was $15.0 billion, as of June 30, 2017 was $15.7 billion, as of June 30, 2018 was $16.5 billion, and as of June 30, 2019 was $17.3 billion.

The following table shows a comparison of the actuarial value of assets ("AVA") to the market values, the ratio of the AVA to market value and the funded ratio based on AVA compared to funded ratio based on market value assets:

ACTUARIAL VALUE OF ASSETS

June 30,	Actuarial Value of Assets (in millions)	Market Value of Assets (in millions)	Market Value as Percentage of AVA	Funded Ratio (AVA)	Funded Ratio (Market Value)
2010	11,345.6	9,821.6	86.6%	61.4%	53.2%
2011	11,942.8	11,642.3	97.5%	59.4%	57.9%
2012	12,242.5	11,285.9	92.2%	59.2%	54.6%
2013	12,748.8	12,357.8	96.9%	60.0%	58.2%
2014	13,641.8	14,203.0	104.1%	61.4%	63.9%
2015	14,463.7	14,505.5	100.3%	62.2%	62.4%
2016	14,998.7	14,070.0	93.8%	54.7%	51.3%
2017	15,720.6	15,698.3	99.9%	54.9%	54.8%
2018	16,512.7	16,598.4	100.5%	55.2%	55.5%
2019	17,322.2	17,227.0	99.5%	55.2%	54.9%

Source: The 2010-2019 Valuation Reports

The following table shows the normal cost (which means the annual cost of providing retirement benefits for services performed by today's members) as a percentage of payroll, employee contribution rate and effective employer normal cost rate for the two groups of covered employees for fiscal years 2018 and 2019:

NORMAL COST

	June 30,					
	2018			2019		
	Police and Firefighters	Other Employees	All Employees	Police and Firefighters	Other Employees	All Employees
Normal cost as % of payroll	25.46%	12.38%	13.90%	26.55%	12.46%	14.13%
Employee contribution rate	12.49%	5.24%	6.08%	12.53%	5.39%	6.24%
Effective employer normal cost rate	12.97%	7.14%	7.82%	14.02%	7.07%	7.89%

Source: 2019 Valuation Report.

The following table shows the actual contributions that have been contributed as of the last 10 valuation dates. Employer contribution rates are set prospectively by the statute.

SCHEDULE OF EMPLOYER CONTRIBUTIONS
(Dollar amounts in thousands)

June 30,	Actual Contribution
2010	547,613
2011	534,858
2012	548,353
2013	581,447
2014	653,128
2015	717,793
2016	756,558
2017	781,244
2018	847,595
2019	922,635

Source: The 2014-2019 Valuation Reports.

Asset Allocation

In August 2014, the Board of Trustees of ERS approved the adoption of a change in its asset allocation policy from the previous asset-class policy to a new risk-based asset allocation framework within the categories of Broad Growth, Principal Protection, Crisis Risk Offset, Real Return and Other. The new policy became effective as of October 1, 2014. The following table shows the target and actual asset allocation of the System as of December 31, 2019 under the revised asset allocation policy:

ASSET ALLOCATION
(as of December 31, 2019)

	Actual Allocation		Target Allocation		
Asset Type	**Amount ($mm)**	**Percentage**	**Amount ($mm)**	**Percentage***	**Allocation Difference**
Broad Growth	$12,259.7	73.7%	$12,228.0	68.0%	5.7%
Principal Protection	1,205.6	6.7%	1,438.6	8.0%	-1.3%
Crisis Risk Offset	2,548.3	14.25%	2,877.2	16.0%	-1.8%
Real Return	545.5	3.0%	1,438.6	8.0%	-5.0%
Opportunities	30.1	0.2%	0.0	0.0%	0.2%
Other	392.7	2.2%	0.0	0.0%	2.2%
Total	**$ 17,982.3**	**100.0%**	**$17,982.3**	**100.0%**	

Source: Valuations provided by BNY Mellon – December 31, 2019; values unaudited.

* Target Percentages are the 2019 Risk-Based Policy Targets. Numbers subject to changes and rounding errors.

Summary of Actuarial Certification Statement

The summary of the actuarial certification of the Employees' Retirement System as of June 30, 2018 and 2019 is set forth below:

EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII
Summary of Actuarial Certification as of June 30, 2018 and 2019
(Includes all counties)

ASSETS	**2018**	**2019**
Total current assets	$16,512,744,474	$17,322,194,107
Present value of future employee contributions	2,425,178,684	2,584,483,322
Present value of future employer normal cost contributions	2,664,690,218	2,757,121,992
Unfunded actuarial accrued liability	3,404,656,909	14,074,253,578
TOTAL ASSETS	$35,007,270,285	$36,738,052,999
LIABILITIES		
Present value of benefits to current pensioners and beneficiaries	$16,008,847,800	$16,871,118,207
Present value of future benefits to active employees and inactive members	$18,998,422,485	$19,866,934,792
TOTAL LIABILITIES	$35,007,270,285	$36,738,052,999

Source: Gabriel, Roeder, Smith & Company.

As of June 30, 2019, the unfunded actuarial accrued liability (under the entry age normal actuarial cost method) of the System amounted to approximately $14.074 billion. The System's funded ratios — assets divided by the actuarial accrued liability — remain unchanged during fiscal year 2019 as shown below:

FUNDED RATIOS

June 30, 2018	June 30, 2019
55.2%	55.2%

Employee Health Benefits

All regular employees of the University are eligible for coverage under health plans provided through Act 88, SLH 2001, Relating to Public Employees Health Benefits (partially codified as HRS Chapter 87A), which established the Hawaii Employer-Union Health Benefits Trust Fund ("Trust Fund"). The Trust Fund provides health and other benefit plans for public employees, retirees and their dependents. The employers participating in the Trust Fund include the State and the University. The Trust Fund is administered by a ten-member Board of Trustees (the "EUTF Board") appointed by the Governor comprised of five union representatives and five management representatives. The Board is responsible for determining the nature and scope of health plans offered by the Trust Fund, negotiating and entering into contracts with insurance carriers, ruling on eligibility and establishing management policies for the Trust Fund and overseeing Trust Fund activities.

Public employer contributions to the Trust Fund for the health and other benefit plans of public employees and their dependents are determined under HRS Chapter 89C, or by way of applicable public sector collective bargaining agreements. Except for reimbursement of medical insurance coverage under Medicare, public employer contributions to fund the health and other benefit plans of retirees are not to exceed certain monthly contribution levels specified in HRS Chapter 87A.

The Trust Fund currently provides medical, prescription drug, dental, vision, chiropractic and group life benefits. Benefits with respect to regular employees are funded by a combination of employer contributions set by collective bargaining agreement or by executive order (with respect to non-union employees) and employee contributions through payroll deductions. Benefits for retirees are funded by a statutory formula.

In recent years, public and private health plan providers nationwide and in Hawaii, including the Trust Fund, have experienced substantial increases in health care costs. In the case of the Trust Fund, the current fiscal situation faced by State and county employers has made it extremely difficult for the employers to increase employer contributions for health benefits in order to maintain the historical employer-employee contribution ratio. In the past, the EUTF Board has attempted to mitigate health plan rate increases by modifying benefits, and employees have been required to bear a larger share of the increased rates. The University cannot predict what actions will be taken (including changes to future plan benefits or employer-employee contribution rates) to address the impact of rising health care costs on the Trust Fund or what financial effects such changes may have on the University.

For employee health premium payments, the State has appropriated, for the benefit of University employees, $91.1 million for the fiscal year ended June 30, 2016, $96.7 million for the fiscal year ended June 30, 2017, $104.5 million for the fiscal year ending June 30, 2018 and $102.3 million for the fiscal year ended June 30, 2019, and $108.3 million for the fiscal year ended June 30, 2020.

Post-Retirement Benefits

The Governmental Accounting Standards Board ("GASB") previously issued Statement No. 43 ("GASB 43") and Statement No. 45 ("GASB 45"), which addresses how state and local governments should account for and report their costs and obligations related to post-employment health and other non-pension benefits ("OPEB"). GASB 43 and GASB 45 generally require that governments account for and report the annual cost of OPEB and the outstanding obligations and commitments related to OPEB in essentially the same manner as they do for pensions. These requirements were effective for the State, including the University, beginning in the fiscal year ended June 30, 2007 for GASB 43 and in the fiscal year ended June 30, 2008 for GASB 45. The University has commissioned an actuarial study of the obligations for post-retirement benefits which are paid by the Hawaii Employers-Union Health Benefit Trust Fund.

In June 2015, GASB approved new accounting and financial reporting standards for state and local government OPEB. Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (GASB 74) applies to OPEB plans, and replaces GASB 43 and GASB Statement No. 57. Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB 75) applies to state and local employers that sponsor OPEB, and replaces GASB 45 and GASB Statement No. 57. Generally, the new OPEB standards parallel those applied to defined-benefit pension plans and participating employers by Statement No. 67, *Financial Reporting for Pension Plans – An Amendment of GASB Statement No. 25* (GASB 67) and Statement No. 68, *Accounting and Financial Reporting for Pensions* (GASB 68), respectively. The new standards introduce new procedures for measuring OPEB liabilities and costs, require employers to report a net OPEB liability on their financial statements, and require more extensive disclosure in plan and employer financial statements. GASB 74 became effective for plans with fiscal years beginning after June 15, 2016. The Trust Fund implemented GASB 74 for the fiscal year beginning July 1, 2016. GASB 75 became effective for employers for fiscal years beginning after June 15, 2017. The State implemented GASB 75 for the fiscal year beginning July 1, 2017

In the past the State funded its OPEB costs on a "pay as you go" basis; however, the State began the process of pre-funding its OPEB costs with contributions in the amount of $100 million for fiscal year ending June 30, 2014. The State has met its pre-funding OPEB contribution in accordance with Act 268, SLH 2013 for the fiscal years ending June 30, 2015, 2016, 2017, 2018 and 2019 with actual contributions of $117.4 million (versus the $83.0 million Act 268, SLH 2013 required 2015 contribution), $249.8 million (versus the $163.6 million Act 268, SLH 2013 required 2016 contribution), $333.0 million (versus the $230.2 million Act 268, SLH 2013 required 2017 contribution), $337.1 million (versus the $297.063 million Act 268, SLH 2013 required 2018 contribution), and $787.1 million (the Act 268, SLH 2013 required 2019 contribution), respectively. The market value of the State's OPEB assets amounted to $1.8 billion as of June 30, 2019. This results in a funded ratio of 16.1% based on the State's AAL as of July 1, 2019, or $11.4 million. Investment return net of fees on OPEB assets during fiscal year 2020 is estimated to be 1.7% versus the assumed 7%. If this trend continues through the balance of the fiscal year, it would result in an actuarial loss that will negatively affect funded ratios. However, as described below, pre-funding has been temporarily suspended to deal with the COVID-19 emergency.

Act 93, SLH 2017, requires the EUTF board of trustees to conduct an annual actuarial valuation of the Trust Fund. Previous practice was to have an actuarial valuation every two years. Act 93 also requires the board to update all assumptions specific to the Trust Fund used in the valuation at least once every three years.

The State will be temporarily suspending the Act 268 UAAL prefunding balance payments for all public employers starting in fiscal year 2021 in order to help address budget shortfalls resulting from the impacts of the COVID-19 pandemic. Future fiscal years' suspensions will be through legislation proposed during the 2021 session. The duration of the suspensions is currently planned for the period from fiscal years 2021 through fiscal year 2025 but this is subject to change. This planned suspension currently is not expected to affect the funding of the State's Employees' Retirement System as described above.

Act 268, SLH 2013 requires the Trust fund to establish and administer a separate trust fund account for each public employer for the purpose of receiving irrevocable employer contributions to prefund OPEB benefit costs. The University made payments of $139.980 million in excess of its actuarially determined minimum OPEB contribution of $134.898 million for the year ended June 30, 2019, $119.714 million in excess of its actuarially determined minimum OPEB contribution of $135.072 million for the year ended June 30, 2018, $93,101 million in excess of its actuarially determined minimum OPEB contribution of $49.700 million for the year ended June 30, 2017, $68.184 million in excess of its actuarially determined minimum OPEB contribution of $45.100 million for the year ended June 30, 2016, and of $57,438 million in excess of its actuarially determined minimum OPEB contribution of $41.400 million for the year ended June 30, 2015. For additional information on pensions and employee benefits see Note 14 to the University's audited financial statements in **APPENDIX B – "AUDITED FINANCIAL STATEMENTS."**

Insurance

Act 186 of the 2003 Hawaii State Legislature established the Risk Management Special Fund ("*RMSF*") to finance a program of insurance and self-insurance for the University. The program is funded through annual assessments of each campus based on factors such as number of employees, student enrollment, loss history, and specialized facilities. The RMSF pays the University's insurance premiums, retention payments, settlements and judgments, litigation expenses incurred by the University General Counsel, and risk management related expenses.

In addition to its own insurance program, the University participates in the State of Hawaii insurance program.

Outstanding Indebtedness

Bonds Issued and Outstanding Under the Resolution. The University has previously issued and has Outstanding the following Bonds pursuant to the Resolution:

Designation	Principal Amount Outstanding as of September 1, 2020[1]
$111,265,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2010A-1 (the "*Series 2010A-1 Bonds*")	$111,265,000
$127,535,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2010B-1 (the "*Series 2010B-1 Bonds*")	127,535,000
$8,575,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Taxable Series 2015A (the "*Series 2015A Bonds*")	7,855,000
$47,010,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2015B (R) (the "*Series 2015B Bonds*")	47,010,000
$17,585,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2015C (R) (the "*Series 2015C Bonds*")	7,010,000
$25,715,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Taxable Series 2015D (R) (the "*Series 2015D Bonds*")	9,450,000
$67,400,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Refunding Series 2015E (Forward Delivery) (R) (the "*Series 2015E Bonds*")	67,400,000
$3,990,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017A (the "*Series 2017A Bonds*")	3,585,000
$12,040,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017B (Refunding) (the "*Series 2017B Bonds*")	12,040,000
$4,110,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017C (Taxable Refunding) (the "*Series 2017C Bonds*")	4,110,000
$13,185,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017D (Refunding) (the "*Series 2017D Bonds*")	13,185,000
$4,450,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017E (Taxable Refunding) (the "*Series 2017E Bonds*")	4,450,000
$52,275,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017F (Refunding) (the "*Series 2017F Bonds*")	52,275,000
$20,745,000 Board of Regents of the University of Hawaii, University Revenue Bonds, Series 2017G (Taxable Refunding) (the "*Series 2017G Bonds*")	20,320,000
Total	**$487,490,000**

The Series 2010A-1 Bonds and the Series 2010A-2 Bonds were issued to finance and refinance the costs of construction and maintenance of the University's Cancer Research Center of Hawaii. The Series 2010B-1 Bonds and the Series 2010B-2 Bonds were issued to finance and refinance, among other things, renovations and additions to the Mānoa Campus Center, construction and equipment for an Information Technology Building, renovations to

[1] Principal Amount Outstanding as of September 1, 2020, includes principal payments made of October 1,2020.

the Sinclair Library basement on the Mānoa campus, further development of the West Oʻahu campus, various energy conservation/efficiency projects on the community college campuses of Oʻahu, Kauai and Maui, and renovation and construction of other University Projects. The Board elected to issue and designate the Series 2010A-1 Bonds and the Series 2010B-1 Bonds as "Build America Bonds" pursuant to the American Recovery and Reinvestment Act of 2009, which authorized the Board to issue such Bonds as taxable bonds to finance capital expenditures for which it could otherwise issue tax-exempt bonds and to receive a subsidy payment from the federal government equal to 35% of each interest payment on such bonds ("Subsidy Payment"). To the extent such Subsidy Payments are paid by the federal government to the Board, such amounts constitute Revenues of the Network for purposes of the Resolution and are pledged as security for all Bonds. The Subsidy Payments do not represent a full faith credit obligation of the United States.

The Series 2015A Bonds were issued to finance strategic constructions projects at the Hilo College of Pharmacy and the University's Law School. The Series 2015B Bonds and the Series 2015C Bonds were issued to refund a portion of the Series 2006A Bonds and the Series 2015D Bonds and the Series 2015E Bonds were issued to refund a portion of the Series 2006A University Bonds. The Series 2017A Bonds were issued to finance the renovation of the Gregg M. Sinclair Library basement on the Mānoa campus. The Series 2017B Bonds and the Series 2017C Bonds were issued to refund the remaining Series 2006A University Bonds and the Series 2017D Bonds and the Series 2017E Bonds were issued to refund the remaining Series 2006A Bonds. The Series 2017F Bonds and the Series 2017G Bonds were issued to advance refund a portion of the University's Series 2009A University Revenue Bonds. All of the outstanding Revenue Bonds bear interest at a fixed rate.

Separate Resolution Financing: University Bonds. Pursuant to a separate resolution, the Board financed university projects not constituting a part of the Network, currently only Phase I of the University's Health and Wellness Center. In 2002, the University issued $150,000,000 principal amount of University Bonds to finance Phase I and to provide for the planning and design of Phase II. In 2006, the University issued $133,810,000 principal amount of University Bonds to advance refund a portion of the bonds issued in 2002. All bonds issued under this resolution are equally and ratably secured by a pledge of moneys from time to time on deposit in any special fund or revolving fund of the University derived from its ownership or operation of the University, but does not include moneys deposited in the University Revenue-Undertaking Fund derived from the Network. Such special and revolving fund moneys constitute "Legislative Appropriations" under the Resolution. Under the supplemental resolutions authorizing the University Bonds issued in 2002 and 2006, such bonds are additionally payable from and secured by a lien on a portion of the moneys in the Hawaii Tobacco Settlement Special Fund which is prior and paramount to the lien of the Series 2015D Bonds and Series 2015E Bonds and the Series 2017B Bonds and Series 2017C Bonds . The University Bonds have a prior and paramount claim on the Legislative Appropriation pledged to such bonds. There are no University Bonds outstanding. The Board has covenanted not to issue any additional bonds under the University Bonds Resolution.

Reimbursable General Obligation Bonds. In addition to payment of debt service on the bonds issued for the Network, revenues from the Network are utilized to reimburse the State for debt service on certain reimbursable State of Hawaii general obligation bonds to the payment of which general obligation bonds the State has pledged its full faith and credit. Such reimbursement to the State is made after the payment of amounts due on the bonds issued for the Network and certain other amounts. The final installment of reimbursable general obligation bonds was paid in July 2017.

Master Financing Lease; Installment Contracts. The University entered into a "Master Financing Lease Agreement" in 1999 with Academic Capital Government Finance, Inc. for the lease of various equipment. Since the inception of the leasing agreement, the University has leased equipment from time to time. Payments under the leasing agreement are denominated as a "current expense" of the University, are not construed as a debt and are expressly subject to appropriation. In addition, the University from time to time purchases certain equipment under installment purchase contracts. Payments under these arrangements are also treated as a "current expense" of the University, are not construed as debt, are subject to appropriation and are payable from the revenues of the Network. Under both the aforesaid leasing agreement and installment purchases payments are generally made in monthly installments over the economic life of the equipment acquired. As of June 30, 2020, there were no outstanding obligations under the leasing agreement, nor under any installment purchase contract agreements.

EB-5 Financing – West Oʻahu. On May 4, 2012, the University entered into a five-year, unsecured loan agreement ("*Note*") with Hawaii Regional Center LP III ("*Lender*") for a commitment amount not to exceed $18 million, subject to certain limitations. The proceeds were used to facilitate and fund construction of the UH-West

O‘ahu campus located in Kapolei, Hawaii. The Note bears interest at the rate of 1.5% per annum, which is due and payable semi-annually to the Lender on January 1 and July 1 each year until the Note has been paid in full. Under the terms of the Note, repayment each fiscal year is limited and subject to specific appropriations by the State to make such payments. The Note matured on April 22, 2018, at which time the University paid the principal balance in full.

Energy Performance Contracts. The University previously entered into energy performance contracts with Johnson Controls, Inc. (“JCI”) to implement energy conservation equipment and alternate energy measures at the University’s Oahu community college campuses and Maui College. The University recently entered into Phase II energy performance contracts with JCI to lease additional energy conservation equipment at the University’s Oahu community college campuses and Maui College. JCI has assigned the equipment leases to Banc of America Public Capital Corp. (“BAPCC”). As of September 1, 2020, the University’s obligation to make lease payments under these agreements totals $30,198,713.

Public-Private Partnership - Atherton Mixed Use Student Housing Innovation and Entrepreneurship Center. The University is utilizing the public-private partnership process to develop two new capital projects at the Mānoa campus. The first is the redevelopment of Charles Atherton House YMCA facility and the Mary Atherton Richards House YMCA facility on a one acre site on University Avenue. These properties had previously been used for dormitories and YMCA program activities. UHF purchased the properties in 2017. UHF has entered into a partnership with Hunt Development Group, who will design, build, finance, operate and maintain the project, which will be leased to the University upon completion. The Mary Atherton Richards House will be demolished, and will be the site of a new six story dormitory to accommodate 350 residents. The Charles Atherton House will be renovated and repurposed as an Innovation and Entrepreneurship Center housing classrooms, offices, incubator spaces and retail space.

Public-Private Partnership - Graduate Student Housing. The University has entered into a public-private partnership with Greystar Development Services, LLC to develop a graduate student-oriented mixed use housing project on a 2.2 acre site on the Mānoa campus. The project site is the former location of three National Oceanographic and Atmospheric Administration buildings. The University will lease the property to the developer, who will design, build, finance, operate and maintain the project pursuant to specifications determined by agreement of the University and the developer. The project will offer 400 studio, one, two and three bedroom rental apartments to graduate students and junior faculty at below market rents. The project will consist of two high rise towers of up to 18 stories, connected by a two story common area podium. The first floor will include a new location for the University’s child care center that currently serves over 100 faculty, staff and student children, and retail space.

APPENDIX B
AUDITED FINANCIAL STATEMENTS

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UNIVERSITY of HAWAI'I®
SYSTEM

2019 Annual Financial Report, Required Supplementary Information and Other Supplementary Information University of Hawai'i State of Hawai'i

Research   Sustainability   Hawaiian Place of Learning

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Index
June 30, 2019 and 2018

CERTIFIED PUBLIC ACCOUNTANTS

Report of Independent Auditors

To the Board of Regents of the
University of Hawaiʻi

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of the University of Hawaiʻi (the "University"), a component unit of the State of Hawaiʻi, as of and for the years ended June 30, 2019 and 2018, and the related notes to the consolidated financial statements, which collectively comprise the University's basic financial statements as listed in the accompanying index.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these 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 financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We did not audit the financial statements of the University of Hawaiʻi Foundation (the "Foundation"), which represent 12.5 percent and 13.8 percent, respectively, of the total assets and deferred outflows of resources and 0.7 percent and 0.8 percent, respectively, of the total operating revenues of the University as of and for the years ended June 30, 2019 and 2018. Those financial statements were audited by other auditors whose reports thereon have been furnished to us, and our opinion expressed herein, insofar as it relates to the amounts included for the Foundation as of and for the years ended June 30, 2019 and 2018, are based solely on the reports of the other auditors. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits 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 the auditors' 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, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity'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, based on our audit and the reports of other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the University, as of June 30, 2019 and 2018, and the changes in financial position and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 1 to the consolidated financial statements, in 2019, the University adopted new accounting guidance under Governmental Accounting Standards Board ("GASB") Statement No. 83, *Certain Asset Retirement Obligations*, and GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. As a result of adopting GASB Statement No. 83, the University has restated the beginning net position for year ended June 30, 2018. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedules of the proportionate share of the net pension liability, pension contributions, changes in net OPEB liability and related ratios, and OPEB contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 5, 2019, on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

Accuity LLP

Honolulu, Hawai'i
December 5, 2019

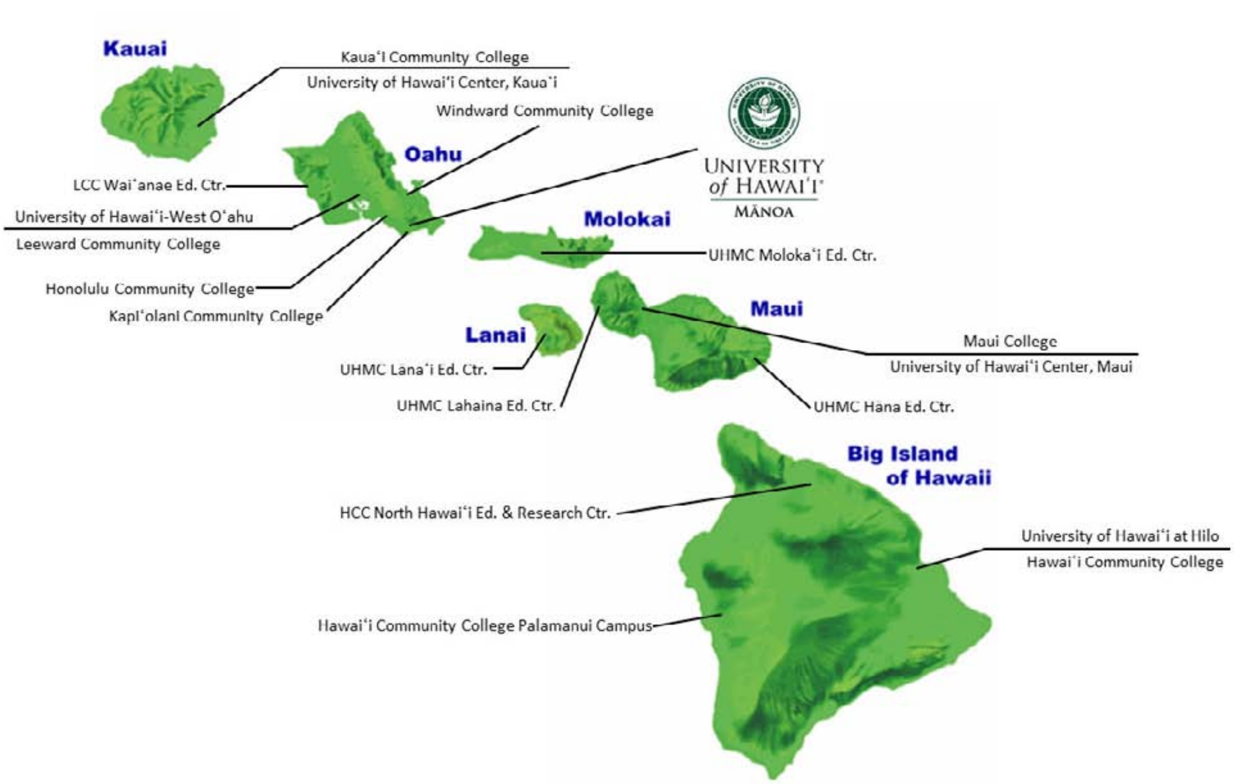
Introduction

The following discussion and analysis provides an overview of the consolidated financial position and activities of the University of Hawai‘i (the “University”) for the years ended June 30, 2019 and 2018, with selected information for the year ended June 30, 2017. This discussion has been prepared by management and should be read in conjunction with the financial statements and the notes thereto, which follow this section.

Founded in 1907 under the auspices of the Morrill Act, the University is a land-grant, sea-grant and space-grant institution and a 10-campus system comprised of a major research university (UH-Mānoa), two baccalaureate campuses (UH-Hilo and UH-West O‘ahu), seven community colleges (Hawai‘i, Honolulu, Kapi‘olani, Kauai, Leeward, Maui and Windward), and nine educational centers distributed across the State.

The University is the sole public higher education system within the State and, therefore, has a unique competitive position and value in Hawai‘i. Furthermore, the University is the only truly integrated higher education system in the country that seamlessly arranges its universities and community colleges into one system. Other public higher education systems in the country are typically separate and distinct systems defined by the type of system (community colleges, junior colleges, and universities).

In addition to being an integrated higher education system, the University distinguishes itself through its Hawai‘i, Asian and Pacific orientation and its position as one of the world’s foremost multicultural centers for global and indigenous studies. Students are members of a population in which no one ethnic group constitutes a majority, and the educational experience is enriched by the diversity of cultures represented.

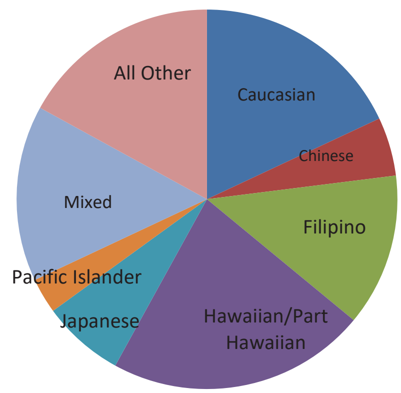


Students	Academic Year 2019	Academic Year 2018	Academic Year 2017
Undergraduate	44,564	46,375	47,903
Graduate	5,413	5,299	5,515
Total	**49,977**	**51,674**	**53,418**

Type of Degrees Awarded	**731**
Certificates: Community Colleges	176
Certificates: University	122
Associate degrees	127
Bachelor's degrees	147
Master's degrees	95
Doctoral degrees	60
Professional degrees	4

Residency	
Hawaiʻi	83%
Mainland	11%
U.S Affiliated	1%
Foreign	5%

Student Diversity (full time Students)	
Caucasian	18%
Chinese	5%
Filipino	13%
Hawaiian/Part Hawaiian	22%
Japanese	7%
Pacific Islander	3%
Mixed	15%
All Other	17%



Total Revenues ($ in thousands)	Fiscal Year 2019	% of Total	Fiscal Year 2018	Fiscal Year 2017
Net tuition and fees	$ 261,844	14%	$ 258,887	$ 270,123
Contracts and grants (including Pell grants)	443,786	24%	437,586	424,592
State appropriations	506,399	28%	485,153	471,453
Transfer from State for fringe benefits	286,479	16%	255,311	179,715
Sales and services	131,753	7%	130,011	130,867
Capital State appropriations	133,996	7%	184,103	159,094
Others	60,920	4%	120,929	202,376
Total	**$ 1,825,177**	**100%**	**$ 1,871,980**	**$ 1,838,220**

The University's Revenue Bond Ratings:

Moody's Investors Service - Aa2 with stable outlook
Fitch Ratings - AA with stable outlook

Using the Financial Statements

The University’s consolidated financial statements are prepared in accordance with Governmental Accounting Standards Board (“GASB”) principles, which establish standards for external financial reporting for public colleges and universities. The University’s consolidated financial statements are comprised of the following four components:

- **Statements of Net Position** – The Consolidated Statements of Net Position presents information on the University’s assets, deferred outflow of resources, liabilities, and deferred inflows of resources with the difference reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the University’s financial condition is improving or deteriorating. Net position increases when revenues exceed expenses, or when assets and deferred outflows of resources increase without a corresponding increase in liabilities and deferred inflows of resources. This is an indication of improving financial condition. However, when expenses exceed revenues, or when liabilities increase without a corresponding increase in assets, there is an indication of deteriorating financial condition.

- **Statements of Revenues, Expenses and Changes in Net Position** – The Consolidated Statements of Revenues, Expenses and Changes in Net Position present the University’s revenues and expenses and illustrate how current year activities improve or weaken the University’s financial condition. Changes in net position are reported when the underlying event occurs (accrual basis of accounting), which may be different from actual cash flows. In accordance with GASB requirements, certain significant revenues budgeted for fundamental operational support of the core instructional mission of the University must be recorded as nonoperating revenue, including state educational appropriations, private gifts, and investment income. Consequently, the Consolidated Statements of Revenues, Expenses and Changes in Net Position distinguish operating from nonoperating revenues and expenses. It is anticipated that the University will consistently report an operating loss since certain significant revenue sources relied upon for core operational needs are considered nonoperating revenue.

- **Statements of Cash Flows** – The Consolidated Statements of Cash Flows distinguish between cash inflows and outflows from operating activities, non-capital financing activities, capital and related financing activities, and investing activities.

- **Notes to Consolidated Financial Statements** – The notes provide additional information that is essential to a full understanding of the information presented in the consolidated financial statements.

Related Entities

The University maintains close relationships with two other entities, considered to be component units, whose financial information is blended into the University’s accompanying consolidated financial statements. The University of Hawai‘i Foundation (the “Foundation”) is a not-for-profit organization established to solicit and manage funds for the benefit of the University. The Research Corporation of the University of Hawai‘i (the “Research Corporation”) provides administrative support services for research and training programs of the University. Both of the University’s component units prepare stand-alone financial statements with footnotes, which are audited by independent auditors. Summarized information of the individual components of the University’s consolidated financial position, results of operations, and cash flows for the years ended June 30, 2019 and 2018 is presented in Note 17 to the consolidated financial statements.

Financial Position

The Consolidated Statements of Net Position presents information on all of the University's assets, deferred outflows of resources, liabilities, and deferred inflows of resources, with the difference between the components (assets and deferred outflows of resources, less liabilities and deferred inflows of resources) presented as net position. Net position is reported as one of three categories: net investment in capital assets, restricted, or unrestricted. Restricted net position is further classified as either expendable or nonexpendable. The University's assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position at June 30, 2019, 2018 and 2017 are summarized as follows (in thousands of dollars):

	2019	2018	FY 19 vs 18 Change	2017	FY 18 vs 17 Change
Current assets					
Cash and operating investments	$ 493,215	$ 437,927	$ 55,288	$ 424,276	$ 13,651
Receivables, net	106,820	103,249	3,571	98,041	5,208
Other current assets	24,374	26,011	(1,637)	21,741	4,270
Total current assets	624,409	567,187	57,222	544,058	23,129
Noncurrent assets					
Endowment and other investments	542,497	535,495	7,002	507,613	27,882
Capital assets, net	2,163,325	2,128,415	34,910	2,087,733	40,682
Other noncurrent assets	468,644	555,119	(86,475)	507,535	47,584
Total assets	3,798,875	3,786,216	12,659	3,646,939	139,277
Deferred outflows of resources					
Deferred outflows on net pension and OPEB liability and other	506,467	528,173	(21,706)	567,220	(39,047)
Total deferred outflows of resources	506,467	528,173	(21,706)	567,220	(39,047)
Total assets and deferred outflows of resources	$ 4,305,342	$ 4,314,389	$ (9,047)	$ 4,214,159	$ 100,230
Current liabilities	$ 272,384	$ 266,840	$ 5,544	$ 289,085	$ (22,245)
Noncurrent liabilities					
Long-term debt	487,490	506,655	(19,165)	524,565	(17,910)
Net pension liability and other postemployment benefits	3,496,296	3,432,460	63,836	2,493,243	939,217
Other noncurrent liabilities	149,171	157,129	(7,958)	112,568	44,561
Total liabilities	4,405,341	4,363,084	42,257	3,419,461	943,623
Deferred inflows of resources					
Deferred inflows on net pension and OPEB liability	69,780	53,497	16,283	65,171	(11,674)
Total deferred inflows of resources	69,780	53,497	16,283	65,171	(11,674)
Net position					
Net investment in capital assets	1,625,457	1,598,660	26,797	1,541,725	56,935
Restricted					
Nonexpendable	301,890	360,553	(58,663)	342,071	18,482
Expendable	633,393	606,866	26,527	586,825	20,041
Unrestricted	(2,730,519)	(2,668,271)	(62,248)	(1,741,094)	(927,177)
Total net position	(169,779)	(102,192)	(67,587)	729,527	(831,719)
Total liabilities, deferred inflows of resources and net position	$ 4,305,342	$ 4,314,389	$ (9,047)	$ 4,214,159	$ 100,230

Implementation of GASB Statements No. 83 and 75

During fiscal year 2019, the University implemented GASB Statement No. 83, *Certain Asset Retirement Obligations*. The objective of this Statement is to address accounting and financial reporting for certain asset retirement obligations related to tangible capital assets. This statement requires recognition of a liability for legal obligations to perform asset retirement activities related to tangible capital assets.

During fiscal year 2018, the University implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The adoption of Statement No. 75 has a significant impact on the University’s consolidated financial statements, which requires us to report expenditures, liabilities, deferred outflows of resources, and deferred inflows of resources in accordance with the provisions of Statement No. 75, rather than the accrual-based measurement under the provisions of GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Readers of the fiscal year 2018 financial statements should notice that the University’s balance sheet showed a significant financial impact by the full inclusion of the University’s proportionate share of the postemployment benefits other than pensions (“OPEB”) liability for the Hawai‘i Employer-Union Health Benefits Trust Fund (“EUTF”).

The adoption of GASB Statement No. 75 and 83 resulted in the restatement of the University’s beginning net position as of July 1, 2017 by $880.6 million and $2.9 million, respectively, from $729.5 million to a net deficit of $153.9 million, which reflected the retrospective effects of Statement No. 75 and 83.

Current Assets and Liabilities

Working capital is a good measure of both the University’s efficiency and financial health. Positive working capital means that the University has current assets in excess of current liabilities and is able to pay off short-term obligations. A working capital deficit would mean that the University is unable to meet its short-term obligations with existing current assets.

The University recorded an increase in working capital the last three fiscal years, which resulted mainly from the implementation of the new financial management policy. In November 2013, the University adopted a financial reserve policy to establish systemwide operating reserves from non-general fund revenue in amounts sufficient to provide continued operations for at least two months with a minimum of five percent unencumbered cash from all tuition and fee funds, special funds, and revolving funds. At June 30, 2019, 2018 and 2017, working capital amounted to $352.0 million, $300.3 million and $255.0 million, respectively. The University is committed to maintaining a prudent level of working capital to fund operations, including pre-funding approximately $381.5 million in extramural grants which were mostly paid on a cost reimbursement basis. Based on the $1.7 billion of operating expenses (excluding depreciation) for the year ended June 30, 2019, the working capital at year end represents approximately 69 days of operating funds, as compared to 61 and 57 days of operating funds in 2018 and 2017, respectively.

The components of the University's current assets and liabilities and their fluctuations during the three-year period are as follows:

- Current assets consist primarily of cash and cash equivalents, operating investments, and net receivables. Total current assets were $624.4 million, $567.2 million and $544.0 million at June 30, 2019, 2018 and 2017, respectively. Total current assets increased by $57.2 million, or 10.1 percent, at June 30, 2019, primarily due to a $9.0 million increase in cash and cash equivalents and $46.3 million increase in operating investments. The cash increase was attributable to the University implementing various cost control initiatives, including personnel cost reductions, which started in 2018. The operating investments increase was due to the University investing excess cash into government obligations. Total current assets increased by $23.1 million, or 4.3 percent, at June 30, 2018, primarily due to a $13.7 million increase in cash and operating investments and a $4.7 million increase in accounts receivable. The cash increase was attributable to the operating surplus from tuition and fees.

- Current liabilities consist primarily of accounts payable, accrued payroll and fringe benefits, advances from sponsor, and unearned revenue. Current liabilities also include amounts due to the State of Hawaiʻi, the current portion of long-term liabilities, and other current liabilities. Total current liabilities were $272.4 million, $266.8 million and $289.1 million at June 30, 2019, 2018 and 2017, respectively. Total current liabilities increased by $5.5 million, or 2.1 percent, at June 30, 2019, primarily due to increases in operating expenses. In fiscal year 2018, total current liabilities decreased by $22.2 million, or 7.7 percent, at June 30, 2018, primarily due to the final payment of the $17.0 million note payable ("EB-5 loan") with Hawaiʻi Regional Center LP III in fiscal year 2018.

Endowment and Other Investments

The University's endowment and other investments, including endowments held with the Foundation, increased by $7.0 million, or 1.3 percent, to $542.5 million at June 30, 2019 primarily as a result of an increase in investment income due to favorable market conditions. The fiscal year 2018 increase of $27.9 million, or 5.5 percent, was primarily due to additional gifts received and favorable market conditions.

Realized and unrealized net gains in fiscal years 2019 and 2018 totaled $23.0 million and $21.6 million, respectively. A summarized comparison of the University's investments as of June 30, 2019, 2018 and 2017 is as follows (in millions of dollars):

	2019	2018	2017
University of Hawaiʻi	$ 102.8	$ 102.2	$ 100.1
Foundation	439.7	433.3	407.5
Total	$ 542.5	$ 535.5	$ 507.6

The University’s endowment funds consist of both permanent endowments and funds functioning as endowments (quasi-endowment funds). Permanent endowment funds are funds received from donors or other outside agencies with the stipulation that the principal be inviolate and invested in perpetuity for the purpose of producing present and future income which may either be expended for the purposes specified by the donor or added to principal. Quasi-endowment funds are funds which the Board of Regents, rather than a donor or other outside agency, has allocated for long-term investment purposes. The Board of Regents, in accordance with its policies, is not required to maintain the quasi-endowment principal in perpetuity. Quasi-endowment funds are further categorized as restricted and unrestricted. Restricted quasi-endowment funds represent donor-restricted gifts, without the requirement to maintain the principal in perpetuity. Unrestricted quasi-endowment funds represent unrestricted funds designated by the Board of Regents for long-term investment purposes.

Programs supported by the University’s permanent and quasi-endowment funds include scholarships, fellowships, professorships, research efforts, and other important programs and activities. The University uses its endowment to support academic and research programs by generating a predictable stream of annual support for current needs, while preserving the purchasing power of the endowment funds for future periods.

The spending rate policy for the University’s self-managed endowment is to limit the immediate impact that significant changes in the fair value of the endowment portfolio have on annual distributions. The spending rate policy provides for an annual distribution, ranging between three percent and five percent of the five-year moving average of the endowment portfolio’s fair value. In fiscal years 2019, 2018 and 2017, the University instituted a 4.5 percent distribution rate on restricted and unrestricted endowments. The total restricted and unrestricted distributions available to the University amounted to $2.8 million, $2.7 million and $2.6 million in fiscal years 2019, 2018 and 2017, respectively.

Capital and Debt Activities

The University’s capital assets are separated into seven categories: land, buildings, infrastructure, land improvements, equipment, library materials, and construction in progress. At June 30, 2019, 2018 and 2017, total capital assets, net of accumulated depreciation, remained relatively constant at $2.2 billion, which represented approximately 57 percent of the University’s total assets. Capital asset additions totaled $180.9 million, $179.2 million and $173.1 million in fiscal years 2019, 2018 and 2017, respectively, while depreciable capital asset disposals, net of accumulated depreciation, amounted to $5.6 million, $10.9 million and $15.9 million, respectively.

Capital asset additions remained consistent in the past three fiscal years due to the number of ongoing strategic capital projects.

Capital Projects

One of the critical factors in enhancing the quality of the University's academic and research programs and student life enrichment is the development, replacement and renewal of capital assets. The University continues to modernize its older teaching and research facilities, and develops and constructs new facilities.

Significant capital projects completed during fiscal years 2019 and 2018 or in progress as of June 30, 2019 and 2018 include:

- **Coconut Island Marine Laboratory 1 & 2** – The new estimated completion date for the $21.5 million Coconut Island Marine Laboratory Buildings 1 & 2 renovation project is December 2020. The Hawai‘i Institute of Marine Biology at the University of Hawai‘i at Mānoa is a world-renowned research institute situated on Coconut Island in the Kāne‘ohe Bay. Coconut Island provides excellent opportunities for research as it covers approximately twenty-nine acres with six acres enclosed in lagoons that are used for keeping organisms in captivity for study. The ongoing research projects on the island cover many disciplines of tropical marine science conducted by researchers from all over the world.

- **Coconut Island Utility Rehabilitation/Replacement** – The $10 million new sewer and telecommunications infrastructure lines are scheduled to be completed in December 2019. The new infrastructure lines are built roughly forty feet below Kāne‘ohe Bay. New additions to the project scope were to upsize the waterline between Coconut Island and O‘ahu and to replace the existing sewer pump station.

- **Daniel K. Inouye College of Pharmacy** – The $33.7 million Daniel K. Inouye College of Pharmacy building is scheduled to be completed in December 2019. This new construction project will provide a two-story 45,000 square-foot building that will consolidate student laboratories, faculty offices, and Student Affairs under a single roof. It will also provide faculty and student lounges, private study rooms, and a lecture hall. In addition, the new building will include a simulated mannequin lab which features two highly realistic mannequins that, with the aid of computers, can physically respond to stimuli and upon which students can learn and practice medical procedures before treating real-life patients.

- **William S. Richardson School of Law Clinical Building** – The $9 million Community Legal Outreach Center at the William S. Richardson School of Law on the University of Hawai‘i at Mānoa campus will serve as a space for the growing clinical services offered by law school students and faculty and is estimated to be completed in November 2019. Currently, students provide thousands of hours of free legal help to some of Hawai‘i's most vulnerable people, including the elderly, troubled and incarcerated youth, veterans, and families living at or near poverty levels. The new building will provide much needed space for these invaluable service offerings.

- **University of Hawai‘i at Mānoa Life Sciences Building** – The $57.7 million University of Hawai‘i at Mānoa Life Sciences Building is estimated to be completed in February 2020. This new Life Sciences Building will play a critical role in expanding inter-disciplinary educational and research opportunities for our students and faculty and will provide multi-disciplinary shared spaces that inspire learning and advancement. The building will include teaching and research laboratories, laboratory support spaces, and office spaces for the College of Natural Sciences, biology, microbiology and botany departments along with the Pacific Biosciences Research Center, which operates the state's only transmission electron microscope.

- **University of Hawai‘i West O‘ahu Creative Media Building** – The $33.7 million Creative Media Building at the University of Hawai‘i at West O‘ahu is estimated to be completed in August 2020. This new design-build project will house the existing Academy of Creative Media (“ACM”) program in a 33,000 square foot facility. The building will combine teaching facilities, production facilities, faculty offices, creative workspaces, and an incubator for emerging companies. The building expands the current UH-West O‘ahu ACM program from approximately 110 student majors to an anticipated 500 majors.

- **University of Hawai‘i at Mānoa Athletic Gymnasium 1 & 2** – The $9.5 million renovation of Athletic Gymnasiums 1 & 2 was completed in July 2019. The project consisted of net zero photovoltaic and roof system and additional thermal insulation for occupants’ comfort and to reduce the noise level. The floors, fixed equipment, and electrical equipment were also upgraded.

- **University of Hawai‘i West O‘ahu Allied Health and Administration Building** – The grand opening for the University of Hawai‘i West O‘ahu Allied Health and Administration building took place on December 12, 2018. The $32 million two-story 43,000 square foot building houses the allied health, community health, health information management, long-term care, and biology programs and will contain administrative offices, faculty offices, classrooms, and lab spaces. The structure is expected to receive at least a Silver LEED certification because of the motion sensor lighting, solar hot water, and water conservation systems. A one hundred-kilowatt rooftop photovoltaic system design was developed for the building.

- **Leeward Community College Product Development Center Renovation** – The $9 million renovation is a cooperative project between the University of Hawai‘i and the Department of Agriculture’s Agribusiness Development Corporation (“ADC”). The 16,000 square foot facility will include a commercial grade kitchen, flexible classroom space, processing and manufacturing rooms, laboratories, and a public loft space. The product development center will take agricultural items that would normally be wasted and turn it into value-added food products that they can market and sell.

- **Leeward Community College “DA Native Hawaiian Center for Excellence”** – The $6.9 million project is scheduled to be completed in February 2020. Leeward Community College is leading the way in the University of Hawai‘i’s commitment to “support vigorous programs of study and support for the Hawaiian language, history, and culture” with the renovation of the building. Leeward Community College currently has the most Native Hawaiian students enrolled. The renovation will add a new ethnobotany/fiber arts lab and classroom and a dance studio.

Financing

The University uses a variety of sources, including federal and state support, revenue bonds, bank loans, gifts, and other expendable resources to finance capital projects.

- **General obligation bonds** – The State of Hawai‘i continues to provide strong support to the University and issued general obligation bonds to help finance certain University projects. These bonds are carried as liabilities of the State. In fiscal years 2019, 2018 and 2017, the State appropriated funds directly to the Department of Budget and Finance to pay for debt service on general obligation bonds issued for the University. As a result, the University itself received no appropriations and made no transfers for debt service on general obligation bonds for these fiscal years. In fiscal years 2019, 2018 and 2017, $116.3 million, $108.0 million and $111.3 million, respectively, were appropriated.

- **Revenue bonds** – The University also issued revenue bonds to finance capital projects. These bonds are carried as liabilities of the University. Total revenue bond liabilities were $506.7 million, $525.4 million and $543.7 million for fiscal years 2019, 2018 and 2017, respectively. The University revenue bonds were assigned municipal bond ratings of “Aa2” and “AA” by Moody’s Investors Service and Fitch Ratings, respectively. The University has appropriated funds, by statute, from the State of Hawai‘i Tobacco Settlement Special Fund for the payment of principal and interest on revenue bonds to finance the cost of construction of the medical school facility and received funds for debt service in the amount of $9.4 million, $9.4 million and $11.8 million in fiscal years 2019, 2018 and 2017, respectively. The University also receives a portion of the State of Hawai‘i’s cigarette tax revenues, by statute, for the University of Hawai‘i Cancer Center to be used for research and operating expenses and capital expenditures. In each of the fiscal years 2019, 2018 and 2017, $7.9 million from cigarette tax revenues was used to cover debt service for the bonds that financed the University of Hawai‘i Cancer Center. Refer to Note 10 for more information regarding the University revenue bonds.

- **Line of credit** – On April 20, 2017, the Foundation entered into a 10-year $13.2 million acquisition and construction credit facility (the “Loan”) for the purchase and renovation of the Charles Atherton House and the Mary Atherton Richards House (the “Atherton Property”). The Loan is secured by the fee simple interest and improvements on the Atherton Property, along with an assignment of a long-term lease and rents due thereunder from the University. Under terms of the credit facility, interest-only payments are required for the first 36 months at a fixed rate of three percent and, thereafter monthly installments of principal and interest, based on a 25-year amortization schedule, at a fixed rate of four percent through the remaining term of the Loan. The Loan matures on April 1, 2027. As of June 30, 2019, the outstanding balance on the Loan was $8.2 million.

- **Equipment lease obligations** – In November 2017, the University entered into two tax-exempt lease purchase (“TELP”) agreements to fund the acquisition of energy conservation measures at the four O‘ahu community college campuses (Honolulu, Kapi‘olani, Leeward and Windward) and Maui College, for $24.2 million and $6.3 million, respectively. Purchases were financed with a bank and the proceeds were deposited into an acquisition fund held to provide for future payments. See Note 10 for further information.

Net Position

Net position represents the residual interest in the University’s assets after liabilities are deducted. At June 30, 2019, 2018 and 2017, total net position amounted to $(169.8) million, $(102.2) million and $729.5 million, respectively. Net position is reported in four major categories: net investment in capital assets, restricted nonexpendable, restricted expendable, and unrestricted. The University’s net position at June 30, 2019, 2018 and 2017 is summarized as follows (in thousands of dollars):

	2019	2018	2017
Net investment in capital assets	$ 1,625,457	$ 1,598,660	$ 1,541,725
Restricted – Nonexpendable	301,890	360,553	342,071
Restricted – Expendable	633,393	606,866	586,825
Unrestricted	(2,730,519)	(2,668,271)	(1,741,094)
Total net position	$ (169,779)	$ (102,192)	$ 729,527

Net investment in capital assets is the University’s capital asset, net of accumulated depreciation and the related outstanding debt used to finance the acquisition, construction or improvement of those assets.

The net investment in capital assets increased by $26.8 million in fiscal year 2019, primarily due to a net increase in capital assets of $8.1 million and $19.2 million in related debt retirement. The net investment in capital assets increased by $56.9 million in fiscal year 2018, primarily due to a net increase in capital assets of $40.7 million and $17.9 million in capital related debt retirement.

Restricted nonexpendable net position primarily represents the University’s and Foundation’s permanent endowment funds, which are required to be maintained in perpetuity and amounted to $301.9 million, $360.6 million and $342.1 million at June 30, 2019, 2018 and 2017, respectively. The decrease of $58.7 million in fiscal year 2019 was primarily due to unrealized losses on interests in perpetual trusts held by others. The increase of $18.5 million in fiscal year 2018 was primarily attributable to new permanent endowment gifts received.

Restricted expendable net position is subject to externally imposed restrictions governing their use. Net position was restricted for the following purposes at June 30, 2019, 2018 and 2017 (in thousands of dollars):

	2019	2018	2017
Plant facilities	$ 386,844	$ 362,584	$ 354,780
Donor-restricted activities	231,214	227,102	215,608
Loan activities	18,400	21,228	24,131
External sponsor activities	(3,065)	(4,048)	(7,694)
	$ 633,393	$ 606,866	$ 586,825

In fiscal year 2019, the overall increase of $26.5 million in restricted expendable net position was due to $24.3 million in net capital asset related activity. The fiscal year 2019 capital asset activity was mainly comprised of State capital appropriations offset by capital asset disposals and operating expenses associated with capital assets. In fiscal year 2018, the overall increase of $20.0 million in restricted expendable net position was due to $7.8 million and $11.5 million in capital asset related activity and donor-restricted activity, respectively.

Net position that is not subject to externally imposed restrictions governing their use is classified as unrestricted for financial reporting purposes. At June 30, 2019, 2018 and 2017, unrestricted net positions amounted to deficits of $2.73 billion, $2.67 billion and $1.74 billion, respectively. Although unrestricted net position is not subject to externally imposed restrictions, all of the University’s unrestricted net positions have been internally designated for various academic and research programs and initiatives, contractual commitments, and capital projects. In addition, unrestricted net positions of $52.6 million, $45.9 million and $44.8 million were designated for endowment activities at June 30, 2019, 2018 and 2017, respectively.

The reduction in unrestricted net positions for the years ended June 30, 2019 and 2018 was caused by the University’s required accounting and recognition of the University’s allocated share of the State’s actuarially determined net pension and OPEB liabilities.

Below is a table showing the unrestricted net position excluding the impact of the net pension and OPEB liabilities (in thousands of dollars):

	2019	2018	2017
Unrestricted net position	$ (2,730,519)	$ (2,668,271)	$ (1,741,094)
Pension	1,399,792	1,308,560	1,212,416
OPEB	1,674,987	1,666,481	788,773
Adjusted net unrestricted position	$ 344,260	$ 306,770	$ 260,095

Results of Operations

The Consolidated Statements of Revenues, Expenses and Changes in Net Position represent the University’s results of operations for the year. It indicates whether the financial condition of the University improved or deteriorated. For financial reporting purposes, certain significant revenues, including state appropriations, private gifts, and investment income, which are relied upon and budgeted to support the University’s core operations, are required to be reported as nonoperating revenues. The University’s results of operations for the years ended June 30, 2019, 2018 and 2017 summarized to match revenues supporting core activities with expenses associated with core activities, are as follows (in thousands of dollars):

	2019	2018	FY 19 vs 18 Change	2017	FY 18 vs 17 Change
Revenues					
Operating					
Tuition and fees	$ 394,952	$ 393,452	$ 1,500	$ 403,177	$ (9,725)
Less: Scholarship allowances	(133,108)	(134,565)	1,457	(133,054)	(1,511)
Grants and contracts	390,264	381,530	8,734	368,892	12,638
Sales and services	131,753	130,011	1,742	130,867	(856)
Other revenue	1,703	1,628	75	1,648	(20)
Total operating revenues	785,564	772,056	13,508	771,530	526
Nonoperating					
State appropriations and transfers for fringe benefits	792,878	740,464	52,414	651,168	89,296
Federal Pell grant	53,522	56,056	(2,534)	55,701	355
Net investment income (loss)	(31,513)	37,129	(68,642)	42,509	(5,380)
Private gifts	37,956	39,895	(1,939)	31,233	8,662
Total nonoperating revenues	852,843	873,544	(20,701)	780,611	92,933
Total revenues supporting core activities	1,638,407	1,645,600	(7,193)	1,552,141	93,459
Expenses					
Operating					
Compensation and benefits	1,320,016	1,258,712	61,304	1,235,479	23,233
Supplies, services and cost of goods sold	185,999	188,572	(2,573)	193,411	(4,839)
Telecom and utilities	69,455	65,726	3,729	59,957	5,769
Scholarships and fellowships	42,639	42,746	(107)	41,771	975
Other expense	112,533	106,419	6,114	124,786	(18,367)
Total operating expenses	1,730,642	1,662,175	68,467	1,655,404	6,771
Nonoperating (revenues) expenses					
Transfers from State, net	(25,489)	(26,810)	1,321	(28,879)	2,069
Transfers (from) to Federal – capital assets	(87)	84	(171)	505	(421)
Transfers (from) to other State agencies	(269)	5,924	(6,193)	-	5,924
Interest expense	25,208	25,585	(377)	26,900	(1,315)
Total nonoperating revenues	(637)	4,783	(5,420)	(1,474)	6,257
Expenses associated with core activities before depreciation	1,730,005	1,666,958	63,047	1,653,930	13,028
Loss from core activities before depreciation	(91,598)	(21,358)	(70,240)	(101,789)	80,431
Depreciation	131,034	127,842	3,192	122,841	5,001
Expenses associated with core activities including depreciation	1,861,039	1,794,800	66,239	1,776,771	18,029
Loss from core activities	(222,632)	(149,200)	(73,432)	(224,630)	75,430
Other nonoperating activity					
Capital gifts and grants	147,950	190,415	(42,465)	171,652	18,763
Permanent endowment	11,850	14,354	(2,504)	96,024	(81,670)
Other expenses, net	(4,755)	(3,836)	(919)	(9,970)	6,134
Other nonoperating income, net	155,045	200,933	(45,888)	257,706	(56,773)
Increase (decrease) in net position	(67,587)	51,733	$ (119,320)	33,076	$ 18,657
Net position					
Beginning of year	(102,192)	729,527		696,451	
Adjustment for change in accounting principle	-	(883,452)		-	
Beginning of year, as restated	(102,192)	(153,925)		696,451	
End of year	$ (169,779)	$ (102,192)		$ 729,527	

Revenues Supporting Core Activities

The University has a diversified stream of revenues to support its operations. No single source generated more than 30 percent of the total 2019 revenue. State appropriations and tuition and fees are the core components that support the University’s instructional and academic programs. Government and nongovernmental grants and contracts provide opportunities for under-graduate and graduate students to participate in basic research with renowned researchers. Private gifts contribute toward the support of the University’s instructional and academic initiatives. Sales and services revenues include revenues from educational departments and auxiliary enterprises, including bookstores, student and faculty housing, food services, parking, and athletics.

Tuition and fees revenue, net of scholarship allowances, remained relatively consistent in fiscal year 2019 as a result of tuition rate increases exceeding enrollment declines. The decrease in fiscal year 2018 was primarily attributable to the continued decline in enrollment. Scholarship allowances amounted to $133.1 million, $134.6 million and $133.1 million in fiscal years 2019, 2018 and 2017, respectively.

One of the largest sources of revenue (26 percent) continues to be grants and contracts. Total grants and contracts revenue increased by $8.7 million, or 2.3 percent in fiscal year 2019. The increase was primarily due to a net increase of federal awards of approximately $4.0 million. The University received a new Federal award from the U.S. Army Corps of Engineers Fort Worth District in fiscal year 2019 for approximately $3.6 million. There was also an increase in nongovernmental sponsored programs of $2.8 million. In fiscal year 2018, the increase was mainly from a net increase of federal awards of approximately $11.3 million.

Sales and services revenues, which are mainly comprised of bookstores, student and faculty housing, food services, parking, and athletics remained relatively consistent in fiscal years 2019 and 2018.

The State continues to provide strong financial support to the University as the sole public higher education system within the State. General state appropriations increased by $21.2 million, or 4.4 percent, to $506.4 million in fiscal year 2019 and increased by $13.7 million, or 2.9 percent, to $485.2 million in fiscal year 2018. The increase in fiscal year 2019 was primarily attributable to an increased allotment of $19.5 million for salary increases of 2.82 percent as negotiated by the collective bargaining agreements. The increase in fiscal year 2018 was primarily attributable to a $10.1 million allotment for salary increases of 2.13 percent as negotiated by collective bargaining agreements, which is a $20.8 million increase from the fiscal year 2017 allotment of $38.4 million.

The State also pays for fringe expense for the University’s general and federal employees. The transfers for fringe expense amounted to $286.5 million, $255.3 million and $179.7 million in fiscal years 2019, 2018 and 2017, respectively. The year-over-year increases were due to rising fringe benefit rates.

The University’s net investment income for fiscal year 2019, as compared to fiscal year 2018, decreased by $68.6 million. The fiscal year 2019 decrease was mainly due to a decrease in the Foundation’s investment income of $78.5 million. The University’s net investment income for fiscal year 2018, as compared to fiscal year 2017, decreased by $5.4 million mainly due to smaller market growth.

The components of net investment income for the years ended June 30, 2019, 2018 and 2017 are as follows (in thousands of dollars):

	2019	2018	FY 19 vs 18 Change	2017	FY 18 vs 17 Change
Interest and dividend income	$ 17,271	$ 13,014	$ 4,257	$ 9,330	$ 3,684
Net realized gains	3,292	6,768	(3,476)	10,733	(3,965)
Net unrealized gains	14,622	14,811	(189)	23,974	(9,163)
Split-interest agreements	(64,624)	3,659	(68,283)	(521)	4,180
Other, net	(2,074)	(1,123)	(951)	(1,007)	(116)
	$ (31,513)	$ 37,129	$ (68,642)	$ 42,509	$ (5,380)

Private gifts, most of which are restricted as to use, remained relatively consistent in fiscal year 2019. Private gifts increased to $39.9 million in fiscal year 2018 compared to $31.2 million in fiscal year 2017. The fiscal year 2018 change was primarily due to an increase in the Research Corporation’s cash contributions of $3.4 million and pledge contributions of $7.6 million.

Expenses Associated with Core Activities

The University is committed to recruiting and retaining outstanding faculty and staff and providing compensation equivalent to peer institutions and nonacademic employers. Of the University’s operating expenses, approximately 80.3 percent, 81.8 percent and 77.3 percent were related to compensation and benefits during fiscal years 2019, 2018 and 2017, respectively.

Compensation and benefits went up by $61.3 million, or 4.9 percent, to $1,320 million in fiscal year 2019 as compared to fiscal year 2018, and increased by $23.2 million, or 1.9 percent, to $1,259 million in fiscal year 2017. The fiscal year 2019 increase was attributable to increases in payroll and OPEB expense of $23.0 million and $30.5 million, respectively. The fiscal year 2019 increase in payroll expense was due to a 2.82 percent salary increase to all University faculty, effective July 1, 2018, and an increase in OPEB expense. The fiscal year 2018 increase was attributable to increases in pension and OPEB expense of $19.3 million and $2.2 million, respectively. The fiscal year 2018 increase in pension expense was due to the University’s recording of the actuarially determined expense, and the increase in OPEB expense was due to the implementation of GASB Statement No. 75.

Supplies, services and cost of goods sold expense includes service fees, printing and binding, advertising, dues and subscriptions, controlled property acquisitions, cost of goods sold for resale items, and other miscellaneous operating costs. In fiscal year 2019, such expenses remained relatively consistent compared to fiscal year 2018. In fiscal year 2018, such expenses decreased by $4.8 million, or 2.5 percent, to $188.6 million as compared to fiscal year 2017. The fiscal year 2018 decrease was primarily attributable to the non-recurring federally funded equipment expense of $5.7 million in fiscal year 2017.

The University is committed to providing affordable yet quality education to its students. To accomplish this goal, student aid is provided in the form of scholarships and fellowships, including tuition and fee waivers applied to student accounts and reflected as reductions and allowances to student tuition and student housing revenues, and scholarship and fellowship payments (mostly academic and athletic) made directly to students.

Total aid to students of $175.7 million in fiscal year 2019 stayed relatively consistent as compared to fiscal year 2018. Total aid to students increased by $2.5 million, or 1.4 percent, to $177.3 million in fiscal year 2018 as compared to 2017. The increase was primarily attributable to an increase in scholarship allowance from the additional state funding for the Hawai‘i Promise scholarship.

Other operating expenses increased by $6.1 million, or 5.7 percent, to $112.4 million in fiscal year 2019 and decreased by $18.4 million, or 14.7 percent, to $106.4 million in fiscal year 2018. The increase in fiscal year 2019 is primarily due to an increase in repairs and maintenance for the University of $5.8 million. The decrease in fiscal year 2018 is primarily a result of the University’s recording of a one-time expense in fiscal year 2017 of $13.6 million. Due to the expiration of the Federal Perkins Loan program in September 2017, the University is required to return the Federal Capital Contribution (“FCC”) from the Perkins Loan Revolving Funds on a regular basis until such time as all of the University’s outstanding Perkins Loans have been paid in full, or otherwise fully retired, or assigned to the federal government. The return of the FCC was recorded in accordance with GASB Statement No. 33.

The University depreciates its capital assets over their estimated useful lives using the straight-line method. Depreciation expense increased by $3.2 million, or 2.5 percent, to $131.0 million during fiscal year 2019 as compared to fiscal year 2018. Depreciation expense increased by $5.0 million, or 4.1 percent, to $127.8 million during fiscal year 2018 as compared to fiscal year 2017. The increases in fiscal years 2019 and 2018 were primarily attributable to increases in depreciable assets relating to buildings and infrastructure.

Transfers from State, net amounted to $25.5 million, $26.8 million and $28.9 million in fiscal years 2019, 2018 and 2017, respectively. Transfers from State were primarily for the tobacco settlement funds paying for John A. Burns School of Medicine revenue bond debt service and the University of Hawai‘i Cancer Center cigarette stamp tax collections.

Other Nonoperating Activities

Revenues from other nonoperating activities are generally not used to support the University’s current operations and are comprised primarily of capital gifts and grants and additions to permanent endowments. Capital gifts and grants and state capital appropriations and transfers may only be used for the purchase or construction of specified capital assets. While additions to permanent endowments must be retained in perpetuity, investment earnings thereon may be available in future years to support specified programs.

In fiscal year 2019, capital gifts and grants, including state capital appropriations and transfers, decreased by $42.5 million, or 22.3 percent, to $148.0 million as compared to $190.4 million in fiscal year 2018. The decrease in fiscal year 2019 was primarily attributable to a decrease in capital appropriations from the State and an increase in capital gifts and grants. Capital appropriations decreased by $50.1 million, or 27.2 percent, to $134.0 million as compared to the capital appropriations in fiscal year 2018 of $184.1 million. This decrease is primarily due to decreased allotments for maintenance and renewal of capital assets. Capital gifts and grants increased by $4.2 million, or 134.3 percent, to $7.3 million. This increase is primarily due to a $3.9 million increase in capital gifts received by the Foundation. The increase in fiscal year 2018 of $18.8 million was primarily attributable to the increase of capital appropriations from the State by $25.0 million, or 15.7 percent, to $184.1 million. This increase was primarily due to increased allotments for maintenance and renewal of capital assets.

Endowed gifts supply permanent capital and an ongoing stream of current earnings to the University. Programs supported by endowment returns include academic programs, scholarships, fellowships, professorships, chairs and research activities. In fiscal year 2019, additions to the permanent endowment remained relatively consistent as compared to the prior year. In fiscal year 2018, additions to the permanent endowment decreased by $81.7 million to $14.4 million, when compared to $96.0 million in fiscal year 2017. The decrease in additions to the permanent endowment was due to a fiscal year 2017 gift from alumnus Jay H. Shidler, who provided $80.2 million in endowed gifts.

Cash Flows

The Consolidated Statements of Cash Flows present the University’s significant sources and uses of cash and cash equivalents, including restricted cash balances. The University’s cash is comprised primarily of demand deposits and time certificates of deposit with an original maturity of three months or less. A summary of the University’s cash flows for the years ended June 30, 2019, 2018 and 2017 is as follows (in thousands of dollars):

	2019	2018	FY 19 vs 18 Change	2017	FY 18 vs 17 Change
Cash received from operations	$ 780,413	$ 761,920	$ 18,493	$ 789,810	$ (27,890)
Cash payments for operations	(1,326,177)	(1,311,164)	(15,013)	(1,313,781)	2,617
Net cash used in operating activities	(545,764)	(549,244)	3,480	(523,971)	(25,273)
Net cash provided by noncapital financing activities	621,312	602,337	18,975	578,881	23,456
Net cash used in capital and related financing activities	(46,397)	(46,026)	(371)	(51,003)	4,977
Net cash provided by (used in) investing activities	(20,189)	46,714	(66,903)	(37,990)	84,704
Net increase (decrease) in cash	8,962	53,781	(44,819)	(34,083)	87,864
Cash					
Beginning of year	122,877	69,096	53,781	103,179	(34,083)
End of year	$ 131,839	$ 122,877	$ 8,962	$ 69,096	$ 53,781

The University’s cash and cash equivalents increased by $9.0 million, or 7.3 percent, to $131.8 million at June 30, 2019 from $122.9 million at June 30, 2018. The University’s cash and cash equivalents increased by $53.8 million, or 77.8 percent, to $122.9 million at June 30, 2018 from $69.1 million at June 30, 2017. During fiscal year 2019, $545.8 million in cash was used for operating activities, offset by $621.3 million in cash provided by noncapital financing activities. Net cash used in capital and related financing activities and net cash provided by investing activities amounted to $46.4 million and $20.2 million in fiscal year 2019.

The net cash used in operating activities decreased by $3.5 million in fiscal year 2019 and increased by $25.3 million in fiscal year 2018. The decrease in fiscal year 2019 was primarily due to payments to employees, which increased by $21.2 million as a result of higher compensation and fringe expense, and offset by increases in cash received from student tuition and fees, and grants and contracts by $17.9 million. The increase in fiscal year 2018 was largely due to an increase in payments to employees caused by an increase in personnel costs coupled with a decrease in student tuition and fees caused by a decrease in enrollment.

In fiscal year 2019, net cash used in capital and related financing activities remained relatively consistent as compared to the prior year. The $5.0 million decrease in net cash used in capital and related financing activities in fiscal year 2018 as compared to fiscal year 2017 were attributable to the change in cash inflows : $48.3 million increase in capital appropriations, $7.3 million decrease in proceeds from capital debt, $3.7 million decrease in capital gifts and grants, offset by the change in cash outflows: $18.7 million increase in purchases of capital assets and $12.7 million increase in principal paid on capital debt and leases (cash outflow).

The net cash used in investing activities increased $66.9 million from $46.7 million in fiscal year 2019. The increase in fiscal year 2019 was primarily due to a $6.8 million increase in investment purchases and a $57.2 million decrease in sales and maturities of investments.

There was a net difference of $84.7 million in investing activity cash flows as there was $46.7 million in net cash provided by investing activities in fiscal year 2018 compared to $38.0 million in net cash used in investing activities in fiscal year 2017. The increase was primarily due to a $162 million decrease in investment purchases, offset by a $81 million decrease in proceeds from investment sales and/or maturities.

Looking Forward

The University of Hawai'i is the sole provider of public higher education in Hawai'i, known for generating streams of talent, knowledge and social benefits, and has always been at the center of the Hawai'i economic engine. The University's programs attract students and faculty from Hawai'i, the mainland, and many international countries and leverage hundreds of millions of dollars in state, federal and private funding to promote discovery of new knowledge that fuels economic growth.

The University of Hawai'i is well recognized for its academic excellence and value in higher education both nationally and internationally.

- *U.S. News and World Report* released its 2020 Best Graduate Schools list that includes:
  - The University of Hawai'i at Mānoa School of Nursing in the top tier, 50 out of 179 schools, for Best Online Graduate Nursing Programs in 2019.
  - The John A. Burns School of Medicine ranked 56th nationally in medical research and 55th in medical primary care among 185 medical schools in America.
  - The William S. Richardson School of Law's evening part-time program ranks in the top 30 in the annual national rankings.
  - The Myron B. Thompson School of Social Work ranked 51st of 262, placing it in the top 25 percent of programs nationally for the past six years.
  - The part-time Master of Business Administration program (Global MBA, 36-month plan) at the Shidler College of Business ranked 117th among 287 part-time MBA programs that qualified for the ranking.
  - The College of Education is ranked 66th of 392 schools.
- The Community College System was ranked in the top 20 of WalletHub's 2018 list, placing 15th from a sample of 715 schools. WalletHub ranked community colleges based on cost, education and career outcomes.

- The University of Hawaiʻi at Mānoa ranked 326 on the 2020 Quacquarelli Symonds World University Ranking ("QSWUR"). The QSWUR is the ranking most used and referenced by international students.

The University's strength is further demonstrated through its credit ratings. The University maintained its Aa2 with stable outlook by Moody's Investors Service in March 2019 and AA with stable outlook was affirmed by Fitch Ratings in September 2019. Both credit agencies have cited some of the strong characteristics of the University:

- Dominant provider of higher education and important economic development driver in the State of Hawaiʻi.
- Strong operating support from the State of Hawaiʻi.
- Unique academic programming and research, and well-diversified revenue.
- Low debt burden which reflects strong and growing capital support from the State of Hawaiʻi.
- Improved cash and investment cushion and reserve.

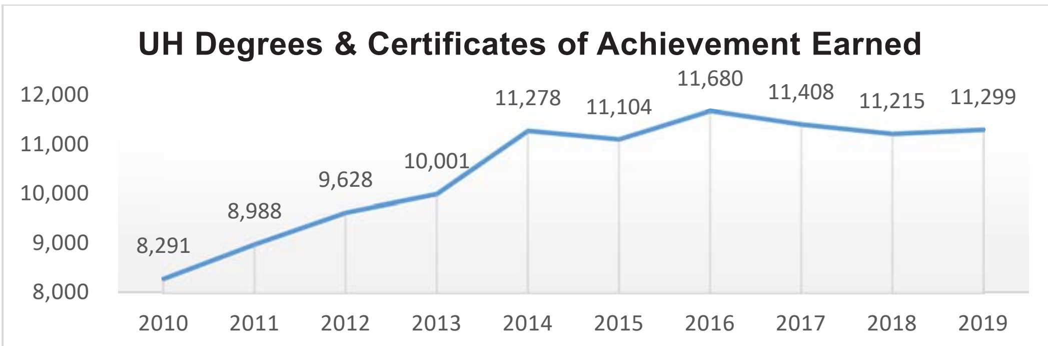
The University is committed to improving the social, economic and environmental well-being of current and future generations. To that end, the University developed and implemented the University of Hawaiʻi Strategic Directions, 2015–2021, built upon previous work outlined in the Strategic Outcomes and Performances Measures, 2008–2015. This will guide the University's priorities for the next three biennia to achieve the outcomes directed by the Board of Regents.

The strategic directions for the University were updated in October 2018 to reflect the institutional priorities through 2021 as listed below:

- Hawaiʻi Graduation Initiative.
- Hawaiʻi Innovation Initiative.
- 21st Century Facilities.
- Mission Focused System.
- High Performing System.

Hawaiʻi Graduation Initiative

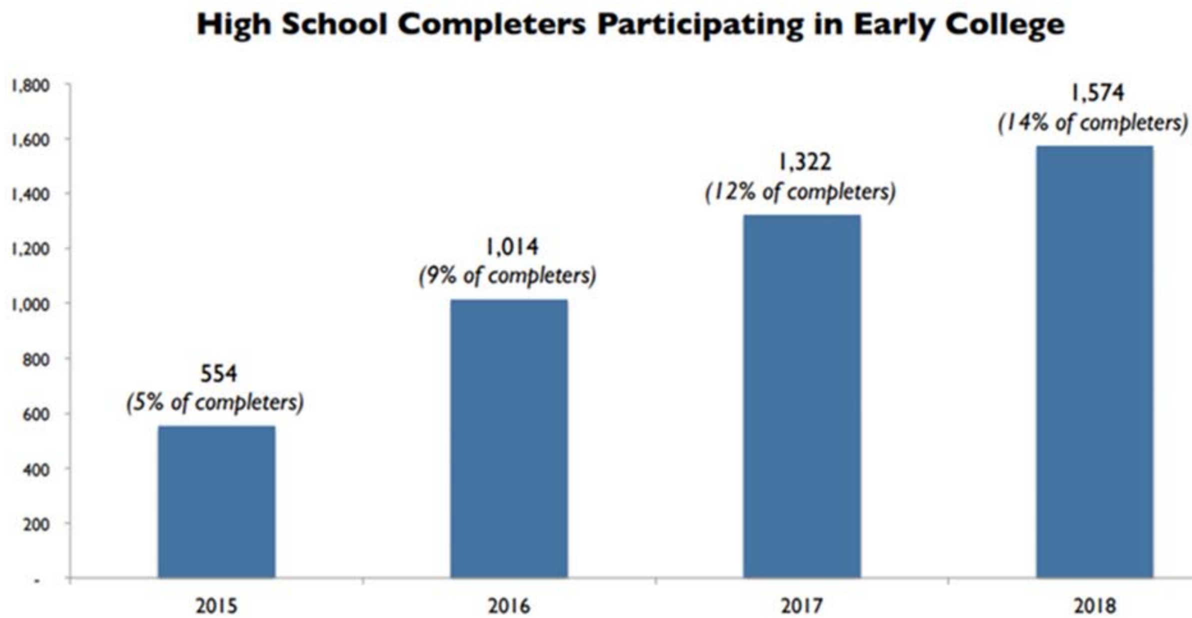
An educated labor force and engaged citizenry are essential in today's global, knowledge-based economy. The State of Hawaiʻi has set goals to increase the percentage of working age adults with two- or four-year degrees to 55 percent by 2025 (*55 by '25 Campaign*). As the sole provider of public higher education in Hawaiʻi, the University is doing its part to increase the number of educated citizens within the State. In 2010, the Hawaiʻi Graduation Initiative ("HGI") was established with a set of goals to increase the graduation rate between 4 percent and 5 percent annually. Because of the focused efforts, the University of Hawaiʻi increased its degrees and certificates of achievement earned by 43 percent since 2008.



As part of the HGI's tactical plans, the *15 to Finish Campaign* was launched to encourage students to take 15 credits per semester (or 30 credits per year) to graduate on time (i.e., in most cases, two years for an associate degree and four years for a bachelor's degree). As a result, 66 percent of all freshmen take 12 or more credits at the community colleges, and more than 90 percent at the four-year campuses. According to our analysis, students taking 15 credits per semester had significantly higher retention at all levels of academic preparation.

To further the HGI, the University has developed the *Guided Pathways System* ("GPS") that provides undergraduate students with the optimal path to their destination, i.e., graduation. When students select a new program of study, GPS helps with their registration and creates a path for the students based on where they are and where they want to go and adds in default 15 credit academic maps. With registration through GPS, more students are enrolled in 15 credits per semester.

Another part of HGI’s tactical plan is the Early College program, which is a collaboration between the University and the Hawai‘i State Department of Education (“DOE”), offering students the opportunity to take college courses at their high schools while simultaneously earning credit toward both high school and college diplomas. Over 3,200 high school students are participating in a variety of dual credit programs, including Early College, Early Admit, and Jump Start to earn both college and high school credits.



Enrollment and Tuition

Enrollment at the University of Hawai‘i’s ten campuses decreased by about two percent in the fall 2019 semester compared to fall 2018, from 51,063 students to 49,977 students. Nine of the 10 UH campuses saw reductions in enrollment, reflecting the national trend of declining enrollment since peak highs following the 2008 recession. Windward Community College is the only UH campus to see an enrollment increase with 2.4 percent growth. As of August 2019, the State unemployment rate was at 2.7 percent. The overall enrollment decline was no surprise, but in spite of that challenge, UH performed well in many key areas including first-time freshmen, rising four-year graduation rates, and continued early college success.

The 2017–2020 Enrollment Management Plan was developed to steadily grow enrollment over the next five years. This framework will continue to guide the University’s overall enrollment, retention and degree efforts in a time of a tight local labor market experiencing extraordinarily low unemployment.

Specific initiatives and strategies are:

- Focus on retention and persistence initiatives with campus specific strategies.
- Use of financial aid to positively impact enrollment.
- Initiatives targeting transfer, returning and adult students.

- Research best practices and maintain national engagement in enrollment management.

- Set enrollment target to increase enrollment between three percent and eight percent system wide for the next four years.

Fall census headcount comparisons are as follows:

	Fall 2019	Fall 2018	% Change	Fall 2017	% Change
Mānoa	17,490	17,710	-1.2	17,612	0.6
Hilo	3,372	3,406	-1.0	3,539	-3.8
West O‘ahu	3,049	3,128	-2.5	3,082	1.5
Community Colleges	26,066	26,819	-2.8	27,441	-2.3
Total	49,977	51,063	-2.1	51,674	-1.2

With the goal to reverse the enrollment decline and address the higher education gaps for the underserved regions and populations, the Community Colleges, working with the State legislators, secured $2.5 million to establish the *Hawai‘i Promise* scholarship program that provides free in-state tuition for qualified community college students with financial needs in fiscal year 2018 and 2019. UH is asking the state legislature to consider funding an expansion of this program to include the three four-year universities. The Hawai‘i Promise Program supported 1,378 UH community college students this past academic year. The program is currently structured as a “last dollar” scholarship that would provide financial assistance towards unmet financial need not satisfied by other forms of financial aid, such as federal grants, University scholarships, and other private sources.

The University awarded 11,299 degrees and certificates last academic year, 0.7 percent higher than the previous academic year. Overall, the University is graduating more students than it is bringing in, which accounts for some of the reductions in campus enrollment. Graduation rates within four years have also doubled in eight years at the four-year campuses. UH-Mānoa welcomed its second straight class of more than 2,000 first-time freshmen, including an eight percent increase in first-time freshman from out of state and a two percent increase in graduate students.

After several years of moderate tuition increases, in May 2019 the Board of Regents approved a three-year freeze of undergraduate tuition rates at all ten campuses beginning with the 2020–2021 academic year. The new tuition schedule also decreases general graduate student tuition rates at UH-Mānoa. The intent of the freeze is to ensure affordable higher education for the people of Hawai‘i while providing stability that will aid student recruitment and retention. It will also increase the competitiveness in the broader higher education landscape.

Research and Innovation

The University’s extramural fund awards include a mix of research and non-research programs that provide financial stability and balance to the University. About 40 to 50 percent of the projects are non-research in nature and are intended for training, workforce development, outreach and community services, clinical trials, and others. The University of Hawai‘i at Mānoa, the flagship campus, is ranked by National Science Foundation (“NSF”) as 80th among 1,050 public and private universities for research and development expenditures in fiscal year 2017.

The extramural awards totaled $422 million in fiscal year 2019, an increase from the previous year's tally. As we continue to endure the fluctuations in federal funding and work to make adjustments in strategy, we have managed to keep extramural funding relatively stable in the neighborhood of $400 million over the last few years. Despite the significant reductions in federal support that have put a strain on research institutions across the county, the University is doing its best to weather the storm through the dedicated efforts of our talented research faculty and support staff. Here are some highlights of fiscal year 2019:

- The National Cancer Institute ("NCI") has increased support to the University of Hawaiʻi Cancer Center under the Cancer Center Support Grant from $5.7 million to $8.4 million and has extended the term of the current NCI designation by an additional year to July 2022.

- The Applied Research laboratory ("ARL") at the University of Hawaiʻi at Mānoa has been awarded a $77.2 million, five-year contract from the U.S. Department of Defense ("DoD"). ARL will conduct research, development, engineering and evaluation of programs in core competency areas of ocean science, astronomy, sensor development, remote sensing, renewable energy, and mission-related research and development.

The Hawaiʻi Institute of Geophysics and Planetology ("HIGP") in the School of Ocean and Earth Science and Technology ("SOEST") received $3.9 million from NASA in support of a two-year project to develop the Hyperspectral Thermal Imager ("HyTI") CubeSat (also known as nanosatellites intended for low Earth orbit that can explore a variety of scientific and technological questions).

Facilities and Infrastructure

Improvement and modernization of the University's physical assets are vital to delivering the University's strategic directions that strives for 21st century facilities for learning, teaching and research. The University has developed a six-year plan for fiscal years 2020–2025 (the "6-Year CIP Plan") that sets forth a vision of a physical environment that supports and augments the high-quality education and research that takes place at our University. It also presents a coordinated, long-term strategy that (1) prioritizes classrooms, laboratories and student spaces with a focus on improving the learning and research environment, (2) targets those facilities with the highest utility and poorest conditions through upgrades to the interior/exterior structures, building roofs, mechanical and electrical systems, pedestrian pathways, and roadways, and (3) changes the paradigm on how the University manages its space.

The State of Hawaiʻi Legislature continued its strong financial support to the University's capital improvement program and provided general obligation bond appropriations for the 2019–2021 and 2017–2019 fiscal biennia that were approximately $282.2 million and $269.7 million, respectively. The University currently has bond issuance authorization through June 30, 2021 for $100 million for strategic capital projects, $9.6 million for land acquisition, and $38 million for parking structure improvements at UH-Mānoa.

Fundraising

The University and the Foundation exceeded its $500 million goal 15 months ahead of schedule. Additionally, Tim Dolan was hired in July 2019 as the UH Foundation CEO. He will be working closely with UH research, faculty and the Hawaiʻi community to develop fundraising plans.

State General Fund Appropriations

As the sole provider of higher public education and a key economic development driver, the University helped generate a total estimated impact of $3.61 billion on Hawai‘i’s economy. Looking toward the future, Hawai‘i’s economy is expected to continue a positive growth of 1.1 percent in 2019 and 1.2 percent in 2020, according to the State Department of Business, Economic Development & Tourism. The tourism and construction industries are projected to remain strong, while the government and military sectors will continue to stay relatively unchanged. Hawai‘i’s robust economy has kept the unemployment rate low at 2.7 percent as of August 2019.

The State of Hawai‘i continues to provide strong support to the University as the sole provider of public higher education in Hawai‘i. When compared to other universities in the nation, the University is well supported by the State and was ranked 6th in the category of higher education operating appropriation per full-time equivalent in 2017 according to State Higher Education Finance fiscal year 2017 report. The Hawai‘i Governor supported, and the State Legislature appropriated, an increase of $35 million in general funds to the University’s fiscal year 2020 operating budget. These funds were allocated throughout the campuses primarily to fund collective bargaining agreements as well as student mentors and tutors at the Community Colleges, Teacher Education program at Leeward Community College, and Ornamental Breeding and Clean Export Practices at the College of Tropical Agriculture and Human Resources.

Future general fund appropriations are subject to legislative appropriations and dependent upon the financial health of the State, future State Council of Revenues (“COR”) projections, and priorities yet to be articulated by the Governor and State legislature. The current economy continues to be strong, but the COR has cautiously cited uncertainty about the future. Fiscal year 2019 base tax revenues finished 5.1 percent over fiscal year 2018, which was above the May 23, 2019 projection from COR of 4.7 percent. The COR current forecast for fiscal year 2020 revenues projects 4.1 percent growth compared to fiscal year 2019, an increase of 0.1 percent from May. The COR also decreased its growth forecast for fiscal 2021 and fiscal year 2022 to 3.0 percent (from 4.0 percent) but maintained the 4.0 percent growth rate for fiscal year 2023-2026. To continue to provide quality and affordable education to the residents of Hawai‘i, the University has been diligently working with lawmakers to promote the University’s needs and priorities.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Consolidated Statements of Net Position
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands)

	2019	2018
Assets and Deferred Outflows of Resources		
Current assets		
Cash and cash equivalents	$ 131,839	$ 122,877
Operating investments	361,376	315,050
Due from State of Hawai‘i	944	1,269
Accounts receivable, net	86,981	82,938
Current portion of notes and contributions receivable, net	18,895	19,042
Other current assets	24,374	26,011
Total current assets	624,409	567,187
Noncurrent assets		
Due from State of Hawai‘i	414,016	403,164
Endowment and other investments	542,497	535,495
Notes and contributions receivable, net	20,607	32,113
Capital assets, net	2,163,325	2,128,415
Other noncurrent assets	34,021	119,842
Total noncurrent assets	3,174,466	3,219,029
Total assets	3,798,875	3,786,216
Deferred outflows of resources		
Deferred outflows on net pension liability, OPEB liability, and other	506,467	528,173
Total deferred outflows of resources	506,467	528,173
Total assets and deferred outflows of resources	$ 4,305,342	$ 4,314,389
Liabilities, Deferred Inflows of Resources and Net Position		
Current liabilities		
Accounts payable	$ 66,398	$ 63,458
Accrued payroll and fringe benefits	64,764	63,076
Advances from sponsors	26,071	25,532
Unearned revenue	43,416	43,256
Due to State of Hawai‘i	6,129	6,140
Current portion of long-term liabilities	58,982	58,645
Other current liabilities	6,624	6,733
Total current liabilities	272,384	266,840
Noncurrent liabilities		
Accrued vacation	44,803	44,837
Accrued workers’ compensation	11,666	11,096
Revenue bonds payable	487,490	506,655
Premium on bonds payable	20,272	22,185
Equipment lease obligations	27,003	28,428
Note payable	8,184	8,200
Net pension liability	1,695,800	1,648,600
Other postemployment benefits	1,800,496	1,783,860
Other noncurrent liabilities	37,243	42,383
Total noncurrent liabilities	4,132,957	4,096,244
Total liabilities	4,405,341	4,363,084
Deferred inflows of resources		
Deferred inflows on net pension and OPEB liability	69,780	53,497
Total deferred inflows of resources	69,780	53,497
Commitments and contingencies		
Net position		
Net investment in capital assets	1,625,457	1,598,660
Restricted		
Nonexpendable	301,890	360,553
Expendable	633,393	606,866
Unrestricted	(2,730,519)	(2,668,271)
Total net position	(169,779)	(102,192)
Total liabilities, deferred inflows of resources and net position	$ 4,305,342	$ 4,314,389

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

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Consolidated Statements of Revenues, Expenses and Changes in Net Position
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands)

	2019	2018
Operating revenues		
Student tuition and fees	$ 394,952	$ 393,452
Less: Scholarship allowances	133,108	134,565
Net student tuition and fees	261,844	258,887
Federal appropriations, grants and contracts	310,644	306,679
State and local grants and contracts	43,044	41,086
Nongovernmental sponsored programs	36,576	33,765
Sales and services of educational departments, other	39,307	35,279
Auxiliary enterprises		
Bookstores	15,886	18,213
Student housing (net of scholarship allowances of $1,432 and $1,863)	30,322	31,310
Other auxiliary enterprises revenues	46,238	45,209
Other operating revenues	1,703	1,628
Total operating revenues	785,564	772,056
Operating expenses		
Compensation and benefits	1,320,016	1,258,712
Supplies, services and cost of goods sold	185,999	188,572
Depreciation and amortization	131,034	127,842
Telephone and utilities	69,455	65,726
Scholarships and fellowships	42,639	42,746
Travel expenses	32,694	33,412
Repairs and maintenance	29,815	24,117
Rental expenses	10,591	11,306
Other operating expenses	39,433	37,584
Total operating expenses	1,861,676	1,790,017
Operating loss	(1,076,112)	(1,017,961)
Nonoperating revenues (expenses)		
State appropriations	506,399	485,153
Federal Pell grants	53,522	56,056
Private gifts	37,956	39,895
Net investment income (loss)	(31,513)	37,129
Interest expense	(25,208)	(25,585)
Net transfers from State of Hawai‘i	294,705	264,855
Loss on disposal of capital assets	(4,860)	(4,645)
Other, net	105	809
Net nonoperating revenues before capital and endowment additions	831,106	853,667
Capital – state appropriations	133,996	184,103
Capital – federal grants/subsidies	5,955	5,021
Capital – gifts and grants	7,325	3,127
Net transfers from (to) State of Hawai‘i for capital assets	674	(1,836)
Transfers from State of Hawai‘i, Tobacco settlement	9,400	9,397
Transfers from State of Hawai‘i, University of Hawai‘i Cancer Center	7,863	7,869
Net transfers from (to) other State agencies	269	(5,924)
Net transfers from (to) Federal – capital assets	87	(84)
Additions to permanent endowments	11,850	14,354
Total other revenues	177,419	216,027
Net nonoperating revenues	1,008,525	1,069,694
Change in net position	(67,587)	51,733
Net position		
Beginning of year	(102,192)	729,527
Adjustment for change in accounting principle (Note 1)	-	(883,452)
Beginning of year, as restated	(102,192)	(153,925)
End of year	$ (169,779)	$ (102,192)

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

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Consolidated Statements of Cash Flows
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands)

	2019	2018
Cash flows from operating activities		
Student tuition and fees	$ 261,217	$ 253,385
Grants and contracts	387,124	377,067
Other revenues	132,072	131,468
Payments to employees	(930,790)	(909,639)
Payments to suppliers and other	(352,748)	(358,779)
Payments for scholarships and fellowships	(42,639)	(42,746)
Net cash used in operating activities	(545,764)	(549,244)
Cash flows from noncapital financing activities		
State appropriations	506,724	485,240
Gifts and grants for other than capital purposes	106,373	107,530
Net transfers from State of Hawai‘i	8,226	9,544
Other receipts (disbursements)	(11)	23
Net cash provided by noncapital financing activities	621,312	602,337
Cash flows from capital and related financing activities		
Capital appropriations	122,124	157,581
Capital gifts and grants	12,954	8,883
Proceeds from other note payable	-	4,526
Purchases of capital assets	(152,953)	(172,815)
Proceeds from sale of capital assets	720	59
Principal paid on capital debt and leases	(20,873)	(36,100)
Interest paid on capital debt and leases (net of amounts capitalized)	(25,632)	(25,426)
Transfer from State of Hawai‘i for		
Tobacco Settlement	9,400	9,397
University of Hawai‘i Cancer Center	7,863	7,869
Net cash used in capital and related financing activities	(46,397)	(46,026)
Cash flows from investing activities		
Interest and dividends on investments, net	14,085	11,202
Proceeds from sales and maturities of investments	684,997	749,429
Purchase of investments	(719,271)	(713,917)
Net cash provided by (used in) investing activities	(20,189)	46,714
Net increase in cash and cash equivalents	8,962	53,781
Cash and cash equivalents		
Beginning of year	122,877	69,096
End of year	$ 131,839	$ 122,877

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

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Consolidated Statements of Cash Flows
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands)

	2019	2018
Reconciliation of operating loss to net cash used in operating activities		
Operating loss	$ (1,076,112)	$ (1,017,961)
Adjustments to reconcile operating loss to net cash used in operating activities		
On behalf payments by State for fringe benefits	286,479	255,311
Depreciation and amortization expense	131,034	127,842
Pension and other postretirement health care benefit expense	100,184	93,261
Bad debt expense, net	2,138	(591)
Escrow funds used for expenses	-	7,621
Changes in operating assets and liabilities		
Accounts receivable	(6,195)	(3,165)
Notes and contributions receivable	969	382
Inventories	1,147	(526)
Prepaid expenses and other assets	2,738	(373)
Accounts payable	7,967	(3,414)
Accrued payroll and benefits	2,389	1,502
Accrued workers' compensation liability	439	(1,234)
Advances from sponsors	539	(1,075)
Other, net	520	(6,824)
Net cash used in operating activities	$ (545,764)	$ (549,244)
Supplemental information of noncash transactions		
Noncash contributions	$ 2,689	$ 2,377
Net transfers to (from) State of Hawai‘i for capital assets	674	(1,836)
Net transfers to (from) Federal for capital assets	87	(84)
Net transfers to (from) other State agencies	269	(5,924)
Accounts payable for capital assets	31,820	36,848
Bond proceeds deposited immediately into escrow	-	116,876
Refunding and defeasance of outstanding revenue bond principal	-	(109,935)
Proceeds from equipment lease liability	-	30,486
Escrow funds used to fund capital asset additions	20,891	-

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

1. Organization and Summary of Significant Accounting Policies

Financial Reporting Entity

The accompanying consolidated financial statements of the University of Hawai‘i (the "University") include the activities of the University of Hawai‘i at Mānoa, University of Hawai‘i at Hilo, University of Hawai‘i at West O‘ahu, University of Hawai‘i at Maui College, University of Hawai‘i Community Colleges, and its component units. The University has defined its reporting entity in accordance with Governmental Accounting Standards Board ("GASB") Statement No. 14, *The Financial Reporting Entity*, as amended by GASB Statement No. 39, *Determining Whether Certain Organizations are Component Units,* as amended by GASB Statement No. 61, *The Financial Reporting Entity: Omnibus – an amendment of GASB Statements No. 14 and No. 34*. The basic criterion for including a potential component unit within the reporting entity is financial accountability. Other criteria, including fiscal dependency and the nature and significance of the relationship, are such that exclusion would cause the financial statements of the University to be misleading. Accordingly, the financial information of the Research Corporation of the University of Hawai‘i (the "Research Corporation") and the University of Hawai‘i Foundation (the "Foundation") have been blended with the University's financial activity in the accompanying consolidated financial statements.

Complete financial statements of the Research Corporation can be obtained at the Research Corporation of the University of Hawai‘i, 2800 Woodlawn Drive, Honolulu, HI 96822. The Foundation's federal Form 990 is available for inspection as required by Internal Revenue Code ("IRC") Section 6104 at the University of Hawai‘i Foundation, 1314 South King Street, Suite B, Honolulu, HI 96814.

Similarly, the University is fiscally dependent upon the State of Hawai‘i (the "State") and therefore, the State is financially accountable for the University as defined by GASB Statement No. 61. Accordingly, the University's financial information is discretely presented as a component unit within the State's comprehensive annual financial report ("CAFR").

The University is classified as a state instrumentality under IRC Section 115 and is therefore exempt from federal income taxes. Certain activities of the University may be subject to taxation as unrelated business income under IRC Sections 511 and 514.

Basis of Presentation

The University follows the reporting model prescribed for special-purpose governments engaged only in business-type activities, as defined in GASB Statement No. 35, *Basic Financial Statements and Management's Discussion and Analysis for Public Colleges and Universities*, as amended. The consolidated financial statements of the University are presented using the economic resources measurement focus and the accrual basis of accounting.

The Foundation's accounting policies conform to accounting principles generally accepted in the United States ("GAAP") applicable to not-for-profit organizations as promulgated by the Financial Accounting Standards Board ("FASB"). The Foundation's financial information has been converted to conform to the University's presentation.

The Research Corporation's accounting policies conform to GAAP applicable to business-type activities of governmental units as promulgated by the GASB.

Cash, Cash Equivalents, and Investments
The University considers all cash and investments with original maturities of three months or less to be cash equivalents. The carrying amounts reported in the Consolidated Statements of Net Position for cash equivalents approximate fair value due to the short maturity of these investments.

The University classifies unspent cash, cash equivalents, and investments from the issuance of revenue bonds held with an escrow agent and invested until used for the cost of construction, and unspent cash, cash equivalents, and investments that were deposited into an acquisition fund held in trust by the acquisition fund custodian for equipment lease obligations, as noncurrent assets.

Investments
Investments in money market instruments that have remaining maturity at time of purchase of one year or less are reported at amortized cost. Investments in time certificates of deposits are carried at cost. Investments in money market funds, fixed income securities, equity securities, and mutual funds with readily determinable fair values are reported at fair value based on quoted market prices. Investments in limited partnerships, absolute return, real estate, and other investments include limited partnership investments in private equity, venture capital, real estate, and hedge funds including absolute return and long/short hedge funds. Fair value is generally based on information provided by the respective external investment manager at the most recent valuation date and from the valuation date to fiscal year-end, if applicable. The private equity, venture capital, and real estate investments are not readily marketable and involve assumptions and methods that are reviewed by the Foundation. Because these investments are not readily marketable, their estimated value is subject to uncertainty and therefore, may differ from the value that would have been used had a ready market for such investment existed. A portion of the investments made by certain hedge funds is also not readily marketable; additionally, hedge fund managers may not provide the detail of their underlying marketable securities. The hedge fund valuation process is carefully reviewed by the Foundation with the assistance of an outside consultant. The Foundation utilized the net asset value per share for the investments in limited partnerships, absolute return, real estate, and other investments. Unrealized gains and losses on investments are included in the Consolidated Statements of Revenues, Expenses and Changes in Net Position. Realized gains and losses are computed as the difference between the proceeds of the sale and the cost basis of the investment sold. The calculation of realized gains and losses is independent of the calculation of net changes in the fair value of investments.

The title to investment securities is vested in the name of Securities and Exchange Commission (“SEC”) registered brokerage firms representing the various investment managers of the University and the Foundation. The title to short-term investments, made from pooled cash, is vested in the name of the University or the Foundation.

Fair Value Measurements
For financial assets reported at fair value, the University defines fair value as the price that would be received to sell an asset in the principal or most advantageous market in an orderly transaction between market participants. The University measures fair value using assumptions developed based on market data obtained from independent external sources and the reporting entity's own assumptions. The hierarchy is broken down into levels based on the reliability of the inputs as follows:

- **Level 1** – Quoted prices (unadjusted) in active markets for identical assets or liabilities.
- **Level 2** – Inputs (other than quoted prices) included within Level 1 that are observable for the asset or liability, either directly or indirectly.
- **Level 3** – Unobservable inputs for an asset or liability reflecting management's assumption. Level 3 inputs are used to measure fair value to the extent that observable Level 1 or 2 inputs are not available.

Due from and Due to State
The State Director of Budget and Finance is responsible for the safekeeping of all cash in the State Treasury in accordance with State laws. Currently, separate accounts are not maintained in the State Treasury for the University's general operating and capital appropriations. Although these appropriations are available to the University to expend, custody and ownership of the funds remain with the State. Unspent general and capital appropriations that continue to be available to the University for expenditure at the end of the fiscal year are reported as "Due from State of Hawaiʻi" in the accompanying Consolidated Statements of Net Position.

Amounts due to the State of Hawaiʻi are primarily due to operating or capital advances.

Perpetual Trusts
The Foundation is the beneficiary of certain perpetual trusts held and administered by others. The fair value of the estimated future cash receipts from the trusts is recognized as assets and private gifts revenue when the Foundation is notified of their existence. The reported value of the assets is fair value.

Split-Interest Agreements
The Foundation's split-interest agreements with donors consist of irrevocable pooled income funds, charitable remainder trusts, and charitable gift annuities for which the Foundation serves as trustee. Assets held under the split-interest agreements are included in investments. Deferred inflows of resources are recognized at the date the split-interest agreements are established after recording liabilities for the present value (utilizing discount rates ranging from 1.2 percent to 8.2 percent) of the estimated future payments to be made to the donors and/or other beneficiaries. Private gifts revenue is recognized when the related resources become available to the Foundation as stipulated in the irrevocable split-interest agreement. The liabilities are adjusted during the term of the split-interest agreements for changes in the fair value of the assets, accretion of the discount, and other changes in the estimates of future benefits.

Accounts Receivable

Accounts receivable are initially recorded at the amount invoiced or otherwise due and normally do not bear interest. The University maintains an allowance for doubtful accounts to reduce receivables to their estimated collectible amount. Management estimates the allowance for uncollectible receivables based on a specific review of customer balances, the overall aging of outstanding balances, historical collection experience, and current business and economic conditions. Delinquent accounts in excess of two years are written off upon approval of University general counsel and when, in the judgment of management, they are deemed uncollectible based on an evaluation of the specific circumstances.

Contributions

The Foundation receives pledges and bequests of financial support from corporations, foundations and individuals. Revenue is recognized when a pledge representing an unconditional promise to pay is received and all eligibility requirements, including time requirements, have been met. In absence of such a promise, revenue is recognized when the gift is received. Endowment pledges that do not meet eligibility requirements, as defined by GASB Statement No. 33, are not recorded as assets until the related gift is received.

Capital Assets

Capital assets are recorded at cost, or if donated, at an appraised value at the date of the gift. Depreciation of capital assets is provided for on a straight-line basis over the estimated useful lives (3 to 100 years) of the respective assets. The University’s policy is to capitalize tangible, nonexpendable personal property having an estimated useful life of more than one year. Interest incurred on tax-exempt construction financing, net of investment income on any unspent financing proceeds, is capitalized as a cost of construction. When taxable debt is incurred specifically for a project, interest is capitalized on amounts expended on the project using the weighted-average cost of outstanding borrowings. The University incurred interest cost of $25,208 and $25,715 for the years ended June 30, 2019 and 2018, respectively, of which $130 was capitalized during the year ended June 30, 2018. No interest costs were capitalized during the year ended June 30, 2019. The University does not capitalize works of art or historical treasures that are held for exhibition, education, research and public service. These collections are neither disposed of for financial gain nor encumbered. Accordingly, such collections are not recognized or capitalized for financial statement purposes. Maintenance and repairs, as well as minor renewals, replacements and betterments, are charged to operations. Major renewals, replacements and betterments are capitalized in the year incurred. Capital assets retired or otherwise disposed of are removed from the appropriate asset and related accumulated depreciation accounts. Gains and losses on disposals and the net book value of transfers of capital assets are reflected in operations.

The University evaluates the future service utility of capital assets when events or changes in circumstances have occurred. A diminished service utility of the University’s capital assets is reported as an impairment loss and netted against any insurance or appropriated recoveries.

Deferred Outflows of Resources
Deferred outflows of resources represent a consumption of net position that applies to a future period. The University defers recognition of the loss on debt refunding related to issuance of its revenue bonds and amortizes these costs over the life of the bonds using the effective interest rate method. The deferred outflow of resources related to the net pension and other postemployment benefits ("OPEB") liabilities resulted from differences between expected and actual experiences, changes in assumptions, the net difference between projected and actual earnings on pension plan investments, and changes in proportion which are amortized over five years, and the University's contributions to the pension and OPEB plans subsequent to the measurement date of the actuarial valuations for the pension and OPEB plans will be recognized as a reduction of the net pension liabilities and net OPEB liability in the subsequent fiscal year. The deferred outflow of resources related to asset retirement obligations ("AROs") represents the difference between the AROs and the cash received to assume the related AROs, and are amortized over the remaining useful life of the related capital assets.

Advances from Sponsors
Advances from sponsors represent amounts received from grant and contract sponsors which have not been earned under the terms of the agreement.

Unearned Revenue
Unearned revenue includes amounts received in advance of an event such as student tuition and advance sports ticket sales related to a future period.

Pensions
For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Employee's Retirement System ("ERS"), and additions to/deductions from the ERS's fiduciary net position have been determined on the same basis as they are reported by the ERS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at their fair value.

Postemployment Benefits Other Than Pensions
For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB and OPEB expense, information about the fiduciary net position of the Hawaiʻi Employer-Union Health Benefits Trust Fund ("EUTF"), and additions to/deductions from the EUTF's fiduciary net position have been determined on the same basis as they are reported by the EUTF. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at their fair value.

Revenue Bonds Payable
Revenue bonds payable include outstanding amounts due from the issuance of revenue bonds by the University.

Equipment Lease Obligations
Obligations for equipment leased under capital leases to fund the installation and acquisition of energy conservation measurements are recorded based on the present value of the future minimum lease payments using the appropriate interest rate. Refer to Note 10 for more information regarding the University's equipment lease obligations.

Asset Retirement Obligations
AROs represent the liabilities where both an external obligating event and internal obligating event have occurred and the liability is reasonably estimable and recorded based on the University's best estimates of the current value of outlays expected to be incurred. The AROs are reevaluated annually for the effects of general inflation or deflation and any events that would cause a significant change in the estimated outlays. AROs are included in other noncurrent liabilities. Refer to Note 15 for more information.

Deferred Inflows of Resources
Deferred inflows of resources represent an acquisition of net position by the University that is applicable to a future reporting period. The deferred inflow of resources related to pension and OPEB resulted from differences between expected and actual experiences and changes in proportion of the pension plan which will be amortized over five years.

Net Position
The University's net position is classified into the following four net position categories:

- **Net investment in capital assets** – This component of net position represents the University's total investment in capital assets, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those capital assets.

- **Restricted**
  - Nonexpendable – Net position subject to externally imposed stipulations that it be maintained permanently by the University, which includes the University's permanent endowment funds.
  - Expendable – Net position that is restricted for specific purposes by sponsors, donors or law. Restrictions in these assets are released when the University complies with the stipulations required by the sponsor, donor or legislative act.

- **Unrestricted** – Net position not classified as restricted or net investment in capital assets and not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by action of management or the Board of Regents ("Board") or may otherwise be limited by contractual agreements with outside parties. Substantially all unrestricted net position is designated for academic and research programs and initiatives and capital asset programs.

When an expense is incurred for purposes for which both restricted and unrestricted resources are available to pay the expenses, resources are generally applied proportionate to the benefit realized. For instances in which such a determination is not feasible or if there are cost compliance issues, unrestricted resources are applied first.

Net Position Restricted by Enabling Legislation
GASB Statement No. 46*, Net Assets Restricted by Enabling Legislation – an amendment of GASB Statement No. 34*, requires that limitations on the use of net position imposed by enabling legislation be reported as restricted net position. GASB Statement No. 46 also specifies the accounting and financial reporting requirements if new enabling legislation replaces existing enabling legislation or if legal enforceability is reevaluated. Restricted net position at June 30, 2019 and 2018 amounted to $935,283 and $967,419, respectively, of which $386,075 and $373,164 were restricted by enabling legislation for capital activity.

Operating and Nonoperating Activities
The University's policies for defining operating activities, as reported on the Consolidated Statements of Revenues, Expenses and Changes in Net Position, are those that generally result from exchange transactions such as payments received for providing services and goods and payments made for services and goods received. Certain significant revenue streams relied upon for operations are recorded as nonoperating revenues, as defined by GASB Statement No. 35, including state appropriations, gifts and investment income.

Student tuition and fees revenues are recognized in the period earned. Revenues for programs that cross fiscal years are prorated between the two fiscal years.

The University recognizes revenue associated with the direct costs of research and training grants and contracts as the related expenses are incurred.

Bookstore revenues are recognized at the point of sale. Sales returns (which are not significant) are recognized at the time returns are made.

Room and other rental revenues are recognized over the period the room is occupied. Room and other rental revenues for the summer term are recognized in the fiscal year in which the term primarily falls. Had room and other rental revenues for the summer term been prorated between fiscal years, the difference would not be material.

Scholarships and Fellowships
Scholarships and fellowships, including tuition and fee waivers applied to student accounts, are shown as a reduction to student tuition and student housing revenues. Stipend and other payments made directly to students are reflected as scholarships and fellowships expense.

State Appropriations
The University recognizes general operating and capital appropriations as nonoperating revenue when allotments are made available to the University for expenditure. If restrictions are placed on such appropriations, the restrictions are given separate and discrete accounting recognition.

Management's Estimates
The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates. These estimates, among others, include workers' compensation liabilities, net pension liabilities, postemployment benefit liabilities, allowances for uncollectible receivables, the useful lives of capital assets, the valuation of investments, and the current versus noncurrent classification of assets and liabilities.

With respect to workers' compensation insurance, the University is self-insured for the first $650 per occurrence and annual aggregate and obtains excess insurance of $50,000 from a commercial insurance company. The University records a liability for risk financing and insurance related losses if it is determined that a loss has been incurred and the amount can be reasonably estimated. The University uses a third-party actuary to estimate its workers' compensation liability. Changes in the liability are the result of claims payments made during the fiscal year, new claims filed, and changes in the estimates of existing claims. Anticipated payments by the third party for the next fiscal year are considered current and payments thereafter are considered noncurrent. The liability represents the University's best estimate of workers' compensation liabilities based on available information. The University's estimated liability for workers' compensation claims is included in “Other Liabilities” in the accompanying Consolidated Statements of Net Position (see Note 10).

The University also uses a third-party actuary to estimate its net pension and OPEB liabilities. Beginning in fiscal year 2018, the net OPEB liability was actuarially determined at the State level. The University records its proportional share of the State's share of the EUTF net OPEB liability through the State's allocation schedules to its component units and proprietary funds. The actuarial assumptions used to determine the liabilities are described in Notes 13 and 14.

The allowance for uncollectible receivables is a valuation account used to estimate the portion of accounts, notes and contributions receivable that are considered uncollectible.

The University depreciates its capital assets using useful lives internally or externally determined to represent the expected service period of the asset.

In general, the fair value of investments has been determined using values supplied by independent pricing services.

New Accounting Pronouncements
During fiscal year 2019, the University implemented GASB Statement No. 83, *Certain Asset Retirement Obligations*. The objective of this Statement is to address accounting and financial reporting for certain AROs related to tangible capital assets. This statement requires recognition of a liability for legal obligations to perform asset retirement activities related to tangible capital assets. The adoption of Statement No. 83 resulted in the restatement of the University's beginning net position as of July 1, 2017 by $2,861, which reflected the retrospective effect of Statement No. 83. Refer to Note 15 for more information.

During fiscal year 2019, the University implemented GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. The primary objective of this Statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. The applicable disclosures related to this Statement are included in the respective notes for debt.

During fiscal year 2018, the University implemented GASB Statement No. 75*, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Statement No. 75 establishes standards of accounting and financial reporting for defined benefit OPEB and defined contribution OPEB that are provided to the employees of state and local governmental employers through OPEB plans that are administered through trusts or equivalent arrangements in which:

- Contributions from employers and nonemployer contributing entities to the OPEB plan and earnings on those contributions are irrevocable.

- OPEB plan assets are dedicated to providing OPEB to plan members in accordance with the benefit terms.

- OPEB plan assets are legally protected from creditors of employers, nonemployer contributing entities, and the OPEB plan administrator. If the plan is a defined benefit OPEB plan, plan assets are also legally protected from creditors of the plan members.

Statement No. 75 replaced GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions,* as amended, and Statement No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*.

The adoption of Statement No. 75 resulted in the restatement of the University’s beginning net position as of July 1, 2017 by $880,591, which reflected the retrospective effect of Statement No. 75. The restatement of the University’s beginning net position as of July 1, 2017 was the combined impact from the University’s employees covered under both the EUTF and Research Corporation’s defined benefit postemployment benefit of $879,485 and $1,106, respectively. The Research Corporation’s net OPEB liability is reported separately as a component of other noncurrent liabilities on the Consolidated Statements of Net Position as it is immaterial to the University’s consolidated financial statements as a whole. Refer to Note 14 for more information regarding the University’s OPEB with EUTF.

The GASB issued Statement No. 87, *Leases*. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. The Statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the provisions of the contract. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The University has not yet determined the effect this Statement will have on its consolidated financial statements.

The GASB issued Statement No. 91, *Conduit Debt Obligations*. The primary objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with commitments extended by issuers, arrangements associated with conduit debt obligations, and related note disclosures. The requirements of this Statement are effective for reporting periods beginning after December 15, 2020. The University has not yet determined the effect this Statement will have on its consolidated financial statements.

(All dollars reported in thousands)

Revisions and Reclassifications

In addition to the restatement of beginning net position as of July 1, 2017, certain amounts in the 2018 consolidated financial statements have been revised due to the adoption of GASB Statement No. 83 or reclassified to conform to the 2019 presentation.

	2018 As Previously Reported	Statement No. 83 Revisions	Reclassifications	2018 Revised
Current assets				
Accrued interest receivable	$ 1,998	$ -	$ (1,998)	$ -
Inventories	8,428	-	(8,428)	-
Prepaid expenses and other current assets	15,585	-	(15,585)	-
Other current assets	-	-	26,011	26,011
Total current assets	567,187	-	-	567,187
Deferred outflows of resources				
Deferred loss on refunding	14,737	-	(14,737)	-
Deferred outflows on net pension and OPEB liability	510,916	-	(510,916)	-
Deferred outflows on net pension liability, OPEB liability, and other	-	2,520	525,653	528,173
Total deferred outflows of resources	525,653	2,520	-	528,173
Total assets and deferred outflows of resources	4,311,869	2,520	-	4,314,389
Current liabilities				
Advances from sponsors	30,532	(5,000)	-	25,532
Total current liabilities	271,840	(5,000)	-	266,840
Noncurrent liabilities				
Other noncurrent liabilities	31,789	10,594	-	42,383
Total noncurrent liabilities	4,085,650	10,594	-	4,096,244
Total liabilities	4,357,490	5,594	-	4,363,084
Net position				
Unrestricted	(2,665,197)	(3,074)	-	(2,668,271)
Total net position	(99,118)	(3,074)	-	(102,192)
Nonoperating revenues (expenses)				
Net transfers from State of Hawaiʻi for				
Fringe benefits	255,311	-	(255,311)	-
Hawaiʻi Barrel Tax	2,578	-	(2,578)	-
School of Nursing	1,053	-	(1,053)	-
University of Hawaiʻi Cancer Center	5,913	-	(5,913)	-
Net transfers from State of Hawaiʻi	-	-	264,855	264,855
Net nonoperating revenues before capital and endowment additions	853,667	-	-	853,667
Operating expenses				
Depreciation and amortization	127,629	213	-	127,842
Total operating expenses	1,789,804	213	-	1,790,017
Operating loss	(1,017,748)	(213)	-	(1,017,961)
Change in net position	51,946	(213)	-	51,733
Adjustment for change in accounting principle (Note 1)	(880,591)	(2,861)	-	(883,452)
Beginning of year, as restated	(151,064)	(2,861)	-	(153,925)
End of year	(99,118)	(3,074)	-	(102,192)

(All dollars reported in thousands)

	2018 As Previously Reported	Statement No. 83 Revisions	Reclassifications	2018 Revised
Cash flows from operating activities				
Grants and contracts	$ 389,080	$ -	$ (12,013)	$ 377,067
Payments to suppliers and other	(378,413)	-	19,634	(358,779)
Net cash used in operating activities	(556,865)	-	7,621	(549,244)
Cash flows from noncapital financing activities				
Transfer from State of Hawai‘i for				
Hawai'i Barrel Tax	2,578	-	(2,578)	-
School of Nursing	1,053	-	(1,053)	-
University of Hawai‘i Cancer Center	5,913	-	(5,913)	-
Net transfers from State of Hawai‘i	-	-	9,544	9,544
Other receipts	7,644	-	(7,621)	23
Net cash provided by noncapital financing activities	609,958	-	(7,621)	602,337
Cash flows from capital and related financing activities				
Proceeds from other note payable	861	-	3,665	4,526
Principal paid on capital debt and leases	(31,794)	-	(4,306)	(36,100)
Interest paid on capital debt and leases (net of amounts capitalized)	(26,067)	-	641	(25,426)
Net cash used in capital and related financing activities	(46,026)	-	-	(46,026)
Reconciliation of operating loss to net cash used in operating activities				
Operating loss	(1,017,748)	(213)	-	(1,017,961)
Adjustments to reconcile operating loss to net cash used in operating activities				
Depreciation and amortization expense	127,629	213	-	127,842
Escrow funds used for expenses	-	-	7,621	7,621
Changes in operating assets and liabilities				
Advances from sponsors	10,938	-	(12,013)	(1,075)
Other, net	(18,837)	-	12,013	(6,824)
Net cash used in operating activities	(556,865)	-	7,621	(549,244)

2. Cash and Investments

The carrying amounts of cash and cash equivalents and time certificates of deposit held outside of the State Treasury as of June 30, 2019 and 2018, classified as cash and cash equivalents and operating investments, were $270,567 and $232,594, with corresponding bank balances of $271,968 and $223,179, respectively. The portion of such bank balances covered by the Federal Deposit Insurance Corporation or by collateral held by the State Director of Budget & Finance in the name of the University totaled $228,969 at June 30, 2019 and $193,560 at June 30, 2018. Additional cash equivalent balances of $31,418 at June 30, 2019 and $19,549 at June 30, 2018 represent deposits with investment brokers covered by the Securities Investor Protection Corporation and additional insurance provided by the investment brokers.

Endowment funds are combined in investment pools with each individual account subscribing to or disposing of shares on the basis of the market value per share.

Cost of securities sold is determined using the first-in first-out method.

(All dollars reported in thousands)

As a result of market fluctuations, the fair market value of certain donor-restricted endowments was less than the historical cost of such funds by $3,764 and $3,901 at June 30, 2019 and 2018, respectively. These unrealized losses have been recorded as reductions in unrestricted net position. Future market gains will be used to restore this deficiency in unrestricted net position before any net appreciation above the historical cost value of such funds increases restricted expendable net position.

- **Endowment funds** are received from benefactors who, by the terms of their conveying instruments, have stipulated that the principal of their gifts may never be expended, and use of the income is generally restricted.

- **Quasi-endowment funds** are funds that have been transferred to the endowment funds by the Board. Use of the income is either restricted by the donor or unrestricted and designated by the Board.

The Hawai‘i Uniform Prudent Management of Institutional Funds Act (“HUPMIFA”), established under Hawai‘i Revised Statute (“HRS”) §517E, was enacted by the State on July 1, 2009. HUPMIFA requires the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result, the University classifies as restricted nonexpendable net position (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund.

The remaining portion of the donor-restricted endowment fund that is not classified in restricted nonexpendable net position is classified as restricted expendable net position until those amounts are expended and distributed by the University in accordance with its Board-approved spending rate policy and in a manner consistent with the standard of prudence prescribed by HUPMIFA. In fiscal years 2019 and 2018, the University’s spending rate policy provided for annual distributions at four and a half percent of the trailing five-year moving average of the endowment fair value.

At June 30, 2019 and 2018, the University’s investments were comprised of the following:

	2019		2018	
	Fair Value	Cost	Fair Value	Cost
Money market funds	$ 4,281	$ 4,280	$ 8,190	$ 8,190
Fixed income securities	348,643	344,922	308,656	313,500
Equity securities	45,297	41,510	1,234	1,267
Mutual funds	111,658	106,594	202,369	170,499
Time certificates of deposit	138,802	138,802	109,933	109,933
Limited partnerships	128,890	60,899	120,596	61,584
Absolute return	19,537	13,430	17,798	11,601
Real estate	29,303	33,867	31,710	37,267
Other investments	77,462	63,618	50,059	55,375
Total investments	903,873	807,922	850,545	769,216
Less: Current portion	361,376	359,736	315,050	317,844
Total noncurrent investments	$ 542,497	$ 448,186	$ 535,495	$ 451,372

(All dollars reported in thousands)

Changes in the University's investments for the year ended June 30, 2019 were as follows:

	Fair Value	Cost Basis	Net Unrealized Gain (Loss)	Net Realized Gain (Loss)
University Endowment Pool				
End of year	$ 74,853	$ 69,622	$ 5,231	
Beginning of year	72,692	65,825	6,867	
Net change	2,161	3,797	(1,636)	$ 4,667
Foundation Endowment Pool				
End of year	321,929	233,532	88,397	
Beginning of year	306,353	227,804	78,549	
Net change	15,576	5,728	9,848	(1,641)
Associated Students of the University of Hawai‘i				
End of year	9,074	8,682	392	
Beginning of year	8,896	8,880	16	
Net change	178	(198)	376	(124)
School of Medicine				
End of year	2,577	2,575	2	
Beginning of year	2,733	2,731	2	
Net change	(156)	(156)	-	6
University Bond System				
End of year	15,398	15,357	41	
Beginning of year	17,588	17,565	23	
Net change	(2,190)	(2,208)	18	91
Operating investments				
End of year	361,376	359,736	1,640	
Beginning of year	315,050	317,844	(2,794)	
Net change	46,326	41,892	4,434	108
Other				
End of year	118,666	118,418	248	
Beginning of year	127,233	128,567	(1,334)	
Net change	(8,567)	(10,149)	1,582	185
Total investments				
End of year	903,873	807,922	95,951	
Beginning of year	850,545	769,216	81,329	
Net change	$ 53,328	$ 38,706	$ 14,622	$ 3,292

(All dollars reported in thousands)

Changes in the University’s investments for the year ended June 30, 2018 were as follows:

	Fair Value	Cost Basis	Net Unrealized Gain (Loss)	Net Realized Gain
University Endowment Pool				
End of year	$ 72,692	$ 65,825	$ 6,867	
Beginning of year	69,054	62,793	6,261	
Net change	3,638	3,032	606	$ 3,107
Foundation Endowment Pool				
End of year	306,353	227,804	78,549	
Beginning of year	283,469	223,970	59,499	
Net change	22,884	3,834	19,050	1,737
Associated Students of the University of Hawai‘i				
End of year	8,896	8,880	16	
Beginning of year	8,768	7,566	1,202	
Net change	128	1,314	(1,186)	1,478
School of Medicine				
End of year	2,733	2,731	2	
Beginning of year	5,540	5,540	-	
Net change	(2,807)	(2,809)	2	2
University Bond System				
End of year	17,588	17,565	23	
Beginning of year	16,738	16,738	-	
Net change	850	827	23	14
Operating investments				
End of year	315,050	317,844	(2,794)	
Beginning of year	355,180	355,686	(506)	
Net change	(40,130)	(37,842)	(2,288)	52
Other				
End of year	127,233	128,567	(1,334)	
Beginning of year	124,044	123,980	64	
Net change	3,189	4,587	(1,398)	378
Total investments				
End of year	850,545	769,216	81,329	
Beginning of year	862,793	796,273	66,520	
Net change	$ (12,248)	$ (27,057)	$ 14,809	$ 6,768

(All dollars reported in thousands)

	2019	2018
Summary of net investment income (loss)		
Change in unrealized net gain	$ 14,622	$ 14,809
Net realized gain	3,292	6,768
	17,914	21,577
Interest and dividend income	17,271	13,195
Split-interest agreements	(64,624)	3,659
Other	(573)	80
Investment income (loss) before management fees	(30,012)	38,511
Less: Management fees	1,501	1,382
Net investment income (loss)	$ (31,513)	$ 37,129

The University's investments reported at fair value on a recurring basis have been categorized based on the fair value hierarchy in Note 1 at June 30, 2019 and 2018 as follows:

	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Investments Not Categorized Within the Fair Value Hierarchy
2019					
Money market funds	$ 4,281	$ 4,281	$ -	$ -	$ -
Fixed income securities	348,643	208,844	133,665	-	6,134
Equity securities	45,297	45,297	-	-	-
Mutual funds	111,658	105,373	-	-	6,285
Time certificates of deposit	138,802	-	-	-	138,802
Limited partnerships	128,890	-	-	-	128,890
Absolute return	19,537	-	-	-	19,537
Real estate	29,303	-	-	10,258	19,045
Other investments	77,462	-	-	1,906	75,556
Total investments	$ 903,873	$ 363,795	$ 133,665	$ 12,164	$ 394,249
2018					
Money market funds	$ 8,190	$ 8,190	$ -	$ -	$ -
Fixed income securities	308,656	164,146	136,900	-	7,610
Equity securities	1,234	1,234	-	-	-
Mutual funds	202,369	196,249	-	-	6,120
Time certificates of deposit	109,933	-	-	-	109,933
Limited partnerships	120,596	-	-	-	120,596
Absolute return	17,798	-	-	-	17,798
Real estate	31,710	-	-	15,348	16,362
Other investments	50,059	-	-	1,681	48,378
Total investments	$ 850,545	$ 369,819	$ 136,900	$ 17,029	$ 326,797

The following is a general description of the terms and conditions upon which the University through the Foundation may redeem investments that are carried at net asset value:

- **Mutual funds** – Domestic mutual funds can be redeemed on a monthly or quarterly basis, with notification provided between 15 and 30 days prior to redemption. Investments in foreign mutual funds can be redeemed on a monthly basis with notification provided between 5 and 30 days prior to redemption.

- **Absolute return, limited partnerships, and other investments** – Redemption frequency for investments in this class range from monthly to annually, with notification provided between 2 and 90 days prior to redemption. Additionally, certain investments can be redeemed at the discretion of the investment managers.

- **Real estate and other investments** – These investments can be redeemed at the discretion of the investment managers. Through the Foundation, the University has commitments to contribute additional amounts to this class of investments of approximately $37,317 at June 30, 2019.

The Board is responsible for the establishment of policies over and monitoring of operating investments and endowments held by the University. Investments authorized by the Board include equity investments, bond investments, certificates of deposit, money market funds, U.S. Government, its Agencies, or its Instrumentalities securities, securities guaranteed or collateralized by the U.S. Government, its Agencies or its Instrumentalities, and other types of investments.

The Board of Directors of the Foundation is responsible for the establishment of policies over and monitoring of investments and endowments held by the Foundation.

The University’s investment strategy incorporates certain financial instruments, which involve, to varying degrees, elements of market risk and credit risk. Market risk is the potential for changes in the value of financial instruments due to market changes, including interest and foreign exchange rate movements and fluctuations embodied in forward and futures, commodity or security prices. Market risk is directly impacted by the volatility and liquidity of the markets in which the related underlying assets are traded. Credit risk is the possibility that a loss may occur due to the failure of a counterparty to perform according to the terms of the contract. The University’s risk of loss in the event of counterparty default is typically limited to the amounts recognized in the Consolidated Statements of Net Position and is not represented by the contract or notional amounts of the instruments.

Investment Risk Factors

There are many factors that affect the value of investments. Some, such as custodial credit risk, concentration risk, and foreign currency risk may affect both equity and fixed income securities. Equity securities respond to such factors as economic conditions, individual company earnings performance, and market liquidity, while fixed income securities are particularly sensitive to credit risks and changes in interest rates.

(All dollars reported in thousands)

Concentration Risk

Concentration risk is the risk associated with a lack of diversification, such as having substantial investments in a few individual issuers, thereby exposing the organization to greater risks resulting from adverse economic, political, regulatory, geographic or credit development. The University limits its risk of concentration of assets by limiting individual bond positions other than obligations of the U.S. government to not more than five percent of the total fixed income portion of the portfolio. Individual equities are limited to not more than five percent of the total market value of the stock portfolio. In addition, investment in any one stock is not to exceed five percent of a corporation's outstanding common stock.

Credit Risk

Credit risk for fixed income securities is the risk that the issuer will not fulfill its obligations. Nationally recognized statistical rating organizations, such as Moody's and Standard and Poor's ("S&P"), assign credit ratings to security issuers and issues that indicate a measure of potential credit risk to investors. Certain fixed-income securities, primarily obligations of the U.S. government or those explicitly guaranteed by the U.S. government, are considered to have minimal credit risk. To manage credit risk, the University specifies that no more than 15 percent of the fixed income investments may be lower than investment grade.

The composition of fixed income securities at June 30, 2019 and 2018, along with credit quality ratings, is summarized below:

		Credit Quality Rating						
		U.S. Govt-Exempt	AAA	AA	A	BBB	BB or Lower	Not Rated
2019								
U.S. Treasury	$ 208,771	$ 208,771	$ -	$ -	$ -	$ -	$ -	$ -
U.S. government agencies	114,064	-	-	114,064	-	-	-	-
Municipal bonds	2,623	-	809	1,473	341	-	-	-
Corporate bonds	23,185	-	576	4,808	10,097	7,379	325	-
Mutual bond funds	60,871	-	1,522	-	-	-	-	59,349
Total fixed income securities	$ 409,514	$ 208,771	$ 2,907	$ 120,345	$ 10,438	$ 7,379	$ 325	$ 59,349
2018								
U.S. Treasury	$ 164,135	$ 164,135	$ -	$ -	$ -	$ -	$ -	$ -
U.S. government agencies	131,474	-	-	131,474	-	-	-	-
Municipal bonds	3,547	-	762	2,166	619	-	-	-
Corporate bonds	9,500	-	-	2,308	4,158	2,666	368	-
Mutual bond funds	93,184	-	6,726	-	4,326	-	-	82,132
Total fixed income securities	$ 401,840	$ 164,135	$ 7,488	$ 135,948	$ 9,103	$ 2,666	$ 368	$ 82,132

Interest Rate Risk

Interest rate risk is the risk that the value of fixed income securities will decline because of changing interest rates. The prices of fixed income securities with a longer time to maturity tend to be more sensitive to changes in interest rates and, therefore, are more volatile than those with shorter maturities.

(All dollars reported in thousands)

At June 30, 2019, the composition of the University's fixed income investments and maturities are summarized below:

		Investment Maturities (in Years)			
	Fair Value	**Less than 1**	**1 to 5**	**6 to 10**	**More than 10**
U.S. Treasury	$ 208,771	$ 47,700	$ 151,272	$ 7,264	$ 2,535
U.S. government agencies	114,064	74,836	30,557	-	8,671
Municipal bonds	2,623	-	1,443	1,180	-
Corporate bonds	23,185	1,620	13,884	5,990	1,691
Mutual bond funds	60,871	3,790	49,348	7,733	-
Total fixed income securities	$ 409,514	$ 127,946	$ 246,504	$ 22,167	$ 12,897

Foreign Currency Risk
Foreign currency risk is the risk that investments denominated in foreign currencies may lose value due to adverse fluctuations in the value of the U.S. dollar relative to foreign currencies. The University's investment policy permits investments in publicly-traded foreign securities.

At June 30, 2019 and 2018, the University's exposure to foreign currency risk expressed in U.S. dollars was not significant.

3. Accounts Receivable

The composition of accounts receivable, net of allowance for uncollectable receivables, of $30,519 and $28,686 at June 30, 2019 and 2018, respectively, is summarized as follows:

	2019	**2018**
U.S. government	$ 53,289	$ 49,803
State and local government	9,653	9,186
Private agencies	7,475	7,749
Student tuition and fees	8,503	8,456
Other	8,061	7,744
	$ 86,981	$ 82,938

4. U.S. Government Funding

The federal government reimburses the University for certain overhead costs (e.g., facilities and administrative costs) incurred in support of federally-sponsored programs based on cost reimbursement rates negotiated with the University's cognizant agency, the U.S. Department of Health and Human Services. These reimbursements amounted to approximately $45,387 in 2019 and $44,021 in 2018 and are reported in federal appropriations, grants and contracts revenue.

The University's federal grants and contracts are subject to periodic audit by federal examiners. In the opinion of the University, any adjustments which may be required as a result of these audits would not be material to the overall financial position of the University.

(All dollars reported in thousands)

5. Notes and Contributions Receivable

The composition of notes and contributions receivable at June 30, 2019 and 2018 is summarized as follows:

	2019	2018
Student notes		
Federal loan programs	$ 5,286	$ 15,085
State loan programs	7,988	7,868
University loan funds	67	67
Other notes receivable	164	77
Total student and other notes outstanding	13,505	23,097
Less: Allowance for uncollectible receivables	4,561	7,488
Total student and other notes receivable, net	8,944	15,609
Contributions receivable	33,649	38,127
Less: Allowance for uncollectible pledges	2,111	1,967
Less: Discount to present value	980	614
Total contributions receivable, net	30,558	35,546
Total student notes and contributions receivable, net	39,502	51,155
Less: Current portion, net	18,895	19,042
	$ 20,607	$ 32,113

The allowance for uncollectible receivables at June 30, 2019 and 2018 is comprised of:

	2019	2018
Federal Perkins loan program	$ 1,664	$ 3,712
State of Hawai‘i Higher Education loans	2,859	3,739
Nursing/Health Profession loans	6	6
Short-term loans	32	31
	$ 4,561	$ 7,488

Payments on contributions receivable at June 30, 2019 are expected to be collected in:

Less than one year	$ 19,535
One year to five years	14,114
	$ 33,649

The principal repayment and interest rate terms of federal and University loans vary considerably. The allowance for uncollectible receivables only applies to University funded notes and the University’s portion of federal student loans, as the University is not obligated to fund the federal portion of uncollected student loans. Federal loan programs are funded principally with federal advances to the University under the Perkins and various health profession loan programs.

(All dollars reported in thousands)

The Federal Perkins loan program provides for the assignment of uncollectible loans to the U.S. Department of Education for collection. Uncollectible Nursing and Health Profession loans may be written off with the approval of the U.S. Department of Health and Human Services, Division of Financing Services. Uncollectible State of Hawai‘i Higher Education loans, Hawai‘i Educator loans, and University short-term loans may be written off with the approval of the University’s General Counsel.

During the year ended June 30, 2019, the University distributed $137,147 in Direct Loan programs and did not distribute any student loans through the U.S. Department of Education Federal Perkins Loan Program. During the year ended June 30, 2018, the University distributed $1,740 in student loans through the U.S. Department of Education Federal Perkins Loan Program, and $143,204 in Direct Loan programs. These distributions and related funding sources are not included as expenses or revenues in the accompanying financial statements.

As discussed in Note 1 to the consolidated financial statements, pledges for permanent endowments that do not meet eligibility requirements, as defined by GASB Statement No. 33, are not recorded as assets until the related gift is received. Accordingly, permanent endowment pledges totaling approximately $5,253 and $6,323 at June 30, 2019 and 2018, respectively, were not recognized as assets in the accompanying consolidated financial statements because of uncertainties with regard to their realizability, valuation, bequest intentions, and other conditional promises until the specified conditions are met.

Unconditional promises to give (contributions receivable) that are expected to be collected within one year are recorded at net realizable value. Pledges receivable that are expected to be collected in future years are recorded at the present value of their estimated future cash flows. The discounts on those amounts are computed using the risk-free interest rates applicable to the years in which the promises are received. Amortization of the discounts is included in private gift revenues.

6. Other Current Assets

Other current assets at June 30, 2019 and 2018 were comprised of:

	2019	2018
Accrued interest receivable	$ 2,615	$ 1,998
Inventories	7,281	8,428
Prepaid expenses	9,605	8,379
Other	4,873	7,206
	$ 24,374	$ 26,011

(All dollars reported in thousands)

The inventories and the methods of valuation at June 30, 2019 and 2018 are summarized below:

		2019	2018
University of Hawai‘i Bookstore merchandise inventory	Lower of cost or market using the first-in, first-out retail inventory method.	$ 4,328	$ 5,146
University of Hawai‘i Chemistry Stockroom	Cost applied on the first-in, first-out basis.	1,112	1,066
University of Hawai‘i Facilities Management Warehouse	Cost applied on the first-in, first-out basis.	917	891
University of Hawai‘i Press merchandise inventory	Job order or specific identification method. Books remaining in the inventory after the first year of publication are written off on the straight-line basis over a five-year period.	703	890
University of Hawai‘i other inventory	Lower of cost or market using the weighted average cost method.	221	435
		$ 7,281	$ 8,428

7. Capital Assets

A summary of capital assets at June 30, 2019 and 2018 is as follows:

	Beginning Balance	Additions	Deductions	Transfers	Ending Balance
2019					
Nondepreciable capital assets					
Land	$ 55,222	$ -	$ -	$ 1,750	$ 56,972
Construction in progress	221,921	138,442	164	(119,944)	240,255
Total capital assets not being depreciated	277,143	138,442	164	(118,194)	297,227
Depreciable capital assets					
Land improvements	139,520	1,302	-	12,274	153,096
Infrastructure	253,346	528	-	7,025	260,899
Buildings	2,490,824	24,047	15,253	95,656	2,595,274
Equipment	402,707	13,878	10,313	3,239	409,511
Library materials	174,303	2,693	-	-	176,996
Total capital assets being depreciated	3,460,700	42,448	25,566	118,194	3,595,776
Less: Accumulated depreciation	1,609,428	140,401	20,151	-	1,729,678
Capital assets, net	$ 2,128,415	$ 40,489	$ 5,579	$ -	$ 2,163,325

(All dollars reported in thousands)

	Beginning Balance	Additions	Deductions	Transfers	Ending Balance
2018					
Nondepreciable capital assets					
Land	$ 55,195	$ -	$ -	$ 27	$ 55,222
Construction in progress	170,027	151,322	6,283	(93,145)	221,921
Total capital assets not being depreciated	225,222	151,322	6,283	(93,118)	277,143
Depreciable capital assets					
Land improvements	131,745	151	-	7,624	139,520
Infrastructure	243,030	662	-	9,654	253,346
Buildings	2,421,881	10,244	15,316	74,015	2,490,824
Equipment	397,471	14,144	10,733	1,825	402,707
Library materials	171,605	2,698	-	-	174,303
Total capital assets being depreciated	3,365,732	27,899	26,049	93,118	3,460,700
Less: Accumulated depreciation	1,503,221	127,629	21,422	-	1,609,428
Capital assets, net	$ 2,087,733	$ 51,592	$ 10,910	$ -	$ 2,128,415

Capital assets consist of land, land improvements, infrastructure, buildings, equipment, library materials, and construction in progress. Construction in progress (“CIP”) additions represent costs for new projects, net of the amount of capital assets placed in service. CIP is not depreciated until the asset is placed in service. Assets acquired are recorded at cost, or if donated, at appraised value at the date of the gift. Land parcels comprising 1,206 acres, or 22 percent of the University’s property, are recorded at the State’s value of $1 per parcel. Assets owned by the federal government, although in the custody of the University, are not included in the capital asset total.

8. Other Noncurrent Assets

Other noncurrent assets at June 30, 2019 and 2018 were comprised of:

	2019	2018
Interest in beneficial trusts held by others	$ 31,917	$ 96,782
Funds on deposit with custodian	1,621	22,598
Other	483	462
	$ 34,021	$ 119,842

In November 2017, the University entered into two tax-exempt lease purchase (“TELP”) agreements with a Company to purchase energy conservation equipment for Honolulu, Kapi‘olani, Leeward and Windward Community Colleges (collectively “Oahu Campuses”) and Maui College for $24,183 and $6,302, respectively. The purchases were financed with a bank, and proceeds of $24,183 and $6,302 were deposited to an acquisition fund held in trust by an acquisition fund custodian (“Custodian”) to provide for future payments as requested by the University. At June 30, 2019 and 2018, funds on deposit with the Custodian were reported as $1,621 and $22,598, respectively. See Note 10 for terms of the lease obligations.

(All dollars reported in thousands)

9. Due From and Due To the State of Hawai‘i

Amounts due from and due to the State of Hawai‘i at June 30, 2019 and 2018 were as follows:

	2019		2018	
	Due from	**Due to**	**Due from**	**Due to**
State appropriations for current operations	$ 944		$ 1,269	
State capital appropriations – noncurrent	414,016		403,164	
Total due from State of Hawai‘i	$ 414,960		$ 404,433	
Imprest/petty cash advances		$ 74		$ 77
Advance		6,000		6,000
Employee fringe adjustments		55		63
Total due to State of Hawai‘i		$ 6,129		$ 6,140

10. Long-Term Liabilities

Long-term liability activity for the years ended June 30, 2019 and 2018 is summarized as follows:

	Beginning Balance	Additions	Reductions	Ending Balance	Current Portion
2019					
Bonds payable					
Revenue bonds payable	$ 525,425	$ -	$ 18,770	$ 506,655	$ 19,165
Other liabilities					
Workers’ compensation	17,199	4,713	4,274	17,638	5,972
Accrued vacation	76,506	30,884	30,183	77,207	32,404
Net pension liability (Note 13)	1,648,600	267,866	220,666	1,695,800	-
Postemployment health care/life insurance benefits (Note 14)	1,783,860	167,067	150,431	1,800,496	-
Equipment lease obligations	30,531	-	2,103	28,428	1,425
Long-term debt	8,200	-	-	8,200	16
Total other liabilities	3,564,896	470,530	407,657	3,627,769	39,817
Total long-term liabilities	$ 4,090,321	$ 470,530	$ 426,427	$ 4,134,424	$ 58,982
2018					
Bonds payable					
Revenue bonds payable	$ 543,680	$ 110,795	$ 129,050	$ 525,425	$ 18,770
Other liabilities					
Workers’ compensation	18,433	4,556	5,790	17,199	6,103
Accrued vacation	75,907	29,956	29,357	76,506	31,669
Net pension liability (Note 13)	1,704,470	229,360	285,230	1,648,600	-
Postemployment health care/life insurance benefits (Note 14)	788,773	1,090,340	95,253	1,783,860	-
Equipment lease obligations	-	30,531	-	30,531	2,103
Long-term debt	25,200	-	17,000	8,200	-
Total other liabilities	2,612,783	1,384,743	432,630	3,564,896	39,875
Total long-term liabilities	$ 3,156,463	$ 1,495,538	$ 561,680	$ 4,090,321	$ 58,645

(All dollars reported in thousands)

Revenue Bonds Payable

The University's revenue bonds payable at June 30, 2019 and 2018 is as follows:

	Series	Date Issued	Authorized	2019	2018
Various acquisition and construction projects (interest rate, 2.5% to 6.0%)	2009A	April 15, 2009	$ 100,000	$ 2,905	$ 5,690
University of Hawai‘i Cancer Center (interest rate, 2.5% to 6.0%)	2010A-1, 2010A-2	October 7, 2010	138,640	114,800	118,195
Various construction projects (interest rate, 2.5% to 6.0%)	2010B-1, 2010B-2	October 7, 2010	154,090	131,545	135,355
Student Housing System at Mānoa and Telecommunications System (interest rate, 2.0% to 5.0%)	2012A(R)	February 22, 2012	8,575	-	240
Hilo College of Pharmacy and Law School Expansion and Modernization (interest rate, 1.0% to 4.7%)	2015A	September 24, 2015	8,575	8,040	8,220
Frear Hall Construction, Student Housing System at Mānoa, Food Service System and Student Housing System at Hilo (interest rate, 3.0% to 5.0%)	2015B(R)	September 24, 2015	47,010	47,010	47,010
Frear Hall Construction, Student Housing System at Mānoa, Food Service System and Student Housing System at Hilo (interest rate, 0.8% to 3.0%)	2015C(R)	September 24, 2015	17,585	9,895	12,725
University Health & Wellness Center (interest rate, 0.8% to 2.8%)	2015D(R)	September 24, 2015	25,715	14,675	19,795
University Health & Wellness Center (interest rate, 5.0%)	2015E(R)	April 20, 2016	67,400	67,400	67,400
Sinclair Library Basement Renovation (interest rate, 2.0% to 5.0%)	2017A	December 28, 2017	3,990	3,790	3,990
University Health & Wellness Center (interest rate, 3.0%)	2017B	December 28, 2017	12,040	12,040	12,040
University Health & Wellness Center (interest rate, 3.28% to 3.38%)	2017C	December 28, 2017	4,110	4,110	4,110
Frear Hall Construction, Student Housing System at Mānoa, Student Housing System at Hilo (interest rate, 3.0%)	2017D	December 28, 2017	13,185	13,185	13,185
Frear Hall Construction, Student Housing System at Mānoa, Food Service System and Student Housing System at Hilo (interest rate, 3.28% to 3.65%)	2017E	December 28, 2017	4,450	4,450	4,450
Various acquisition and construction projects (interest rate, 5.0%)	2017F	December 28, 2017	52,275	52,275	52,275
Various acquisition and construction projects (interest rate, 2.10% to 3.85%)	2017G	December 28, 2017	20,745	20,535	20,745
			$ 678,385	$ 506,655	$ 525,425

In December 2017, the University issued $110,795 in Series 2017A ($3,990, tax-exempt new money), 2017B ($12,040, tax-exempt refunding), 2017C ($4,110, taxable refunding), 2017D ($13,185, tax-exempt refunding), 2017E ($4,450, taxable refunding), 2017F ($52,275, tax-exempt refunding), and 2017G ($20,745, taxable refunding) Bonds (collectively, the "Series 2017 Bonds") for the purpose of financing the costs of a University project, the renovation of the Gregg M. Sinclair Library basement, and refunding previously issued bonds. All Series 2017 Bonds were delivered on December 28, 2017. Total premium for the Series 2017 Bonds approximated $10,607.

The proceeds of the Series 2017B, 2017C, 2017D, 2017E, 2017F and 2017G Bonds were deposited into an irrevocable trust with an escrow agent to provide for the redemption of the outstanding principal of the Series 2006A University Revenue Bonds and Refunding Series 2006A University Bonds, and to provide for the defeasance and redemption of a portion of the Series 2009A University Revenue Bonds. Accordingly, the trust account assets and liabilities relating to the defeased bonds are not recorded in the consolidated financial statements of the University. During the year ended June 30, 2018, $33,535 of bonds outstanding from the Series 2006A University Revenue Bonds and Refunding Series 2006A University Bonds were refunded on a current basis, and $76,400 of bonds outstanding from the Series 2009A University Revenue Bonds were considered defeased. The refunding and defeasance resulted in an accounting gain of $17,502 and an economic gain (difference between the present values of the debt service payment on the old and new debt) of $15,550. Deferred loss on refunding for Series 2017 Bonds amounted to $6,125 and $6,731 at June 30, 2019 and 2018, respectively. The coupon interest rates for the Series 2017 Bonds range from two percent to five percent (the first interest payment was paid on April 1, 2018) with the last maturity on October 1, 2038.

In September 2015, the University issued $166,285 in Series 2015A ($8,575, taxable new money), 2015B(R) ($47,010, tax-exempt refunding), 2015C(R) ($17,585, taxable refunding), 2015D(R) ($25,715, taxable refunding), and 2015E(R) ($67,400, tax-exempt forward delivery refunding) Bonds (collectively, the “Series 2015 Bonds”) for the purpose of financing the costs of University projects and refunding previously issued bonds. All Series 2015 Bonds were delivered on September 24, 2015 with the exception of the forward delivery Series 2015E(R) Bonds which were delivered on April 20, 2016. Total premium for the Series 2015 Bonds approximated $13,698. Deferred loss on refunding for Series 2015 Bonds amounted to $6,972 and $8,006 at June 30, 2019 and 2018, respectively. The University projects include the UH Mānoa Law School Expansion and Modernization Project and the UH Hilo College of Pharmacy Project.

The proceeds of the Series 2015B(R), 2015C(R), 2015D(R) and 2015E(R) Bonds were deposited into an irrevocable trust with an escrow agent to provide for a portion of the future debt service payments on the Series 2006A University Revenue Bonds and the Refunding Series 2006A University Bonds. Accordingly, the trust account assets and liabilities relating to the defeased bonds are not recorded in the consolidated financial statements of the University. During the year ended June 30, 2016, $163,245 of bonds outstanding from the Series 2006A University Revenue Bonds and the Refunding Series 2006A University Bonds were considered defeased. The defeasance resulted in an accounting gain of $15,080 and an economic gain (difference between the present values of the debt service payment on the old and new debt) of $9,573. The coupon interest rates for the Series 2015 Bonds range from 0.811 percent to five percent (first interest payment due on April 1, 2016) with the last maturity on October 1, 2044.

In February 2012, the University issued $8,575 in Series 2012A(R) Bonds to retire (current refund) $8,955 of the outstanding Series 2001B Bonds. The proceeds of the Series 2012A(R) Bonds were deposited into a trust account with an escrow agent to fully defease the outstanding principal of the Series 2001B Bonds. The defeasance resulted in an accounting gain of $943 and an economic loss of $27. The coupon interest rates for the Series 2012A(R) Bonds range from two percent to five percent (first interest payment due on April 1, 2012) and mature on October 1, 2018.

In October 2010, the University issued $292,730 in Series 2010A-1 ($111,265), 2010A-2 ($27,375), 2010B-1 ($127,535), and 2010B-2 ($26,555) Bonds (collectively, the “Series 2010 Bonds”) for the purpose of financing the costs of certain University projects. The Series 2010A-1 and Series 2010B-1 Bonds are designated as “Build America Bonds” under the provisions of the American Recovery and Reinvestment Act of 2009. These University projects may include the construction and maintenance of the University of Hawai‘i Cancer Center, renovations and additions to the Mānoa Campus Center, construction and equipment for an Information Technology Building, renovations to the Sinclair Library basement on the Mānoa campus, further development of the University of Hawai‘i at West O‘ahu (“UH-West O‘ahu”) Kapolei campus, various energy conservation/efficiency projects on the community college campuses on O‘ahu and Maui, land acquisition for the Leeward Community College Wai‘anae Education Center, construction of the Kapi‘olani Community College Culinary Institute of the Pacific, and renovation of the observatory for the Panoramic Survey Telescope & Rapid Response System 2 telescope. The coupon interest rates for the Series 2010 Bonds range from 2.50 percent to 6.03 percent (first interest payment due on April 1, 2011) and mature on October 1, 2030 and 2040.

The University receives funds from the State of Hawai‘i Tobacco Settlement Special Fund for the payment of principal and interest on the Refunding Series 2006A, Series 2015D(R), 2015E(R), 2017B and 2017C Bonds to finance the cost of construction of the medical school facility. The funds received from the State of Hawai‘i Tobacco Settlement Special Fund for debt service amounted to $9,400 and $9,397 in 2019 and 2018, respectively.

The revenue bonds are paid from certain unrestricted revenues in annual installments, including semi-annual interest payments ranging from $12 to $12,539 with the final payment due in October 2044. Series 2009A, 2010, 2012A(R), 2015 and 2017 Bonds interest is payable semi-annually on April 1 and October 1, and the principal is payable on October 1 of each year. The Bond Resolution adopted on November 16, 2001 and supplemented (“Bond Resolution”), stipulates that revenues of the University Bond System, including legislative appropriations and moneys in any special or revolving fund of the University, are pledged to the payment of the Series 2009A, 2010, 2012A(R), 2015 and 2017 Bonds, interest and premiums (if any).

The University entered into continuing disclosure certificates for the benefit of revenue bondholders, where it agreed to provide certain financial information and operating data relating to the University with respect to its revenue bonds to the Municipal Securities Rulemaking Board. The University, based on consultation with its bond counsel and bond underwriter, has complied in all material respects with the continuing disclosure requirements.

The Bond Resolution permits the holders of not less than 25 percent of the aggregate principal amount of outstanding revenue bonds to declare the principal of all revenue bonds then outstanding, together with all accrued and unpaid interest thereon, to be due and payable immediately upon the occurrence and during the continuation of an Event of Default by the University under the Bond Resolution. Events of Default include, but are not limited to, the failure to pay principal when due or interest within 30 days of the date due, a breach of the terms of the Bond Resolution by the University which goes uncured for the applicable cure period, if any, or the dissolution, bankruptcy or receivership of the University.

(All dollars reported in thousands)

At June 30, 2019, future maturities of revenue bonds are as follows:

	Principal	Interest
Year ending June 30,		
2020	$ 19,165	$ 24,751
2021	19,695	24,082
2022	20,305	23,352
2023	21,050	22,479
2024	21,900	21,489
2025–2029	122,575	90,729
2030–2034	136,190	58,519
2035–2039	111,150	25,318
2040–2044	34,115	2,334
2045	510	12
	$ 506,655	$ 293,065

Bond Premiums

Activity related to the premiums on revenue bonds for the years ended June 30, 2019 and 2018 is as follows:

	Series	Beginning Balance	Additions	Reductions	Ending Balance
2019					
University of Hawai'i Cancer Center	2010A	$ 102	$ -	$ 85	$ 17
Various construction projects	2010B	169	-	140	29
Student Housing	2015B(R)	4,885	-	297	4,588
John A. Burns School of Medicine	2015E(R)	6,828	-	609	6,219
Sinclair Library basement renovation	2017A	511	-	51	460
John A. Burns School of Medicine	2017B	264	-	23	241
Student Housing	2017D	109	-	9	100
Student Housing	2017F	9,317	-	699	8,618
Total bond premiums		$ 22,185	$ -	$ 1,913	$ 20,272
2018					
John A. Burns School of Medicine	Ref 2006A	$ 178	$ -	$ 178	$ -
University of Hawai'i Cancer Center	2010A	249	-	147	102
Various construction projects	2010B	405	-	236	169
Student Housing	2015B(R)	5,170	-	285	4,885
John A. Burns School of Medicine	2015E(R)	7,410	-	582	6,828
Sinclair Library basement renovation	2017A	-	536	25	511
John A. Burns School of Medicine	2017B	-	275	11	264
Student Housing	2017D	-	128	19	109
Student Housing	2017F	-	9,668	351	9,317
Total bond premiums		$ 13,412	$ 10,607	$ 1,834	$ 22,185

(All dollars reported in thousands)

Equipment Lease Obligations

As discussed in Note 8, in November 2017, the University entered into TELP agreements to acquire energy conservation equipment for its Oahu Campuses and Maui College. For the Oahu Campuses, payments commenced on August 1, 2018 and will continue through August 1, 2031 at a tax-exempt interest rate of 2.55 percent. For Maui College, payments commenced on December 1, 2018 and will continue through December 1, 2031 at a tax-exempt interest rate of 2.55 percent. Upon failure to pay any rental payment within the 15 days following the due date, the lessor may demand full payment and/or retake possession of the equipment.

	Principal	Interest
Year ending June 30,		
2020	$ 1,425	$ 724
2021	1,539	688
2022	1,565	649
2023	1,709	609
2024	1,838	566
2025–2029	11,691	2,039
2030–2032	8,661	439
	$ 28,428	$ 5,714

11. Line of Credit

The Research Corporation has a revolving line of credit with First Hawaiian Bank in the amount of $5,000 for short-term working capital, expiring on February 1, 2020. The terms of the revolving line of credit require repayment as specified in the credit agreement. All borrowings are collateralized by a security agreement over the Research Corporation’s accounts receivable. The rate of interest on borrowings was 4.4 percent and four percent at June 30, 2019 and 2018, respectively. At June 30, 2019 and 2018, there were no borrowings under this line.

On April 20, 2017, the Foundation entered into a 10-year $13,200 acquisition and construction credit facility (the “Loan”) for the purchase and renovation of the Charles Atherton House and the Mary Atherton Richards House (the “Atherton Property”). The Loan is secured by the fee simple interest and improvements on the Atherton Property, along with an assignment of a long-term lease and rents due thereunder from the University. Under terms of the credit facility, interest-only payments are required for the first 36 months at a fixed rate of three percent and, thereafter monthly installments of principal and interest, based on a 25-year amortization schedule, at a fixed rate of four percent through the remaining term of the Loan. The credit facility also includes terms that if the Foundation is more than 10 days late on any sum payable to the lender, the full amount of the Loan becomes due immediately. The Loan matures on April 1, 2027. As of June 30, 2019 and 2018, the outstanding balance on the Loan was $8,200.

(All dollars reported in thousands)

The aggregate maturities of the Loan subsequent to June 30, 2019 are as follow.

Year ending June 30,	
2020	$ 16
2021	196
2022	203
2023	212
2024	7,573
	$ 8,200

12. Property Leases

The University has entered into real property operating lease agreements with future minimum payments as follows:

Year ending June 30,	**Lease Amount**
2020	$ 1,701
2021	1,428
2022	1,372
2023	1,069
2024	229
2025–2029	624
2030–2034	392
Thereafter	1,468
	$ 8,283

Rent expense for outside space for the years ended June 30, 2019 and 2018 approximated $5,754 and $7,129, respectively.

13. Employee Benefits

Employees' Retirement System
Pension Plan

Plan Description
Generally, all full-time employees of the University are required to be members of the Employees' Retirement System of the State of Hawai‘i ("ERS"), a cost-sharing multiple-employer defined benefit pension plan that administers the University's pension benefits program. Benefits, eligibility and contribution requirements are governed by HRS Chapter 88 and can be amended through legislation. The ERS issues publicly available annual financial reports that can be obtained at ERS's website: *http://www.ers.ehawaii.gov*.

Benefits Provided

The ERS Pension Trust is comprised of three pension classes for membership purposes and considered to be a single plan for accounting purposes since all assets of the ERS may legally be used to pay the benefits of any of the ERS members or beneficiaries. The ERS provides retirement, disability and death benefits with three membership classes known as the noncontributory, contributory and hybrid retirement classes. The three classes provide a monthly retirement allowance equal to the benefit multiplier (generally 1.25 percent to 2.25 percent) multiplied by the average final compensation multiplied by years of credited service. Average final compensation for members hired prior to July 1, 2012 is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation for members hired January 1, 1971 or later and the average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation for members hired prior to January 1, 1971. For members hired after June 30, 2012, average final compensation is an average of the highest salaries during any five years of credited service excluding any salary paid in lieu of vacation.

Each retiree’s original retirement allowance is increased on each July 1 beginning the calendar year after retirement. Retirees first hired as members prior to July 1, 2012 receive a 2.5 percent increase each year of their original retirement allowance without a ceiling. Retirees first hired as members after June 30, 2012 receive a 1.5 percent increase each year of their original retirement allowance without a ceiling. The annual increase is not compounded.

<u>Noncontributory Class</u>

- <u>Retirement Benefits</u> – General employees’ retirement benefits are determined as 1.25 percent of average final compensation multiplied by the years of credited service. Employees with 10 years of credited service are eligible to retire at age 62. Employees with 30 years of credited service are eligible to retire at age 55.

- <u>Disability Benefits</u> – Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35 percent of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 12.5 percent of average final compensation.

- <u>Death Benefits</u> – For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a monthly benefit of 30 percent of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. Additional benefits are payable to surviving dependent children up to age 18. If there is no spouse/reciprocal beneficiary or surviving dependent children, no benefit is payable.

  Ordinary death benefits are available to employees who were active at time of death with at least ten years of credited service. The surviving spouse/reciprocal beneficiary (until remarriage/reentry into a new reciprocal beneficiary relationship) and surviving dependent children (up to age 18) receive a benefit equal to a percentage of the member’s accrued maximum allowance unreduced for age or, if the member was eligible for retirement at the time of death, the surviving spouse/reciprocal beneficiary receives 100 percent joint and survivor lifetime pension and the surviving dependent children receive a percentage of the member’s accrued maximum allowance unreduced for age.

Contributory Class for Members Hired Prior to July 1, 2012

- Retirement Benefits – General employees' retirement benefits are determined as two percent of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 55.

- Disability Benefits – Members are eligible for service-related disability benefits regardless of length of service and receive a one-time payment of the member's contributions and accrued interest plus a lifetime pension of 50 percent of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined as 1.75 percent of average final compensation multiplied by the years of credited service but are payable immediately, without an actuarial reduction, and at a minimum of 30 percent of average final compensation.

- Death Benefits – For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50 percent of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or surviving dependent children/parents, the ordinary death benefit is payable to the designated beneficiary.

  Ordinary death benefits are available to employees who were active at time of death with at least one year of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death, or 50 percent joint and survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least 10 years of service and designated one beneficiary, or 100 percent joint and survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Contributory Class for Members Hired After June 30, 2012

- Retirement Benefits – General employees' retirement benefits are determined as 1.75 percent of average final compensation multiplied by the years of credited service. General employees with ten years of credited service are eligible to retire at age 60.

- Disability and Death Benefits – Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 50 percent of their average final compensation plus refund of contributions and accrued interest. Ten years of credited service is required for ordinary disability.

  Death benefits for contributory members hired after June 30, 2012 are generally the same as those for contributory members hired June 30, 2012 and prior.

Hybrid Class for Members Hired Prior to July 1, 2012

- Retirement Benefits – General employees' retirement benefits are determined as two percent of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 62. General employees with 30 years of credited service are eligible to retire at age 55.

- Disability Benefits – Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35 percent of their average final compensation plus refund of their contributions and accrued interest. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 25 percent of average final compensation.

- Death Benefits – For service-connected deaths, the designated surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50 percent of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or surviving dependent children/parents, the ordinary death benefit is payable to the designated beneficiary.

  Ordinary death benefits are available to employees who were active at time of death with at least five years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage multiplied by 150 percent, or 50 percent joint and survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least 10 years of service and designated one beneficiary, or 100 percent joint and survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Hybrid Class for Members Hired After June 30, 2012

- Retirement Benefits – General employees' retirement benefits are determined as 1.75 percent of average final compensation multiplied by the years of credited service. General employees with 10 years of credited service are eligible to retire at age 65. Employees with 30 years of credited service are eligible to retire at age 60.

- Disability and Death Benefits – Provisions for disability and death benefits generally remain the same except for ordinary death benefits. Ordinary death benefits are available to employees who were active at time of death with at least 10 years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest, or 50 percent joint and survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least ten years of service and designated one beneficiary, or 100 percent joint and survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Contributions

Contributions are governed by HRS Chapter 88 and may be amended through legislation. The employer rate is set by statute based on the recommendations of the ERS actuary resulting from an experience study conducted every five years. Since July 1, 2005, the employer contribution rate is a fixed percentage of compensation, including the normal cost plus amounts required to pay for the unfunded actuarial accrued liabilities. The contribution rate was 19 percent and 18 percent for fiscal years 2019 and 2018, respectively. Contributions to the pension plan for the University for the years ended June 30, 2019 and 2018 were $117,600 and $111,436, respectively.

Per Act 17 (SLH 2017), employer contributions from the State and counties are expected to increase over four years beginning July 1, 2017. The rate for general employees increased to 19 percent on July 1, 2018; and increases to 22 percent on July 1, 2019; and 24 percent on July 1, 2020.

The University is required to make all contributions for noncontributory members. Contributory members hired prior to July 1, 2012 are required to contribute 7.8 percent of their salary. Contributory members hired after June 30, 2012 are required to contribute 9.8 percent of their salary. Hybrid members hired prior to July 1, 2012 are required to contribute six percent of their salary. Hybrid members hired after June 30, 2012 are required to contribute eight percent of their salary.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2019 and 2018, the University reported a liability of $1,695,800 and $1,648,600, respectively, for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2018 and 2017, respectively, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The University’s proportion of the net pension liability was based on a projection of the University’s long-term share of contributions to the pension plan relative to projected contributions of all participants, actuarially determined. At June 30, 2018 and 2017, the University’s proportion was 12.73 percent. The University’s proportion of 12.73 percent at June 30, 2017 was a decrease of 0.02 percent from its proportion measured as of June 30, 2016.

There was no change in actuarial assumptions as of June 30, 2017 to June 30, 2018. There were no changes between the measurement date, June 30, 2018, and the reporting date, June 30, 2019, that are expected to have a significant effect on the proportionate share of the net pension liability.

(All dollars reported in thousands)

For the years ended June 30, 2019 and 2018, the University recognized pension expense of $203,974 and $208,927, respectively. At June 30, 2019 and 2018, the University reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
2019		
Difference between expected and actual experience	$ 30,588	$ 10,626
Net difference between projected and actual investment earnings on pension plan investments	-	8,761
Change in assumptions	182,835	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	1,212	16,840
Contributions subsequent to the measurement date	117,600	-
Total deferred inflows and outflows of resources	$ 332,235	$ 36,227
2018		
Difference between expected and actual experience	$ 26,420	$ 17,667
Net difference between projected and actual investment earnings on pension plan investments	-	4,881
Change in assumptions	251,735	-
Changes in proportion and differences between employer contributions and proportionate share of contributions	1,543	28,614
Contributions subsequent to the measurement date	111,436	-
Total deferred inflows and outflows of resources	$ 391,134	$ 51,162

At June 30, 2019, the approximate $117,600 reported as deferred outflows of resources related to pensions resulting from University contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ending June 30, 2020. The $111,436 reported as deferred outflows of resources related to pensions resulting from University contributions subsequent to the measurement date at June 30, 2018 was recognized as a reduction of the net pension liability in the year ended June 30, 2019.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ending June 30,	
2020	$ 79,749
2021	71,023
2022	26,739
2023	(212)
2024	1,109
	$ 178,408

(All dollars reported in thousands)

Actuarial Assumptions

The total pension liability in the June 30, 2018 and 2017 actuarial valuations were determined using the following actuarial assumptions adopted by the ERS's Board of Trustees on December 12, 2016, based on the 2015 Experience Study for the five-year period from July 1, 2010 through June 30, 2015:

Inflation	2.50%
Payroll growth rate	3.50%
Investment rate of return	7.00% per year, compounded annual including inflation

The same rates were applied to all periods. There were no changes to ad hoc postemployment benefits including cost-of-living allowances.

For the June 30, 2018 and 2017 actuarial valuation, post-retirement mortality rates are based on the 2016 Public Retirees of Hawai‘i mortality table with adjustments based on generational projections of the BB projection table for 2016 and full generational projections in future years. Pre-retirement mortality rates are based on multiples of RP-2014 mortality table based on the occupation of the member.

The long-term expected rate of return on pension plan investments was determined using a "top down approach" of the Client-Constrained Simulation-based Optimization Model (a statistical technique known as "re-sampling with a replacement" that directly keys in on specific plan-level risk factors as stipulated by the ERS's Board of Trustees) in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future nominal rates of return (real returns and inflation) by the target asset allocation percentage. The target asset allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

	Target Allocation	Long-Term Expected Real Rate of Return
Strategic Allocation (risk-based classes)		
Broad growth	63.0%	7.1%
Principal protection	7.0%	2.5%
Real return	10.0%	4.1%
Crisis risk offset	20.0%	4.6%
Total	100.0%	

(All dollars reported in thousands)

Discount Rate

The discount rate used to measure the net pension liability was seven percent, consistent with the rate used at the prior measurement date. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that contributions from the University will be made at statutorily required rates, actuarially determined. Based on those assumptions, the pension plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the University’s Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the University’s proportionate share of the net pension liability, calculated using the discount rate of seven percent, for the measurement dates June 30, 2018 and 2017, as well as what the University’s proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (six percent) or one percentage point higher (eight percent) than the current rate:

	1% Decrease (6.00%)	Discount Rate (7.00%)	1% Increase (8.00%)
2019			
The University’s proportionate share of the net pension liability	$ 2,205,113	$ 1,695,800	$ 1,275,949
2018			
The University’s proportionate share of the net pension liability	$ 2,136,421	$ 1,648,600	$ 1,246,368

Pension Plan Fiduciary Net Position

The pension plan’s fiduciary net position is determined on the same basis used by the pension plan. The ERS’s financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred, and revenues are recorded in the accounting period in which they are earned and become measurable. Employer and member contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded as of their trade date. Administrative expenses are financed exclusively with investment income.

There were no significant changes after the report measurement date. Detailed information about the pension plan’s fiduciary net position is available in the separately issued ERS financial report. ERS’s complete financial statements are available at *http://www.ers.ehawaii.gov*.

Payable to the Pension Plan

The University's employer contributions payable to ERS by fiscal year end was paid by June 30, 2019. Excess payments of $6,025 are being applied to amounts due in fiscal year 2020. At June 30, 2018, the amount payable to the ERS was $1,279.

Other Benefits
The State absorbs the fringe benefit cost for the University’s employees paid from State and federal appropriations. In fiscal years 2017 and 2016, the State appropriated funds to the Department of Budget and Finance to pay for these fringe benefit costs on behalf of the University. Fringe benefit costs included in total revenue and total expenditures amounted to $286,540 and $255,042 for fiscal years 2019 and 2018, respectively.

All regular employees, with certain exceptions, earn vacation leave at the rate of 14 hours for each month of service. Employees who are entitled to annual vacation may accumulate for the succeeding year or years up to 15 working days annual vacation allowance, provided that the total accumulation shall not exceed 90 working days at the end of the calendar year.

Accumulated vacation leave earned, but not taken, is reflected as an accrual in the accompanying consolidated financial statements. When termination of services takes place, the employees are paid for their vacation allowance in a lump sum.

Sick leave accumulates at the rate of 14 hours for each full month of service without limit, but can be taken only in the event of an illness and is not convertible to pay upon termination of employment. Accordingly, accumulated sick leave, earned but not taken, is not reflected as an accrual in the accompanying consolidated financial statements. Employees who retire with 60 days of unused sick leave are entitled to three months of service credit in the ERS. For each additional 20 days, or major fraction thereof, of unused sick leave they have in excess of 60 days, their service period is increased by one month. As of June 30, 2019 and 2018, accumulated sick leave approximated $475,761 and $469,824, respectively.

The University’s regular employees may enter into deferred compensation arrangements directly with authorized insurance companies or agencies through a payroll deduction plan. Accordingly, the University has no deferred compensation or withholding payable.

The University manages its workers’ compensation program. Medical-related payments for fiscal years 2019 and 2018 were $3,182 and $3,253, respectively. Temporary wage loss payments for fiscal years 2019 and 2018 amounted to $417 and $885, respectively.

14. Postemployment Health Care and Life Insurance Benefits

Plan Description
The State provides certain health care and life insurance benefits to all qualified employees. Pursuant to Act 88, SLH 2001, the State contributes to the Hawai‘i Employer-Union Health Benefits Trust Fund (“EUTF”), an agent, multiple-employer defined benefit plan that replaced the Hawai‘i Public Employees Health Fund effective July 1, 2003. The EUTF was established to provide a single delivery system of health benefits for state and county workers, retirees and their dependents. The EUTF issues an annual financial report that is available to the public. The report may be obtained by writing to:

Hawai‘i Employer-Union Health Benefits Trust Fund
P.O. Box 2121
Honolulu, Hawai‘i 96805-2121

(All dollars reported in thousands)

For employees hired before July 1, 1996, the State pays the entire base monthly contribution for employees retiring with 10 years or more of credited service, and 50 percent of the base monthly contribution for employees retiring with fewer than 10 years of credited service. A retiree can elect a family plan to cover dependents.

For employees hired after June 30, 1996, but before July 1, 2001, and who retire with less than 10 years of service, the State makes no contributions. For those retiring with at least 10 years, but fewer than 15 years of service, the State pays 50 percent of the base monthly contribution. For employees retiring with at least 15 years, but fewer than 25 years of service, the State pays 75 percent of the base monthly contribution. For employees retiring with at least 25 years of service, the State pays 100 percent of the base monthly contribution. Retirees in this category can elect a family plan to cover dependents.

For employees hired on or after July 1, 2001 and who retire with less than 10 years of service, the State makes no contributions. For those retiring with at least 10 years, but fewer than 15 years of service, the State pays 50 percent of the base monthly contribution. For those retiring with at least 15 years, but fewer than 25 years of service, the State pays 75 percent of the base monthly contribution. For employees retiring with at least 25 years of service, the State pays 100 percent of the base monthly contribution. Only single plan coverage is provided for retirees in this category. Retirees can elect family coverage, but must pay the difference.

Employees Covered by Benefit Terms

At July 1, 2018, the following number of plan members were covered by the benefit terms:

Inactive plan members or beneficiaries currently receiving benefits	36,340
Inactive plan members entitled to but not yet receiving benefits	7,588
Active plan members	50,519
Total plan members	94,447

Contributions

Contributions are governed by HRS Chapter 87A and may be amended through legislation. Contributions to the OPEB plan for the University was $119,714 for the fiscal year ended June 30, 2019. The employer is required to make all contributions for members.

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

At June 30, 2019, and 2018, the University reported a net OPEB liability of $1,800,496 and $1,783,860, respectively, for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of July 1, 2018 and 2017, respectively, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date.

There were no changes between the measurement date, July 1, 2018, and the reporting date, June 30, 2019, that are expected to have a significant effect on the net OPEB liability.

(All dollars reported in thousands)

For the years ended June 30, 2019 and 2018, the University recognized OPEB expense of approximately $148,486 and $117,937, respectively. At June 30, 2019 and 2018, the University reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
2019		
Changes in assumptions	$ 18,581	$ 30,701
Net difference between projected and actual earnings on OPEB plan investments	-	2,351
Contributions subsequent to the measurement date	139,980	-
Total deferred inflows and outflows of resources	$ 158,561	$ 33,052
2018		
Net difference between projected and actual earnings on OPEB plan investments	$ -	$ 2,335
Contributions subsequent to the measurement date	119,714	-
Total deferred inflows and outflows of resources	$ 119,714	$ 2,335

At June 30, 2019, the approximate $139,980 reported as deferred outflows of resources related to OPEB resulting from University contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in the year ending June 30, 2020. The $119,714 reported as deferred outflows of resources related to OPEB resulting from University contributions subsequent to the measurement date at June 30, 2018 were recognized as a reduction of the net OPEB liability in the year ending June 30, 2019.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Years ending June 30,	
2020	$ (3,192)
2021	(3,192)
2022	(3,192)
2023	(2,493)
2024	(2,314)
Thereafter	(88)
	$ (14,471)

(All dollars reported in thousands)

Actuarial Assumptions

The total OPEB liabilities in the July 1, 2018 and 2017 valuations were determined using the following actuarial assumptions adopted by the EUTF's Board of Trustees on January 8, 2018, based on the experience study covering the five-year period ended June 30, 2015 as conducted for the ERS:

	2019	**2018**
Inflation	2.50%	2.50%
Payroll growth rate (including inflation)	3.50% to 7.00%	3.50% to 7.00%
Investment rate of return	7.00%	7.00%
PPO*		
Initial rates	10.00%	6.60%, 6.60%, and 9.00%
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	4.86%	4.86%
Number of years that the rate reaches the ultimate trend rate	13 years	14 years
HMO*		
Initial rate	10.00%	9.00%
Ultimate trend rate	4.86%	4.86%
Number of years that the rate reaches the ultimate trend rate	13 years	14 years
Medicare Part B Contribution		
Initial rates	4.00% and 5.00%	2.00% and 5.00%
Ultimate trend rate	4.70%	4.70%
Number of years that the rate reaches the ultimate trend rate	12 years	14 years
Dental		
Initial rates (for the first three years)	5.00%	3.50%
Ultimate trend rate	4.00%	3.50%
Vision		
Initial rates (for the first three years)	0.00%	2.50%
Ultimate trend rate	2.50%	2.50%
Life Insurance		
Rate	0.00%	0.00%

* Blended rates for medical and prescription drug

Mortality rates are based on system-specific mortality tables utilizing scale BB to project generational mortality improvement.

(All dollars reported in thousands)

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each asset class are summarized in the following table:

	Long-Term Target Allocation	Long-Term Expected Real Rate of Return
Strategic Allocation		
Private equity	10.00 %	8.65%
U.S. microcap	7.00 %	7.00%
U.S. equity	15.00 %	5.05%
Non-U.S. equity	17.00 %	6.50%
Global options	7.00 %	4.50%
Core real estate	10.00 %	4.10%
Private credit	6.00 %	5.25%
Core bonds	3.00 %	1.30%
TIPS	5.00 %	0.75%
Long Treasuries	6.00 %	1.90%
Alternative risk premia	5.00 %	2.45%
Trend following	9.00 %	3.00%
Total	100.00 %	

Single Discount Rate

The discount rate used to measure the net OPEB liability was seven percent, based on the expected rate of return on OPEB plan investments of seven percent and the municipal bond rate of 3.62 percent (based on the daily rate closest to but not later than the measurement date of the Fidelity “20-year Municipal GO AA Index”). Beginning with the fiscal year 2019 contribution, the State’s funding policy is to pay the recommended actuarially determined contribution, which is based on layered, closed amortization periods. Based on those assumptions, the OPEB plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

OPEB Plan Fiduciary Net Position

The OPEB plan’s fiduciary net position has been determined on the same basis used by the OPEB plan. The EUTF’s financial statements are prepared using the accrual basis of accounting under which revenues are recorded when earned and expenses are recorded at the time liabilities are incurred, regardless of the timing of the cash flows. Employer contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded on a trade-date basis. Administrative expenses are financed exclusively with investment income.

(All dollars reported in thousands)

There were no significant changes after the report measurement date. Detailed information about the OPEB plan's fiduciary net position is available in the separately issued EUTF financial report. The EUTF's complete financial statements are available at *http://eutf.hawaii.gov*.

Changes in Net OPEB Liability

The following table represents a schedule of changes in the net OPEB liability. The ending balances are as of the measurement dates, July 1, 2018 and July 1, 2017.

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
2019			
Beginning balance	$ 1,932,553	$ 148,693	$ 1,783,860
Service cost	40,189	-	40,189
Interest on the total OPEB liability	124,435	-	124,435
Employer contributions	-	119,714	(119,714)
Net investment income	-	13,793	(13,793)
Benefit payments	(60,589)	(60,589)	-
Change in assumptions	22,269	-	22,269
Difference between expected and actual experience in the measurement of total OPEB liability	(36,795)	-	(36,795)
Administrative expense	-	(45)	45
Net changes	89,509	72,873	16,636
Ending balance	$ 2,022,062	$ 221,566	$ 1,800,496
2018			
Beginning balance	$ 1,853,649	$ 92,473	$ 1,761,176
Service cost	31,124	-	31,124
Interest on the total OPEB liability	94,505	-	94,505
Employer contributions	-	92,918	(92,918)
Net investment income	-	9,303	(9,303)
Benefit payments	(46,725)	(46,725)	-
Administrative expense	-	(23)	23
Other	-	747	(747)
Net changes	78,904	56,220	22,684
Ending balance	$ 1,932,553	$ 148,693	$ 1,783,860

(All dollars reported in thousands)

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Cost Trend Rates

The following table presents the University's net OPEB liability calculated using the discount rate of seven percent, for the measurement dates July 1, 2018 and 2017, as well as what the University's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (six percent) or one percentage point higher (eight percent) than the current discount rate:

	1% Decrease (6.00%)	Discount Rate (7.00%)	1% Increase (8.00%)
2019			
The University's proportionate share of the net OPEB liability	$ 2,128,619	$ 1,800,496	$ 1,542,673
2018			
The University's proportionate share of the net OPEB liability	$ 2,093,685	$ 1,782,860	$ 1,533,147

The following table presents the University's net OPEB liability calculated using the assumed healthcare cost trend rate, as well as what the University's net OPEB liability would be if it were calculated using the trend rate that is one percentage point lower or one percentage point higher than the current healthcare cost trend rate:

	1% Decrease	Healthcare Cost Trend Rate	1% Increase
2019			
The University's proportionate share of the net OPEB liability	$ 1,528,621	$ 1,800,496	$ 2,153,331
2018			
The University's proportionate share of the net OPEB liability	$ 1,518,711	$ 1,783,860	$ 2,118,508

Payables to the OPEB Plan

The University's employer contributions payable to the EUTF by fiscal year end was paid by June 30, 2019 and 2018.

(All dollars reported in thousands)

15. Other Noncurrent Liabilities

Other noncurrent liabilities at June 30, 2019 and 2018 are comprised of:

	2019	2018
Liabilities under split interest agreements	$ 12,529	$ 12,566
Amounts held for others	4,362	3,936
Asset retirement obligation	10,824	10,594
Refundable advance from the Federal Perkins loan program	6,299	12,013
Other	3,229	3,274
	$ 37,243	$ 42,383

The University accounts for certain costs associated with the future and on-going dismantling and removal of four telescopes on the summit of Mauna Kea in accordance with GASB Statement No. 83. Under Statement No. 83, the execution of the General Lease No. 4191 dated January 1, 1968, between the Board of Land and Natural Resources of the State of Hawai‘i and the University and the University’s acts of acquiring and placing the telescopes into service, serve as external and internal obligating events, respectively, that require the University to recognize a liability and corresponding deferred outflow of resources equal to the estimated current cost of activities to perform upon future retirement of the telescopes. The AROs are associated with three telescopes that currently have estimated remaining useful lives ranging from five to fifteen years and one telescope that is not currently operational but has not yet been decommissioned.

The $10,824 and $10,594 reported as a noncurrent liability at June 30, 2019 and 2018, respectively, was determined based on the most likely amount of what it would cost to perform all the dismantling and removal tasks, as determined by an outside company in 2014 and adjusted for inflation. Actual costs may be higher due to inflation or changes in construction costs or technology.

Deferred outflows of resources related to AROs amounted to $2,519, and $2,520 at June 30, 2019 and 2018, respectively.

In fiscal year 2014, the University received the title to two telescopes, as well as a total of $5,000 from the respective sublessees in exchange for assuming the retirement obligations of the telescopes.

16. State Appropriations

By statutory provision, the University prepares a biennium budget for its programs. Budgeted expenditures are derived primarily from the General Appropriations Act and from other specific appropriations acts in various Sessions Laws of Hawai‘i (“SLH”).

An allotment system and encumbrance accounting are utilized by the University for statutory budgetary control purposes. Obligations in the form of purchase orders or contracts are recorded as encumbrances at the time purchase orders or contracts are awarded and executed. To the extent they are not expended or encumbered, general fund appropriations generally lapse at the end of the fiscal year. The State Legislature specifies the lapse date and any other particular conditions relating to terminating the authorizations for other appropriations.

(All dollars reported in thousands)

Act 53, SLH 2018 Section 3, provided $116,311 in general fund appropriations directly to the Department of Budget and Finance to pay for debt service on general obligation bonds issued for the University. As a result, the University itself received no appropriations and made no transfers for debt service on general obligation bonds for the year ended June 30, 2019.

Act 53, SLH 2018 Section 3, provided $108,031 in general fund appropriations directly to the Department of Budget and Finance to pay for debt service on general obligation bonds issued for the University. As a result, the University itself received no appropriations and made no transfers for debt service on general obligation bonds for the year ended June 30, 2018.

The net amount of the University's State general and capital appropriations for the years ended June 30, 2019 and 2018 were $506,399 and $184,103 and $485,153 and $184,103, respectively.

Net general and capital appropriations for the year ended June 30, 2019 were as follows:

General appropriations	
Act 49, SLH 2017, Appropriation Warrant No. 10	$ 481,508
Act 61, SLH 2017, Appropriation Warrant No. 66	200
Act 14, SLH 2018, Appropriation Warrant No. 74	700
Act 117, SLH 2018, Appropriation Warrant No. 94	150
Act 132, SLH 2018, Appropriation Warrant No. 99	500
	483,058
Total funds lapsed	(665)
Executive restriction	(2,138)
Collective bargaining adjustment	26,144
Total general appropriations	$ 506,399
Capital appropriations	
Sections 30 & 56 of Act 49, SLH 2017, Amended by Section 5 of Act 53 SL	$ 21,173
Section 49, SLH 2017 Sections 30 & 56	9,000
Sections 30 & 56, Act 49, Amended by Act 53 SLH 2018	104,450
Total funds lapsed	(627)
Total capital appropriations	$ 133,996

(All dollars reported in thousands)

Net general and capital appropriations for the year ended June 30, 2018 were as follows:

General appropriations	
Act 49, SLH 2017, Appropriation Warrant No. 10	$ 475,757
Act 61, SLH 2017, Appropriation Warrant No. 70	200
Total funds lapsed	(13)
Executive restriction	(2,203)
Collective bargaining adjustment	11,412
Total general appropriations	$ 485,153
Capital appropriations	
Sections 47, 83 & 93 of Act 119, SLH 2015, Amended by Act 124, SLH 2016	$ 35,000
Section 47 & 83 of Act 119, SLH 2015, Amended by Act 124 SLH 2016	29,700
Section 49, SLH 2017 Sections 30 & 56	120,220
Total funds lapsed	(817)
Total capital appropriations	$ 184,103

Net transfers from the State of Hawai‘i for the years ended June 30, 2019 and 2018 were as follows:

	2019	2018
Fringe benefits	$ 286,479	$ 255,311
Hawai‘i Barrel Tax	2,665	2,578
School of Nursing	238	1,053
University of Hawai‘i Cancer Center	5,323	5,913
	$ 294,705	$ 264,855

(All dollars reported in thousands)

17. Blended Component Information

The following condensed combining information summarizes the individual components of the University's consolidated financial position, results of operations, and cash flows as of and for the years ended June 30, 2019 and 2018:

Condensed Consolidating Statements of Net Position

	2019				
	University	Research Corporation	Foundation	Consolidation Adjustments	Total
Assets and Deferred Outflows of Resources					
Current assets	$ 542,963	$ 38,162	$ 43,284	$ -	$ 624,409
Interdepartmental receivables	27,737	3,425	5,253	(36,415)	-
Capital assets, net	2,149,722	3,217	10,386	-	2,163,325
Other assets	526,716	-	484,425	-	1,011,141
Total assets	3,247,138	44,804	543,348	(36,415)	3,798,875
Deferred outflows of resources	506,412	55	-	-	506,467
Total deferred outflows of resources	506,412	55	-	-	506,467
Total assets and deferred outflows of resources	$ 3,753,550	$ 44,859	$ 543,348	$ (36,415)	$ 4,305,342
Liabilities, Deferred Inflows of Resources, and Net Position					
Current liabilities	$ 239,239	$ 30,395	$ 2,750	$ -	$ 272,384
Interdepartmental payables	24,328	-	6,487	(30,815)	-
Noncurrent liabilities	4,103,474	4,408	25,075	-	4,132,957
Total liabilities	4,367,041	34,803	34,312	(30,815)	4,405,341
Deferred inflows of resources	69,279	501	-	-	69,780
Total deferred inflows of resources	69,279	501	-	-	69,780
Net position					
Net investment in capital assets	1,620,054	3,217	2,186	-	1,625,457
Restricted					
Nonexpendable	10,493	-	296,650	(5,253)	301,890
Expendable	427,654	-	205,739	-	633,393
Unrestricted	(2,740,971)	6,338	4,461	(347)	(2,730,519)
Total net position	(682,770)	9,555	509,036	(5,600)	(169,779)
Total liabilities, deferred inflows of resources, and net position	$ 3,753,550	$ 44,859	$ 543,348	$ (36,415)	$ 4,305,342

(All dollars reported in thousands)

	2018				
	University	Research Corporation	Foundation	Consolidation Adjustments	Total
Assets and Deferred Outflows of Resources					
Current assets	$ 505,165	$ 32,055	$ 29,967	$ -	$ 567,187
Interdepartmental receivables	22,241	6,327	6,323	(34,891)	-
Capital assets, net	2,114,726	3,145	10,544	-	2,128,415
Other assets	541,489	-	549,125	-	1,090,614
Total assets	3,183,621	41,527	595,959	(34,891)	3,786,216
Deferred outflows of resources	528,105	68	-	-	528,173
Total deferred outflows of resources	528,105	68	-	-	528,173
Total assets and deferred outflows of resources	$ 3,711,726	$ 41,595	$ 595,959	$ (34,891)	$ 4,314,389
Liabilities, Deferred Inflows of Resources, and Net Position					
Current liabilities	$ 236,928	$ 26,953	$ 2,959	$ -	$ 266,840
Interdepartmental payables	19,769	644	7,799	(28,212)	-
Noncurrent liabilities	4,066,814	4,728	24,702	-	4,096,244
Total liabilities	4,323,511	32,325	35,460	(28,212)	4,363,084
Deferred inflows of resources	53,497	-	-	-	53,497
Total deferred inflows of resources	53,497	-	-	-	53,497
Net position					
Net investment in capital assets	1,593,171	3,145	2,344	-	1,598,660
Restricted					
Nonexpendable	10,493	-	356,383	(6,323)	360,553
Expendable	404,093	-	202,773	-	606,866
Unrestricted	(2,673,039)	6,125	(1,001)	(356)	(2,668,271)
Total net position	(665,282)	9,270	560,499	(6,679)	(102,192)
Total liabilities, deferred inflows of resources, and net position	$ 3,711,726	$ 41,595	$ 595,959	$ (34,891)	$ 4,314,389

(All dollars reported in thousands)

Condensed Consolidating Statements of Revenues, Expenses and Changes in Net Position

	2019				
	University	**Corporation**	**Foundation**	**Adjustments**	**Total**
Operating revenues					
Student tuition and fees, net	$ 262,063	$ -	$ -	$ (219)	$ 261,844
Federal appropriations, grants and contracts	310,647	-	-	(3)	310,644
State and local grants and contracts	42,250	1,766	-	(972)	43,044
Nongovernmental sponsored programs	51,483	-	-	(14,907)	36,576
Sales and services of educational departments, other	37,900	6,427	4,683	(9,703)	39,307
Auxiliary enterprises	92,446	-	-	-	92,446
Other operating revenues	633	-	1,070	-	1,703
Total operating revenues	797,422	8,193	5,753	(25,804)	785,564
Operating expenses					
Depreciation and amortization	130,153	682	199	-	131,034
Other operating expenses	1,689,937	7,880	59,997	(27,172)	1,730,642
Total operating expenses	1,820,090	8,562	60,196	(27,172)	1,861,676
Operating loss	(1,022,668)	(369)	(54,443)	1,368	(1,076,112)
Nonoperating activity					
Net nonoperating revenues (expenses)	556,510	654	(14,648)	(1,255)	541,261
Capital contributions and additions to permanent endowments	136,346	-	17,628	966	154,940
Transfers	312,324	-	-	-	312,324
Total nonoperating activity	1,005,180	654	2,980	(289)	1,008,525
Change in net position	(17,488)	285	(51,463)	1,079	(67,587)
Net position					
Beginning of year	(665,282)	9,270	560,499	(6,679)	(102,192)
End of year	$ (682,770)	$ 9,555	$ 509,036	$ (5,600)	$ (169,779)

(All dollars reported in thousands)

	2018				
	University (Restated)	Research Corporation	Foundation	Consolidation Adjustments	Total
Operating revenues					
Student tuition and fees, net	$ 259,205	$ -	$ -	$ (318)	$ 258,887
Federal appropriations, grants and contracts	306,672	-	-	7	306,679
State and local grants and contracts	40,405	1,788	-	(1,107)	41,086
Nongovernmental sponsored programs	50,031	-	-	(16,266)	33,765
Sales and services of educational departments, other	33,509	5,863	4,978	(9,071)	35,279
Auxiliary enterprises	94,732	-	-	-	94,732
Other operating revenues	673	-	955	-	1,628
Total operating revenues	785,227	7,651	5,933	(26,755)	772,056
Operating expenses					
Depreciation and amortization	127,060	570	212	-	127,842
Other operating expenses	1,621,498	7,445	60,584	(27,352)	1,662,175
Total operating expenses	1,748,558	8,015	60,796	(27,352)	1,790,017
Operating loss	(963,331)	(364)	(54,863)	597	(1,017,961)
Nonoperating activity					
Net nonoperating revenues	528,963	332	64,886	(724)	593,457
Capital contributions and additions to permanent endowments	182,952	-	17,717	(545)	200,124
Transfers	276,113	-	-	-	276,113
Total nonoperating activity	988,028	332	82,603	(1,269)	1,069,694
Change in net position	24,697	(32)	27,740	(672)	51,733
Net position					
Beginning of year	192,367	10,408	532,759	(6,007)	729,527
Adjustment for change in accounting principle	(882,346)	(1,106)	-	-	(883,452)
Beginning of year, as restated	(689,979)	9,302	532,759	(6,007)	(153,925)
End of year	$ (665,282)	$ 9,270	$ 560,499	$ (6,679)	$ (102,192)

Condensed Consolidating Statements of Cash Flows

	2019			
	University	Research Corporation	Foundation	Total
Net cash provided by (used in)				
Operating activities	$ (548,637)	$ 6,188	$ (3,315)	$ (545,764)
Noncapital financing activities	611,377	-	9,935	621,312
Capital and related financing activities	(45,643)	(754)	-	(46,397)
Investing activities	(33,361)	8,533	4,639	(20,189)
Total change in cash	(16,264)	13,967	11,259	8,962
Cash and cash equivalent balances				
Beginning of year	100,351	14,014	8,512	122,877
End of year	$ 84,087	$ 27,981	$ 19,771	$ 131,839

(All dollars reported in thousands)

	2018			
	University	Research Corporation	Foundation	Total
Net cash provided by (used in)				
Operating activities	$ (544,388)	$ 8,153	$ (13,009)	$ (549,244)
Noncapital financing activities	584,505	-	17,832	602,337
Capital and related financing activities	(44,808)	(1,218)	-	(46,026)
Investing activities	50,994	(1,077)	(3,203)	46,714
Total change in cash	46,303	5,858	1,620	53,781
Cash and cash equivalent balances				
Beginning of year	54,048	8,156	6,892	69,096
End of year	$ 100,351	$ 14,014	$ 8,512	$ 122,877

18. Litigation, Other Contingent Liabilities, and Commitments

HRS §304A-108 stipulates that any liability arising from a claim, action or suit brought against the University shall be payable solely from the moneys and property of the University and shall not constitute a general obligation of the State. The Board is not precluded from requesting and securing legislative appropriations to fund the settlement of any such claim or judgment against the University.

The University is contingently liable in connection with certain other claims and contracts, including those currently in litigation, arising in the normal course of its activities. Although there are inherent uncertainties in any litigation, the University’s management and general counsel are of the opinion that the outcome of such matters will not have a material effect on the University’s financial position.

Substantial amounts are received and expended by the University under federal and state programs which are subject to audit by cognizant governmental agencies and independent auditors under Uniform Guidance. This funding relates to research, student aid, and other programs. University management believes that any liabilities arising from such audits will not have a material effect on the University’s financial position.

The State and the Office of Hawaiian Affairs (“OHA”) are involved in an ongoing dispute relating to certain lands transferred by the former Republic of Hawai‘i to the United States which were re-conveyed to the State upon Hawai‘i’s admission to the Union in 1959. These lands (collectively, the “ceded lands”) are the subject of a number of claims, litigation and legislation, which are being addressed by the State on behalf of all State agencies, including the University. These matters are more fully described in the State’s CAFR that includes financial statements and required supplementary information which may be obtained from the following address:

State of Hawai‘i Department of Accounting and General Services
1151 Punchbowl Street
Honolulu, Hawai‘i 96813

Although the ultimate outcome and financial impact to the University of these OHA matters are not presently known, the University has come to an agreement with the State with respect to the University's estimated pro rata portion of its obligation due to OHA related to revenues generated from ceded lands. The University's financial statements reflect the liabilities and disbursements in connection with this agreement.

Risk Management
In general, the University obtains third-party insurance coverage directly from third-party insurers or is covered under the umbrella of the State's insurance program. However, the University is partially or entirely self-insured for certain risks, such as unemployment and workers' compensation claims.

Construction and Other Contracts
The University is committed under contracts awarded for construction and other services. These commitments amounted to approximately $230,283 and $312,859 as of June 30, 2019 and 2018, respectively.

Collective Bargaining Agreements
The Hawai‘i State Constitution under Article XIII, Section 2, grants public employees in the State the right to organize for the purpose of collective bargaining as provided by law. Chapter 89, HRS, provides for 14 recognized bargaining units for all public employees throughout the State, including State and county employees. Each bargaining unit is represented by an employee organization otherwise known as the exclusive bargaining representative or "union" of all employees in the unit, which negotiates wages, hours, and terms and conditions of employment with the public employers.

As the University is part of the State, most employees working at the University are included in a bargaining unit as defined in HRS §89-6(a) depending on the nature of their positions. The University is responsible for properly administering eight collective bargaining agreements ("CBAs") associated with the aforementioned bargaining units. The number of University employees in each bargaining unit ("Unit") as reported by the Hawai‘i Labor Relations Board on March 15, 2019, are as follows:

- Unit 1 (nonsupervisory employees in blue collar positions): 514
- Unit 2 (supervisory employees in blue collar positions): 12
- Unit 3 (nonsupervisory employees in white collar positions: 640
- Unit 4 (supervisory employees in white collar positions): 34
- Unit 7 (faculty of the University and the community college system): 3,673
- Unit 8 (personnel of the University and the community college system, other than faculty): 2,388
- Unit 9 (registered professional nurses): 8
- Unit 10 (institutional. health and correctional workers): 2

The civil service employees working at the University are included in Units 1, 2, 3, 4, 9 and 10. The University's employees exempt from civil service are considered Board of Regents appointees, and include faculty members, who are included in Unit 7, and administrative, professional, and technical ("APT") employees, who are included in Unit 8.

- Employees in executive or managerial positions, as well as certain other personnel designated as excluded from collective bargaining pursuant to HRS §89-6(f), and whose responsibilities concern confidential matters affecting employee-employer relations, are not represented by any union. Wages, hours, and other terms and conditions of employment for these employees are as provided by law or action of the Board of Regents, as applicable. Some employees (for example, 89-day contractual hires) are not parties to any bargaining unit under HRS chapter 89.

Units 1, 7 and 10 have CBAs that are effective through June 30, 2021. The salary increases for these units through the terms of the CBAs have been reported in the University's previous financial statements; however, the following additional salary adjustments were negotiated pursuant to the CBAs' reopener provisions:

Unit 1: Effective January 1, 2020, all members shall receive a 1.2 percent per month across-the-board ("ATB") salary increase. Members not administratively assigned to the salary schedule shall receive a 1.2 percent per month increase.

Effective January 1, 2021, all members shall receive a 1.2 percent per month ATB salary increase; members not administratively assigned to the salary schedule shall receive a 1.2 percent per month increase.

Unit 7: Effective January 2, 2020, a salary enhancement equivalent to the average negotiated step movement plans in other bargaining units or 1.2 percent, whichever is higher.

Effective January 1, 2021, a salary enhancement equivalent to the average negotiated step movement plans in other bargaining units or 1.2 percent, whichever is higher.

Unit 10: Effective July 1, 2019, employees eligible for Developmental Career Plan ("DCP") movements during the period July 1, 2019 to June 30, 2020, shall move to the appropriate step on their DCP movement date.

Effective January 1, 2020, a 0.74 percent per month ATB increase to the salary schedule. Employees not administratively assigned to the salary schedule shall receive a 0.74 percent per month increase.

Effective July 1, 2020, employees eligible for DCP movements during the period July 1, 2020 to June 30, 2021 shall move to the appropriate step on their DCP movement date.

Effective January 1, 2021, a 1.07 percent ATB increase to the salary schedule. Employees not administratively assigned to the salary schedule shall receive 1.07 percent per month increase.

(All dollars reported in thousands)

For Units 2, 3, 4, 8, and 9, the CBAs expired on June 30, 2019. Since then, wages, hours, and terms and conditions of employment have remained "status quo." However, Unit 9 received an interest arbitration award on September 16, 2019, that is summarized below; these salary adjustments are tentative pending approval by the appropriate legislative bodies:

Unit 9: Effective July 1, 2019, employees shall receive a 2.5 percent ATB increase to the salary schedule, and the continuation of existing step movements. Employees not administratively assigned to the salary schedule shall receive a 2.5 percent increase.

Effective July 1, 2019, a new step L-5 shall be established and implemented for employees who have accrued 25 years or more of service credit in accordance with the current step movement plan.

Effective July 1, 2019, employees on salary ranges from SR-16 to SR-30, who are administratively assigned, shall receive a one-time-bonus as follows (with the bonus for employees who work less than full time prorated):

Step B	$1,800
Step C	$1,825
Step D	$1,850
Step E	$1,875
Step L1	$1,900
Step L2	$1,925
Step L3	$1,950
Step L4	$1,975
Step L5	$2,000

Effective July 1, 2019, employees not administratively assigned to the salary schedule shall receive a one-time bonus of $1,800; employees less than full-time shall receive a prorated amount.

Effective July 1, 2020, employees shall receive a 2.5 percent ATB increase to the salary schedule and the continuation of existing step movements. Employees not administratively assigned to the salary schedule shall receive a 2.5 percent increase.

For Unit 8, the employer received notice on October 24, 2019 that the affected employees ratified a tentative agreement ("TA") that had been reached between the parties, with cost items subject to approval by the appropriate legislative bodies. A summary of the salary adjustments in Unit 8 TA is as follows:

- Effective July 1, 2019, employees assigned to the salary schedule as of June 30, 2019, shall receive a one-time bonus of $1,000 for employees with less than three (3) years of service, or $2,000 for employees with three (3) or more years of service.

- Effective July 1, 2020, employees on Step 1 to Step 46 receive a two-step adjustment to the next higher step; employees on Step 47 receive a one-step adjustment to the next higher step and a two percent lump sum payment; and employees on Step 48 receive a four percent lump sum payment.

- Effective January 1, 2020, a 1.2 percent across the board increase for eleven-month and nine-month APT employees.

For Unit 2, the employer received notice on October 24, 2019 that the affected employees ratified a TA that had been reached between the parties with cost items subject to approval by the appropriate legislative bodies. A summary of the salary adjustments in the Unit 2 TA is as follows:

- Effective July 1, 2019, employees receive a $2,000 lump sum bonus.

- Effective July 1, 2020, employees receive a 5.29 percent across the board increase.

- Effective January 1, 2021, employees receive a 1.2 percent across the board increase.

For Unit 3, interest arbitration hearings are scheduled for January 13, 2020 through January 17, 2020.

For Unit 4, interest arbitration hearings were held the week of September 30, 2019; an award has not been rendered as of this update in November 2019.

Finally, all Units have identical adjustments to the employer’s EUTF contributions, effective July 1, 2019 through June 30, 2021.

Required Supplementary Information Other Than Management's Discussion and Analysis

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedule of the Proportionate Share of the Net Pension Liability (Unaudited)
Year Ended June 30, 2019
(All dollars reported in thousands)

Fiscal Year Ending	Proportionate Share of the Net Pension Liability as a Percentage	Proportionate Share of the Net Pension Liability as an Amount (a)	Annual Covered Payroll (b)	Proportion of the Net Pension Liability as a Percentage of Covered Payroll (a) / (b)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
June 30, 2019	12.73%	$1,695,800	$590,725	287%	55.48%
June 30, 2018	12.73%	$1,648,600	$586,658	281%	54.80%
June 30, 2017	12.75%	$1,704,470	$587,203	290%	51.28%
June 30, 2016	13.11%	$1,144,564	$572,907	200%	63.42%
June 30, 2015	13.60%	$1,089,882	$564,736	193%	63.92%
June 30, 2014	13.75%	$1,227,787	$550,758	223%	57.96%

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedule of Pension Contributions (Unaudited)
Year Ended June 30, 2019
(All dollars reported in thousands)

Fiscal Year Ending	Statutorily Required Contribution (a)	Contributions in Relation to the Statutorily Required Contribution (b)	Contribution Deficiency (Excess) (a) - (b)	Covered Annual Payroll (c)	Contributions as a Percentage of Covered Payroll (a) / (c)
June 30, 2019	$117,600	$117,600	$0	$590,725	19.91%
June 30, 2018	$111,436	$111,436	$0	$586,658	19.00%
June 30, 2017	$98,865	$98,865	$0	$587,203	16.84%
June 30, 2016	$97,394	$97,394	$0	$572,907	17.00%
June 30, 2015	$93,949	$93,949	$0	$564,736	16.64%
June 30, 2014	$88,381	$88,381	$0	$550,758	16.05%

1. Changes of Benefit Terms

There were no changes of benefit terms in 2019, 2018, 2017, 2016 or 2015.

2. Changes of Assumptions

There were no significant changes in actuarial assumptions in 2019 or 2018.

There were significant changes in actuarial assumptions effective in the University’s fiscal year 2017 based on the Five-Year Experience Study report dated July 5, 2016 that resulted in a significant increase in the measurement of the total pension liability. Primary drivers for the increase include a decrease in the investment return assumption and discount rate from 7.65 percent as of June 30, 2015 to seven percent as of June 30, 2016; and a decrease in the mortality assumptions for longer life expectancy and an explicit assumption for continued future mortality improvement (generational approach).

In fiscal year 2016, the only significant change in actuarial assumptions was the investment return assumption which decreased from 7.75 percent to 7.65 percent. There were no changes of assumptions in 2015.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedule of Changes in the Net OPEB Liability and Related Ratios (Unaudited)
Year Ended June 30, 2019
(All dollars reported in thousands)

	2019	2018
Total OPEB liability		
Service cost	$ 40,189	$ 31,124
Interest	124,435	94,505
Difference between expected and actual experience	(36,795)	-
Changes of assumptions	22,269	-
Benefit payments	(60,589)	(46,725)
Net change in total OPEB liability	89,509	78,904
Total OPEB liability – beginning	1,932,553	1,853,649
Total OPEB liability – ending	$ 2,022,062	$ 1,932,553
Plan fiduciary net position		
Employer contributions	$ 119,714	$ 92,918
Net investment income	13,793	9,303
Benefit payments	(60,589)	(46,725)
OPEB plan administrative expense	(45)	(23)
Other	-	747
Net change in plan fiduciary net position	72,873	56,220
Plan fiduciary net position – beginning	148,693	92,473
Plan fiduciary net position – ending	221,566	148,693
Net OPEB liability – ending	$ 1,800,496	$ 1,783,860
Plan fiduciary net position as a percentage of OPEB liability	10.96%	7.69%
Covered-employee payroll	$ 590,725	$ 586,658
Net OPEB liability as a percentage of covered-employee payroll	304.79%	304.07%

University of Hawaiʻi
State of Hawaiʻi
(A Component Unit of the State of Hawaiʻi)
Schedule of OPEB Contributions (Unaudited)
Year Ended June 30, 2019
(All dollars reported in thousands)

	2019	2018
Actuarially determined contribution	$ 134,898	$ 135,072
Contributions in relation to the actuarially required contribution	139,980	119,714
Contributions excess	$ (5,082)	$ 15,358
University's covered-employee payroll	$ 590,725	$ 586,658
Contributions as a percentage of covered employee payroll	23.70%	20.41%

1. **Changes of Benefit Terms**

   There were no changes of benefit terms in 2019.

2. **Changes of Assumptions**

   Actuarial assumption changes during the University's fiscal year 2019 included updating the healthcare trend assumptions to better anticipate short-term premium experience. The actuarial methods and assumptions used to calculate the total OPEB liability are described in Note 14 of the consolidated financial statements.

Other Supplementary Information

Accuity LLP

CERTIFIED PUBLIC ACCOUNTANTS

Report of Independent Auditors on Supplemental Information

To the Board of Regents
University of Hawai‘i

We have audited the consolidated financial statements of the University of Hawai‘i as of and for the years ended June 30, 2019 and 2018, and our report thereon dated December 5, 2019, which expressed an unmodified opinion, appears on pages 1 to 3. Our audits were conducted for the purpose of forming an opinion on the consolidated financial statements taken as a whole. The supplemental information (Schedules I, II, III, IV, V, VI, VII, VIII, IX and, X) included hereinafter is presented for purposes of additional analysis and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

Accuity LLP

Honolulu, Hawai‘i
December 5, 2019

999 Bishop Street, Suite 1900
Honolulu, Hawaii 96813
Telephone: 808 531 3400 Facsimile: 808 531 3433

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Condensed Statements of Net Position
Condensed Statements of Revenues, Expenses and Changes in Net Position
Current Unrestricted Funds Excluding General Fund
As of and for the Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule I**

	2019	2018
Condensed statements of net position		
Assets		
Current assets	$ 380,384	$ 352,970
Noncurrent assets	1,388	715
Total assets	$ 381,772	$ 353,685
Liabilities		
Current liabilities	$ 94,590	$ 93,011
Noncurrent liabilities	11,948	12,158
Total liabilities	106,538	105,169
Net position		
Unrestricted	275,234	248,516
Total net position	275,234	248,516
Total liabilities and net position	$ 381,772	$ 353,685
Condensed statements of revenues, expenses and changes in net position		
Operating revenues	$ 439,335	$ 433,229
Operating expenses	393,059	389,851
Operating income	46,276	43,378
Nonoperating revenues and transfers	48,181	52,302
Nonoperating expenses and transfers	67,739	65,755
Change in net position	26,718	29,925
Net position		
Beginning of year	248,516	218,591
End of year	$ 275,234	$ 248,516

1. Basis of Presentation

The accompanying condensed statements of net position and related condensed statements of revenues, expenses and changes in net position present the financial position and results of operations of certain of the University’s Special and Revolving Funds, which are pledged as collateral on the University’s Series 2009A, 2010A, 2010B, 2012A(R), 2015A, 2015B(R), 2015C(R), 2015D(R), 2015E(R), 2017A, 2017B, 2017C, 2017D, 2017E, 2017F and 2017G revenue bonds, and are presented on the accrual basis of accounting. The financial information of the Research Corporation of the University of Hawai‘i and the University of Hawai‘i Foundation is not reflected in this schedule.

2. Employee Benefits

In accordance with University policy, the University’s liability for other postemployment benefits (“OPEB”) and deferred outflows and deferred inflows of resources related to OPEB (“OPEB benefits”) are not allocated internally to individual departments and funds. Accordingly, OPEB benefits are not reflected in this schedule.

In accordance with University policy, the University’s liability for pension benefits and deferred outflows and deferred inflows of resources related to pensions (“pension benefits”) are not allocated internally to individual departments and funds. Accordingly, pension benefits are not reflected in this schedule.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedules of Series 2002A University Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule II**

	2019	2018
Beginning balance	$ 2,733	$ 5,540
Additions		
Interest and investment income	59	59
Total additions	59	59
Deductions		
Payments – building, construction in progress, other	212	2,863
Management fees	3	3
Total deductions	215	2,866
Ending balance	$ 2,577	$ 2,733

1. Basis of Presentation

The accompanying schedules of Series 2002A University Bond proceeds activity present the sources and uses of bond proceeds associated with the construction of the John A. Burns School of Medicine facility at Kaka‘ako. The financial information of the Research Corporation of the University of Hawai‘i and the University of Hawai‘i Foundation is not reflected in this schedule.

2. Refinancing

In October 2006, the University refinanced a majority of the outstanding Series 2002A University Bonds through the issuance of Refunding Series 2006A University Bonds.

In September 2015, the University refinanced a portion of the outstanding Refunding Series 2006A University Bonds through the issuance of Series 2015D(R) and 2015E(R) revenue bonds. The Series 2015D(R) revenue bonds were delivered on September 24, 2015 and the forward delivery Series 2015E(R) revenue bonds were delivered on April 20, 2016.

In December 2017, the University refinanced the remainder of the outstanding Refunding Series 2006A University Bonds through the issuance of Series 2017B and 2017C revenue bonds.

Proceeds from the State’s settlement agreement with tobacco companies are expected to be utilized to service the debt.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedules of Series 2006A Revenue Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule III**

	2019	2018
Beginning balance	$ 4,035	$ 3,994
Additions		
Interest and investment income	99	44
Total additions	99	44
Deductions		
Management fees	4	3
Total deductions	4	3
Ending balance	$ 4,130	$ 4,035

1. Basis of Presentation

The accompanying schedules of Series 2006A revenue bond proceeds activity present the sources and uses of bond proceeds associated with the construction of the Frear Hall dormitory at the Mānoa campus and repair and maintenance of various housing projects on the Mānoa and Hilo campuses. The financial information of the Research Corporation of the University of Hawai‘i and the University of Hawai‘i Foundation is not reflected in this schedule.

2. Refinancing

In September 2015, the University refinanced a portion of the outstanding Series 2006A revenue bonds through the issuance of Series 2015B(R) and 2015C(R) revenue bonds.

In December 2017, the University refinanced the remainder of the outstanding Series 2006A revenue bonds through the issuance of Series 2017D and 2017E revenue bonds.

University of Hawaiʻi
State of Hawaiʻi
(A Component Unit of the State of Hawaiʻi)
Schedules of Series 2009A Revenue Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule IV**

	2019	2018
Beginning balance	$ 1,565	$ 1,549
Additions		
Interest and investment income	36	17
Total additions	36	17
Deductions		
Management fees	1	1
Total deductions	1	1
Ending balance	$ 1,600	$ 1,565

1. Basis of Presentation

The accompanying schedules of Series 2009A revenue bond proceeds activity present the sources and uses of bond proceeds associated with the financing of costs of certain University projects. The financial information of the Research Corporation of the University of Hawaiʻi and the University of Hawaiʻi Foundation is not reflected in this schedule.

2. Refinancing

In December 2017, the University refinanced a portion of the outstanding Series 2009A revenue bonds through the issuance of Series 2017F and 2017G revenue bonds.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedules of Series 2010A Revenue Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule V**

	2010A-1	2010A-2
Balance at June 30, 2017	$ 112	$ 1,119
Additions		
Interest and investment income	1	12
Total additions	1	12
Deductions		
Payments − building, construction in progress, other	-	505
Management fees	-	1
Total deductions	-	506
Balance at June 30, 2018	113	625
Additions		
Interest and investment income	2	12
Total additions	2	12
Deductions		
Payments − building, construction in progress, other	-	288
Total deductions	-	288
Balance at June 30, 2019	$ 115	$ 349

1. Basis of Presentation

The accompanying schedules of Series 2010A-1 and Series 2010A-2 revenue bond proceeds activity present the sources and uses of the bond proceeds associated with construction and maintenance of the University of Hawai‘i Cancer Center. The financial information of the Research Corporation of the University of Hawai‘i and the University of Hawai‘i Foundation is not reflected in these schedules.

University of Hawaiʻi
State of Hawaiʻi
(A Component Unit of the State of Hawaiʻi)
Schedules of Series 2010B Revenue Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule VI**

	2010B-1	2010B-2
Balance at June 30, 2017	$ 584	$ 852
Additions		
Interest and investment income	7	10
Total additions	7	10
Deductions		
Payments – building, construction in progress, other	36	9
Management fees	-	1
Total deductions	36	10
Balance at June 30, 2018	555	852
Additions		
Interest and investment income	12	20
Total additions	12	20
Deductions		
Management fees	-	1
Total deductions	-	1
Balance at June 30, 2019	$ 567	$ 871

1. Basis of Presentation

The accompanying schedules of Series 2010B-1 and Series 2010B-2 revenue bond proceeds activity present the sources and uses of the bond proceeds associated with renovations and additions to the Mānoa Campus Center, construction and equipment for an Information Technology Building, renovations to the Sinclair Library basement on the Mānoa campus, further development of the West Oʻahu campus, various energy conservation/efficiency projects on the community college campuses on Oʻahu and Maui, and the financing of costs of renovation and construction of other University projects. The financial information of the Research Corporation of the University of Hawaiʻi and the University of Hawaiʻi Foundation is not reflected in these schedules.

University of Hawaiʻi
State of Hawaiʻi
(A Component Unit of the State of Hawaiʻi)
Schedules of Series 2015A Revenue Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule VII**

	2019	2018
Beginning balance	$ 5,322	$ 8,528
Additions		
Interest and investment income	120	92
Total additions	120	92
Deductions		
Payments – building, construction in progress, other	171	3,292
Management fees	5	6
Total deductions	176	3,298
Ending balance	$ 5,266	$ 5,322

1. Basis of Presentation

The accompanying schedules of Series 2015A revenue bond proceeds activity present the sources and uses of bond proceeds associated with the UH Mānoa Law School Expansion and Modernization Project and the UH Hilo College of Pharmacy Project. The financial information of the Research Corporation of the University of Hawaiʻi and the University of Hawaiʻi Foundation is not reflected in this schedule.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Schedule of Series 2017A Revenue Bond Proceeds Activity
Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule VIII**

	2019	2018
Beginning balance	$ 4,521	$ -
Additions		
Bond proceeds	-	4,526
Interest and investment income	85	23
Total additions	85	4,549
Deductions		
Payments – building, construction in progress, other	2,103	26
Management fees	3	2
Total deductions	2,106	28
Ending balance	$ 2,500	$ 4,521

1. Basis of Presentation

The accompanying schedule of Series 2017A revenue bond proceeds activity present the sources and uses of bond proceeds associated with renovations to the Sinclair Library basement on the Mānoa campus. The financial information of the Research Corporation of the University of Hawai‘i and the University of Hawai‘i Foundation is not reflected in this schedule.

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Condensed Statements of Net Position
Condensed Statements of Revenues, Expenses and Changes in Net Position
University Bond System
As of and for the Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule IX**

	2019	2018
Condensed statements of net position		
Assets and deferred outflows of resources		
Current assets	$ 119,481	$ 110,177
Capital assets, net	470,848	495,230
Other assets	15,399	17,588
Total assets	605,728	622,995
Deferred outflows of resources	13,097	14,737
Total deferred outflows of resources	13,097	14,737
Total assets and deferred outflows of resources	$ 618,825	$ 637,732
Liabilities		
Current liabilities	$ 38,139	$ 34,710
Noncurrent liabilities	508,993	530,066
Total liabilities	547,132	564,776
Net position		
Net investment in capital assets	(30,201)	(20,453)
Restricted expendable	1,038	1,037
Unrestricted	100,856	92,372
Total net position	71,693	72,956
Total liabilities and net position	$ 618,825	$ 637,732
Condensed statements of revenues, expenses and changes in net position		
Operating revenues		
Bookstores	$ 17,907	$ 20,639
Room and other rentals	31,533	32,975
Parking	5,905	5,933
Telecommunications	2,887	3,444
Other operating revenues	9,658	9,175
Total operating revenues	67,890	72,166
Operating expenses (including $29,475 and $29,606 in depreciation expense in 2019 and 2018, respectively)	(85,816)	(88,477)
Operating loss	(17,926)	(16,311)
Nonoperating revenues	41,620	37,080
Nonoperating expenses	(24,957)	(41,339)
Change in net position	(1,263)	(20,570)
Net position		
Beginning of year	72,956	93,526
End of year	$ 71,693	$ 72,956

University of Hawai‘i
State of Hawai‘i
(A Component Unit of the State of Hawai‘i)
Condensed Statements of Cash Flows
University Bond System
As of and for the Years Ended June 30, 2019 and 2018
(All dollars reported in thousands) **Schedule X**

	2019	2018
Condensed statements of cash flows		
Net cash flows provided by operating activities	$ 18,819	$ 14,146
Net cash flows provided by non-capital financing activities	5,307	3,079
Net cash flows used in capital and related financing activities	(17,979)	(10,925)
Net cash flows used in investing activities	(1,244)	(6,457)
Net increase (decrease) in cash and cash equivalents	4,903	(157)
Cash and cash equivalents		
Beginning of year	11,240	11,397
End of year	$ 16,143	$ 11,240

1. Reporting Entity

The University Bond System consists of several University projects funded by bond proceeds. The University projects, operated and maintained jointly as a system, include: (1) all existing University housing units located on the Mānoa campus and connecting food service facilities; (2) the University's student center known as the Campus Center and food service activities on the Mānoa campus; (3) all existing University housing units located on the Hilo campus and connecting food service facilities; (4) the telecommunication system located on the Mānoa campus; (5) all existing bookstores located on any campus of the University; (6) the parking operations for the Mānoa Campus which were financed in whole or in part from certain revenue or general obligation bonds; and (7) certain other University projects.

The University Bond System's outstanding debt was issued pursuant to the bond resolution adopted in November 2001 and as amended and supplemented by supplemental resolutions adopted in November 2006, February 2009, August 2010, and January 2012. The bond resolutions established a network of the University consisting of the University Bond System and any University purpose which, at the election of the Board, is included in the network pursuant to a supplemental resolution. The bond resolutions provide that all revenues collected or received from the Network be used to support the Network (which includes the University projects of the University Bond System) and bond related expenses.

On August 20, 2015, the University of Hawai‘i Board of Regents adopted a supplemental resolution authorizing the issuance of University Revenue Bonds. The University, in September 2015, sold $166,285 in Series 2015A ($8,575, taxable new money), 2015B(R) ($47,010, tax-exempt refunding), 2015C(R) ($17,585, taxable refunding), 2015D(R) ($25,715, taxable refunding), and 2015E(R) ($67,400, tax-exempt forward delivery refunding) bonds (collectively, the "Series 2015 Bonds") for the purpose of financing the costs of University projects and refunding previously issued bonds. The Series 2015 Bonds were delivered on September 24, 2015 with the exception of the forward delivery Series 2015E(R) bonds which were delivered on April 20, 2016. The Series 2015B(R) and 2015C(R) bonds were issued to refund a portion of the Series 2006A University Revenue Bonds and the Series 2015D(R) and 2015E(R) bonds to refund a portion of the Refunding Series 2006A University Bonds issued under a different bond resolution.

On November 16, 2017, the University of Hawai‘i Board of Regents adopted a supplemental resolution authorizing the issuance of University Revenue Bonds. The University, in December 2017, sold $110,795 in Series 2017A ($3,990, tax-exempt new money), 2017B ($12,040, tax-exempt refunding), 2017C ($4,110, taxable refunding), 2017D ($13,185, tax-exempt refunding), 2017E ($4,450, taxable refunding), 2017F ($52,275, tax-exempt refunding), and 2017G ($20,745, taxable refunding) bonds (collectively, the “Series 2017 Bonds”) for the purpose of financing the costs of a University project and refunding previously issued bonds. The Series 2017B and 2017C bonds were issued to refund the remainder of the outstanding Refunding Series 2006A University Bonds issued under a different bond resolution, the Series 2017D and 2017E bonds were issued to refund the remainder of the outstanding Series 2006A University Revenue Bonds and the Series 2017F and 2017G bonds were issued to refund a portion of the Series 2009A University Revenue Bonds.

2. Basis of Presentation

The accompanying condensed statements of net position and related condensed statements of revenues, expenses and changes in net position and condensed statement of cash flows present the financial position and results of operations of the University Bond System, and are presented on the accrual basis of accounting.

3. Employee Benefits

In accordance with University policy, the University’s liability for other postemployment benefits (“OPEB”) and deferred outflows and deferred inflows of resources related to OPEB (“OPEB benefits”) are not allocated internally to individual departments and funds. Accordingly, OPEB benefits are not reflected in this schedule.

In accordance with University policy, the University’s liability for pension benefits and deferred outflows and deferred inflows of resources related to pensions (“pension benefits”) are not allocated internally to individual departments and funds. Accordingly, pension benefits are not reflected in these schedules.

APPENDIX C
SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION

The following is a summary of certain provisions of the resolution adopted by the Board of Regents of the University of Hawaii (the "*Board*") on November 16, 2001, entitled "A RESOLUTION CREATING AND ESTABLISHING A NETWORK CONSISTING OF A UNIVERSITY SYSTEM, INCLUDING CERTAIN UNIVERSITY PROJECTS, AND UNIVERSITY PURPOSES, OF THE BOARD OF REGENTS, UNIVERSITY OF HAWAII; CREATING AND ESTABLISHING AN ISSUE OF REVENUE BONDS OF THE BOARD OF REGENTS, UNIVERSITY OF HAWAII, AND PROVIDING FOR THE SECURITY FOR AND PAYMENT OF SAID BONDS AND LIMITING SUCH PAYMENT TO THE REVENUES OF SAID NETWORK; SETTING FORTH THE TERMS AND CONDITIONS FOR THE ISSUANCE OF BONDS; SETTING FORTH THE TERMS AND CONDITIONS FOR THE ISSUANCE OF ADDITIONAL SERIES OF SAID BONDS; PROVIDING FOR THE RIGHTS OF THE HOLDERS OF SAID BONDS; AND MAKING CERTAIN OTHER COVENANTS AND AGREEMENTS IN CONNECTION WITH THE FOREGOING," as amended and supplemented by the resolutions adopted by the Board on November 16, 2006, February 20, 2009, August 30, 2010, January 19, 2012, August 20, 2015, November 16, 2017, and September 17, 2020 (herein referred to collectively as the "*Resolution*"). This summary is not a complete recital of the terms of the aforementioned documents and reference should be made to the Resolution for its complete terms. Words and terms used in this summary and not defined herein shall have the same meaning as in the Resolution. Copies of the Resolution will be available for inspection after delivery of the Bonds to any registered owner of the Bonds upon request by such owner at the principal corporate trust office of the Director of Finance.

DEFINITIONS OF CERTAIN TERMS

"*Additional Bond*" or "*Additional Bonds*" means any Bond or Bonds issued pursuant to the provisions of the Resolution relating to the issuance of additional bonds, including Bonds issued to refund Outstanding Bonds.

"*Certificate of Determination*" means a certificate of the Designated Financial Officer authorizing the issuance of refunding Bonds as permitted in Section 2.04 of the Resolution and/or fixing the terms, conditions and other details of Bonds in accordance with the delegation of powers to do so under the Resolution or under a Supplemental Resolution.

"*Construct*" and "*Construction*" mean and include respectively, (i) acquire, purchase, plan, construct, reconstruct, remodel, renovate, improve, better and extend, and (ii) acquisition, purchase, planning, construction, reconstruction, remodeling, renovation, improvement, betterment and extension.

"*Cost of Construction*" means all costs and estimated costs of construction, and without limiting the generality of the foregoing, shall include all costs and estimated costs of the preparation and issuance of revenue bonds and obtaining of a loan; cost of land acquisition; engineering, architectural, supervisory, inspection, fiscal, legal, administrative and clerical fees, costs and expenses; interest which it is estimated will accrue during the construction period and for six months thereafter on money obtained by loan or through the issuance of Bonds, or both; amounts necessary to establish or increase reserves; costs of utilities, equipment, fixtures and apparatus necessary or convenient for the use and occupancy of a University Project, and, if so determined by the Board, the initial furnishings of a University Project; and necessary travel expenses.

"*Current Expenses*" means the costs and estimated costs of operation, maintenance and repair and without limiting the generality of the foregoing, shall include all necessary operating expenses; charges for and expenses of repairs, upkeep, replacement and renewals occurring in the ordinary course; salaries, wages and fees of officers, employees and contractors of the Board engaged in the maintenance of the Network; costs of supplies and equipment including ordinary and current rentals of equipment or property or fees and charges for equipment or property incurred under agreement to the extent permitted by the fourth paragraph of Section 6.10 of the Resolution; cost of food, beverages and merchandise; a properly allocated share of charges for insurance; costs and expenses of administration arising out of, and properly allocable to, the operation, maintenance and repair of the Network and the servicing of the debt (including the Bonds) incurred with respect thereto; Integrated Swap Agreement Payments; payments required to be made by the Board pursuant to law to the extent such payments constitute Current Expenses of the Network; and all other expenses incident to the operation, maintenance and repair of the Network; provided that the term "Current Expenses" shall not include depreciation, general administration expenses of the Board, and the credits to the University Network Repair and Replacement Account or any subaccount therein required by the Resolution.

"*Designated Financial Officer*" means the chief financial officer of the University or such other person as may be designated and authorized by the Board to sign for the Board.

"*Director of Finance*" means the single executive heading the Department of Budget and Finance of the State pursuant to Section 26 8, Hawaii Revised Statutes.

"*Federal Government*" means the United States of America or the Department of Housing and Urban Development or any other department or agency acting for and on behalf of the United States of America.

"*Fiscal Year*" means the fiscal year for the State of Hawaii as established from time to time by said State, being on the date of adoption of the Resolution the period from July 1 in any year to and including the following June 30.

"*Hedge Agreement*" means an interest rate swap or exchange agreement, including an Integrated Swap Agreement, a payment exchange agreement, forward purchase agreement or any other hedge agreement entered into by the Board for any purpose providing for payments between the parties based on levels of, or changes in, interest rates, stock or other indices or contracts to exchange cash flows or a series of payments or contracts, including without limitation, interest rate floors or caps, options, puts or calls to hedge payment, rate, spread or similar risk.

"*Holder of a Bond*" or "*Bondholder*" means any person who shall be the bearer of any Bond not then registered, or the registered owner or his duly authorized attorney-in-fact, representative or assigns, of any Bond which shall at the time be registered other than to bearer.

"*Integrated Swap Agreement*" means any interest rate swap agreement entered into by the Board with respect to a series of Bonds having a notional amount equal to the principal amount of such series of Bonds and pursuant to which the Board agrees to make payments on the basis of (a) a fixed rate of interest or (b) a variable rate of interest.

"*Integrated Swap Agreement Payments*" means payments made pursuant to an Integrated Swap Agreement on the basis of fixed or variable rates of interest; specifically excluding, however, termination payments, fees, expenses and other amounts payable under an Integrated Swap Agreement not specifically made on the basis of interest rates.

"*Integrated Swap Agreement Payments*" means payments made pursuant to an Integrated Swap Agreement on the basis of fixed or variable rates of interest; specifically excluding, however, termination payments, fees, expenses and other amounts payable under an Integrated Swap Agreement not specifically made on the basis of interest rates.

"*Interest Increment Amount*" means, as of any particular date of computation and for any particular period or year, with respect to any Bonds the difference, if any, between the rate of interest per annum borne by Variable Rate Bonds in accordance with their terms as set forth in the Supplemental Resolution or Certificate of Determination authorizing the issuance thereof for all Holders other than an issuer or issuers of a Support Facility, and the rate such Variable Rate Bonds bear when such Variable Rate Bonds are held by an issuer or issuers of a Support Facility.

"*Investment Securities*" means any of the following which at the time are legal investments under the laws of the State for the moneys held hereunder then proposed to be invested therein: (i) direct general obligations of, or obligations the payment of the principal and interest of which are unconditionally guaranteed by, the United States of America; and interest of which are unconditionally guaranteed by the United States of America; (ii) obligations of any of the following which constitute the full faith and credit of the United States of America: Export-Import Bank, Farm Credit System Financial Assistance Corporation, Farmers Home Administration, General Services Administration, U.S. Maritime Administration, Small Business Administration, Government National Mortgage

Association, U.S. Department of Housing & Urban Development, and Federal Housing Administration; (iii) senior debt obligations rated "AAA" by Standard & Poor's Ratings Group ("*S&P*") and/or "Aaa" by Moody's Investors Service ("*Moody's*") and/or "AAA" by Fitch, Inc. ("*Fitch*") issued by the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation; (iv) U.S. dollar denominated deposit accounts, federal funds and banker's acceptances with domestic commercial banks which have a rating on their short-term certificates of deposit on the date of purchase of "A-1" or "A-1+" by "S&P and/or "P-1" by Moody's and/or "F-1" by Fitch, Inc. and maturing not more than 360 days after the date of purchase; (v) commercial paper rated "A-1+" by S&P and/or "P-1" by Moody's and/or "F-1+" by Fitch, Inc. at the time of purchase and which matures not more than 270 days after the date of purchase; (vi) investments in a money market fund rated "AAAm" or AAm-G" or better by S&P; (vii) repurchase agreements collateralized by direct obligations of the U.S. Treasury or GNMAs, each at a collateral percentage of 103% or FNMAs or FHLMCs each at a collateral percentage of 104% with any registered Broker/Dealer (a "*Broker/Dealer*") or any commercial bank insured by the FDIC (a "*Bank*"), if at the time of the investment such Broker/Dealer (or its parent) has long-term uninsured, unsecured and unguaranteed debt rated "A3" or better by Moody's or "A-" or better by S&P or "A-" or better by Fitch such Bank has long-term uninsured, unsecured and unguaranteed debt rated "Aa" or better by Moody's and "AA" or better by S&P or "AA" or better by Fitch, provided:

(a) a master repurchase agreement or specific written repurchase agreement governs the transaction; and (b) the securities are held free and clear of any lien of the Resolution or of an independent third party acting solely as agent ("*Agent*") for the Board, and such third party is (i) a Federal Reserve Bank, or (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus and undivided profits of not less than $50 million and the Board shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Board; and (c) a security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. in such securities is created for the benefit of the Bondholders; and (d) the Board will be provided with a valuation for the collateral securities no less frequently than weekly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation; and (e) the Board has the option of terminating the repurchase agreement in the event that the long-term debt ratings of the provider, are reduced below "Baa3" by Moody's and/or "BBB-" by S&P, and/or "BBB-" by Fitch if such provider is a Broker/Dealer and below "A3" by Moody's and/or "A-" by S&P and/or "A-" by Fitch if such provider is a Bank; (viii) investment agreements with: (a) a Broker/Dealer (or its parent) which has long-term unsecured, uninsured and unguaranteed debt rated "A3" or better by Moody's or "A-" or better by S&P or "A-" or better by Fitch; provided, that such Broker/Dealer collateralizes the obligations under the investment agreement with securities described in clause (vii) above meeting the requirements of subparagraphs (b) through (d) of clause (vii) above; provided further, that such agreement shall include a provision to the effect that if the long-term rating of the Broker/Dealer (or its parent, where applicable) is downgraded below "Baa3" by Moody's and "BBB-" by S&P and/or "BBB-" by Fitch, the Board shall have the option of terminating such agreement; (b) a Bank which has a long-term unsecured, uninsured and unguaranteed debt rating "Aa" or better by Moody's and/or "AA" or better by S&P and/or "AA" or better by Fitch provided, that such Bank collateralizes the obligations under the investment agreement with securities described in clause (vii) above meeting the requirements of subparagraphs (b) through (d) of clause (vii) above; provided further that if such Bank's rating falls below "A3" by Moody's and/or "A-" by S&P, and/or "A-" or better by Fitch, the Board shall have the option to terminate such agreement; and (c) a corporation whose principal business is to enter into such investment agreements provided that such corporation has been assigned a "Aaa" counterparty rating by Moody's, S&P or Fitch has rated the investment agreements of such corporation "AAA" provided further that if such counterparty rating is downgraded below "Aaa" by Moody's and/or the investment agreement of such corporation is downgraded below "AAA" by S&P and/or [such counterparty] [the investment agreement] is downgraded below "AAA" by Fitch, the Board shall have the option to terminate the agreement; and (ix) such other investments as may from time to time to be permitted by the laws of the State but are not described above.

"*Legislative Appropriations*" means moneys in any revolving fund or special fund appropriated or allocated by the Legislature of the State to the Board, the University, the University System or the Network and permitted to be expended for Current Expenses of the Board, the University, the University System or the Network or for Aggregate Debt Service or Debt Service, or a combination thereof; provided that so long as any bonds of the Board are outstanding under the resolution adopted on May 17, 2002, Legislative Appropriations shall be subject and subordinate to the lien on such moneys imposed by such resolution, except to the extent that such Legislative

Appropriations are not permitted to be used to pay debt service on such bonds or to pay costs of any project financed with such bonds.

"*Network*" means the University System and any University Purpose which, at the election of the Board, is included as a part of the Network pursuant to a Supplemental Resolution, provided that the inclusion of such University Purpose in the Network under the Resolution would not be in violation of law or in violation of the terms of any grant, gift, bequest or devise.

"*Resolution*" means the Resolution as originally adopted by the Board on November 16, 2001 as it may from time to time be supplemented, modified or amended by any resolution supplemental thereto.

"*Revenues*" means and includes all moneys and other income of whatever nature received or derived by the Board from its ownership or operation and management of the Network or which the Board is entitled to receive as a result of such ownership, operation and management, or as a result of the financing thereof, including Legislative Appropriations to the extent permitted by law; provided, however, that the term "Revenues" shall not include moneys received as proceeds from the sale of Bonds except to the extent such proceeds are credited to the University Bond Account in the University System Revenue-Undertakings Fund or a subaccount therein, or the moneys derived from any University Project or University Purpose which is not included in the Network hereunder, or the moneys derived from any other network or university system that may hereafter be established separate and apart from the Network established hereunder, or gifts the terms of which preclude their being used for the payment of cost of construction, cost of maintenance, or both, of the Network or for the payment of the principal of or interest on the Bonds or, unless permitted by law, general appropriations or taxes.

"*Supplemental Resolution*" means a resolution duly adopted by the Board for any of the purposes of the Resolution or otherwise supplemental to or amendatory to the Resolution but only if and to the extent specifically authorized thereunder.

"*University Project*" means any undertaking or improvement, whether or not capable of producing revenue, constructed, maintained, or both, by the Board, in furtherance of the purposes of the University, including facilities defined in the Chapter 304A, Hawaii Revised Statutes. A University Project shall include, but not be limited to, all land, fixtures, appurtenances, improvements, utilities, equipment, and furnishings necessary or convenient for the use and occupancy of a University Project for the purposes for which it was constructed or is used.

"*University Purpose*" means any action, undertaking or improvement by the Board reasonably related to the development and promotion of the University as an institution of higher learning or an action or undertaking related thereto.

"*University Revenue-Undertakings Fund*" means the special fund of the name created in the treasury of the State of Hawaii by Section 304A-2167.5, Hawaii Revised Statutes.

"*University System*" shall mean that portion of the Network established in Section 2.01 of the Resolution.

"*Variable Rate Bonds*" means any Bonds issued bearing interest at a rate per annum subject to adjustment from time to time pursuant to the terms thereof and calculated in a manner which precludes the actual rate for the entire term of such debt from being ascertainable in advance. For the purposes of this definition, Bonds shall not be considered to be Variable Rate Bonds upon the establishment of or conversion of the rate of interest thereon to a fixed interest rate.

THE RESOLUTION

The Resolution authorizes the issuance and sale or exchange of revenue bonds of the Board, which bonds may be issued in series from time to time, without limit as to the aggregate principal amount, except as may be provided by law and subject to the limitations contained in the provisions of the Resolution relating to the issuance of Additional Bonds, including refunding Bonds.

Authorization of Bonds; Equal Security; Validity (Section 2.02)

The Bonds shall be payable solely from and secured solely by the Revenues, all of which Revenues are pledged to the punctual payment of the Bonds and interest and premium thereon. The foregoing pledge constitutes a lien on the Revenues prior and paramount to any claim or obligation of any nature against the Revenues subsequently arising or subsequently incurred, subject to the application of the Revenues to the payment of the Current Expenses of the Network, as provided in the Resolution.

All of the Bonds shall rank pari passu, and shall be equally and ratably secured, without priority by reason of series, number, date or maturity of Bonds, date of sale, date of issuance, date of execution, or delivery of Bonds.

The Bonds shall not constitute general or moral obligations of the State of Hawaii or an indebtedness of the State within the meaning of any limitation of law, or a charge upon the general fund of the State, nor shall the full faith and credit of the State be pledged to the payment of the principal and interest thereof. No holder of a Bond shall have the right to compel any exercise of the taxing power of the State to pay any such Bond or interest thereon.

Authorization and Issuance of Additional Bonds (Sections 2.03, 2.04 and 2.05)

At any time and from time to time, the Board may issue one or more additional series of Bonds under the Resolution upon compliance with certain conditions enumerated therein, including the following:

1. The Additional Bonds are to be issued for lawful purpose.

2. The University Project or Projects and/or the University Purpose to be financed from the proceeds of the Additional Bonds of such series, is or are made part of the Network and the moneys, if any, to be derived therefrom, or Legislative Appropriations or other moneys made a part of the Revenues shall thereafter constitute Revenues pledged as additional security for the Bonds, including the Bonds then outstanding and the Proposed Additional Bonds.

3. Except in the case of Additional Bonds issued to refund outstanding Bonds, the Supplemental Resolution providing for the issuance of the Additional Bonds shall provide that any accrued interest received upon the sale of the Additional Bonds shall be paid into the University Revenue-Undertakings Fund and credited to the Interest Subaccount in the University Network Bond Account.

4. Except in the case of Additional Bonds issued to refund certain Bonds for which sufficient funds are not available for payment thereon, at the time of the issuance of the Additional Bonds, (a) no default shall exist in the payment of the principal of and premium, if any, and interest on any Bond; (b) the Board shall have made all payments into the several funds and accounts created under the Resolution to the extent required at the time of the issuance of the Additional Bonds; and (c) no deficiencies shall exist in the University Network Revenue Account, the University Network Bond Account (including any subaccounts therein) and the University Network Repair and Replacement Account.

Bonds may be issued under the Resolution at any time upon compliance with the provisions of the Resolution, (a) for the purpose of refunding, at their maturity or at any time within one year prior to their maturity, any of the then outstanding Bonds for which sufficient funds are not available for payment, and any Bonds issued for such purpose shall mature (or mandatory payments of sinking fund installments for redemption of such Bonds shall commence) not earlier than the latest stated maturity of any Bond then outstanding which shall remain outstanding after the completion of such refunding, and (b) for the purpose of refunding at any time part of the Bonds, including amounts to pay principal, redemption premiums and interest, provided that, except for a refunding of Variable Rate Bonds from the proceeds of fixed rate Bonds, the Aggregate Debt Service Requirement of all Bonds to be outstanding after such refunding shall not be greater, after such refunding, in any year in which the Bonds not refunded shall be outstanding, than would have been the Aggregate Debt Service Requirement of the Bonds for such year were such refunding not to occur. All such refunding Bonds shall constitute "Bonds" and "Additional Bonds" under the Resolution. Nothing in the Resolution shall be deemed to apply to, or be construed to prevent, a refunding at one time of all Bonds then outstanding.

In the event of the inclusion of a University Purpose in furtherance of the purposes of the University which is not capable of producing any revenue or revenue sufficient to make such University Purpose self-sufficient and is authorized by law to be designated as and included in the Network for all purposes hereof: the Board shall allocate Legislative Appropriations in an amount, together with revenues (if any) of such University Purpose, sufficient to pay Current Expenses allocable to such University Purpose and the Debt Service allocable to the Bonds issued to finance such University Purpose, all such Legislative Appropriations allocated shall continue to constitute Revenues, and all payments thereafter required to be made by the Board as Current Expenses related to such University Purpose shall continue to constitute Current Expenses, of the Network so long as Bonds remain outstanding; in the event of the inclusion of a university parking unit or units in the University System by reason of the foregoing provisions of this paragraph, for all purposes hereof: all moneys thereafter derived by the Board under Sections 304A-2601 and 304A-2102, Hawaii Revised Statutes, from the campus or campuses on which such university parking units are located or are to be located shall constitute Revenues, and all payments thereafter required to be made by the Board by reason of the provisions of Section 304A-2102, Hawaii Revised Statutes, with respect to such campus or campuses shall constitute Current Expenses of the University System; and, in the event of the inclusion of a University Project in the University System in furtherance of the purposes of the University which is not capable of producing any revenue or revenue sufficient to make such University Project self-sufficient and is authorized by law to be designated as and included in a university system, including the Network, for all purposes hereof: the Board shall allocate Legislative Appropriations in an amount, together with revenues (if any) of such University Project, sufficient to pay Current Expenses allocable to such University Project and the Debt Service allocable to the Bonds issued to finance the cost of construction, all such Legislative Appropriations allocated shall continue to constitute Revenues, and all payments thereafter required to be made by the Board as Current Expenses related to such University Project shall continue to constitute Current Expenses, of the Network so long as Bonds remain outstanding.

The Board has authorized the Designated Financial Officer to cause to be issued one or more series of refunding Bonds for the purpose of refunding any Outstanding Bonds of the Board. In order to effect said issue, and in lieu of and substitution for a Supplemental Resolution of the Board, the Designated Financial Officer shall set forth in a Certificate of Determination:

1. a brief statement of the Designated Financial Officer that, in his opinion, the issue of the one or more series of refunding Bonds is advisable, expedient and in the best financial interest of the Board and the University;

2. except in the case of the issue of one or more series of refunding Bonds that are issued to refund Variable Rate Bonds, a statement that such issue will result in a present value savings to the University System of at least three percent (3%) of the principal amount of the Bonds to be refunded;

3. the Bonds to be refunded and the date or dates, if any, of the retirement or redemption thereof; and

4. the matters listed in clauses (a) through (m) the paragraph numbered 1 of Section 2.05 of the Resolution.

The authorization granted to the Designated Financial Officer, unless extended or renewed, shall expire one (1) year from the date of adoption of the Resolution.

<u>Variable Rate Bonds (Section 2.06)</u>

Nothing in the Resolution shall prohibit or prevent, or be deemed or construed to prohibit or prevent, the Board from issuing Variable Rate Bonds. The Supplemental Resolution or Certificate of Determination authorizing the issuance of such Variable Rate Bonds may provide for the Board to obtain Support Facilities or alternate Support Facilities and enter into Support Agreements in connection therewith, enter into Remarketing Agreements and appoint Remarketing Agents in accordance with standards specified in the Supplemental Resolution or Certificate of Determination, provide for interest to be payable or redetermined on such dates and to accrue over such periods as set forth in such Supplemental Resolution or Certificate of Determination, provide for the determination or establishment of rates of interest based on determinations of a Remarketing Agent, market auction procedures or the establishment, use, composition, adjustment and change of interest indices or the establishment and use of alternate interest indices or the establishment of a fixed interest rate or rates, provide for an Interest Increment Amount, provide for the establishment of special funds and accounts in connection with the issuance of such Variable Rate Bonds, provide for special redemption or purchase provisions for such Variable Rate Bonds and establish notice provisions in connection with the purchase, redemption, delivery or tender of such Variable Rate Bonds.

Hedge, Support and Other Financial Agreements (Section 2.07)

Nothing in the Resolution shall prohibit or prevent, or be deemed or construed to prohibit or prevent, the Board from entering into Hedge Agreements, Support Agreements or other financial agreements under which payments (including but not limited to, fees, charges, expenses but excluding any termination, indemnification or other payments intended to pay any person for loss of benefits under such agreement) are payable from Revenues and secured by a lien on and pledge of Revenues on a parity with the lien on and pledge of the Revenues created for the payment and security of the Bonds; provided such payments shall meet the requirements of Section 2.02 or 2.03 of the Resolution; and provided, further, that Integrated Swap Agreement Payments shall be treated as payment of interest on Bonds. In the event any such payments, other than payments constituting principal of, premium, if any, and interest on, Bonds, shall be secured by a lien on and pledge of Revenues on a parity with the lien on and pledge of the Revenues created for the payment and security of the Bonds, a separate account shall be established in the University Network Bond Account for the payment thereof and payments to such account shall be made ratably from Revenues at the time Revenues are disbursed to the other accounts in the University Network Bond Account pursuant to Section 5.02 of the Resolution. For the purposes of Sections 2.03, 6.05, and for any other provision of the Resolution as otherwise appropriate, any obligation to make payments which are payable from Revenues and secured by a lien on and pledge of Revenues on a parity with the lien on and pledge of the Revenues created for the payment and security of the Bonds as provided in this Section 2.07 shall be deemed and treated as a " Bond" under the Resolution.

Deposit of Revenues; (Section 5.01)

From and after the delivery of any Bond and so long as any Bond remains outstanding, all Revenues are required to be deposited in the University Revenue-Undertakings Fund and credited to the University Network Revenue Account.

Use and Application of Moneys Credited to the University Network Revenue Account (Section 5.02)

The moneys in the University Revenue-Undertakings Fund on credit to the University Network Revenue Account therein shall be used and applied for the following purposes in the following order of priority:

A. **FIRST**: *Current Expenses*. Moneys on credit to the University Network Revenue Account shall be applied from time to time to pay, as a first charge and as the same become due and payable, all Current Expenses of the Network.

B. **SECOND**: *Debt Service and Subordinate Debt Service and Reserves*. To pay when due the Debt Service and the Debt Service Reserve Requirement for each series of the Bonds and, after such payments shall be provided for, to pay when due any bonds, notes, certificates, warrants or other evidences of indebtedness issued as permitted by the Resolution.

C. **THIRD**: *University Network Repair and Replacement Account Credits*. On or before the close of each Fiscal Year, but only after the Current Expenses of the Network becoming due or accruing in such Fiscal Year have been paid or provided for and the credits required by B above of this section to be made during such Fiscal Year shall have been made, there shall be transferred from the moneys on credit to the University Network Revenue Account to the University Network Repair and Replacement Account as provided in Section 5.04 of the Resolution.

D. **FOURTH**: *Reimbursement of Principal and Interest of General Obligation Bonds*. On or before the close of each Fiscal Year, but only after the Current Expenses of the Network becoming due or accruing in such Fiscal Year have been paid or provided for and the credits required by the provisions of

B and C above of this section to be made during such Fiscal Year shall have been made, the moneys then remaining on credit to the University Network Revenue Account may be credited to the Reimbursable General Obligation Bond Subaccount in the University Network Reimbursable General Obligation Bond Account, to be applied to the reimbursement of the general fund of the State for any bond requirements on general obligation bonds issued for University Projects or University Purposes included in the Network to the extent such reimbursement is required by law.

E. **FIFTH**: *Surplus Revenues*. At the end of each Fiscal Year, but only after the Current Expenses of the Network becoming due or accruing in such Fiscal Year have been paid or provided for and the credits required by the provisions of B, C and D above in this section to be made in such Fiscal Year shall have been made, there shall be set aside in the University Network Revenue Account such amount of the moneys then remaining therein as may be deemed necessary by the Board to be retained therein for the purpose of the provisions of A, B, C and D above in the next following Fiscal Year. Any moneys then remaining in the University Network Revenue Account which have not been set aside therein pursuant to the preceding sentence may be used by the Board at the end of the Fiscal Year for any one or more of the following purposes:

(i) to redeem, in an amount of not less than $5,000 principal amount at any one time, outstanding Bonds in accordance with the provisions for redemption of such Bonds and the provisions of the Resolution; or

(ii) for any expenditures, including the payment of debt service (including the payment of the principal of or interest on bond anticipation notes), in improving or restoring any existing University Project and/or University Purpose included in the Network or providing additional University Projects and/or University Purposes, which additional University Projects and/or University Purposes shall constitute part of the Network; or

(iii) to complete the restoration of University Projects and/or University Purposes included in the Network which are damaged or destroyed if the proceeds of insurance received with respect thereto are insufficient for such restoration; or

(iv) for any other lawful purpose, including without limitation, the making of loans under a loan program or programs established by the Board or the making of payments into the Debt Service Reserve Subaccount in the University Network Bond Account and the University Network Repair and Replacement Account.

<u>University Network Bond Account (Section 5.03)</u>

(a) *Interest Subaccount*. There shall be established a separate subaccount in the University Network Bond Account for each series of Bonds issued hereunder, each subaccount to be known as an "Interest Subaccount" and separately identified, which shall be disbursed by the Board solely for the purpose of paying interest on the Bonds of the series for which such Interest Subaccount was established as the same becomes due and may not be applied to the payment of interest on any other series of Bonds.

Moneys in an Interest Subaccount shall be used and applied solely for the purpose of paying interest on Bonds of the series for which such Interest Subaccount is established as the same becomes due and payable and may not be applied to any other series of Bonds. For each series of the Bonds, so long as any of the Bonds of such series are Outstanding, commencing with the first business day which is at least fifteen (15) calendar days prior to an Interest Payment Date for the Bonds of such series, there shall be credited to the Interest Subaccount for Bonds of the series for which such Interest Subaccount is established an amount equal to the interest coming due on such series of Bonds on the next ensuing Interest Payment Date, or to pay, or to reimburse the a provider for a draw on the Support Facility, if any, made to provide funds for the payment of, the interest payable on such series of Bonds on such Interest Payment Date.

In making the foregoing credits to each Interest Subaccount, consideration shall be given to and allowance made for accrued interest received upon the sale of a series of the Bonds, or from the proceeds of the sale of Bonds (i.e., capitalized interest) and credited to the University Network Bond Account or other lawfully available moneys credited to an Interest Subaccount; provided that in any event there shall be credited to the University Network Bond Account such amount as shall be necessary to permit the payment on the next succeeding Interest Payment Date of the amount of interest becoming due on that date on all Bonds then outstanding.

(b) There shall be established a separate subaccount in the University Network Bond Account for each series of Bonds issued hereunder, each subaccount to be known as a "Serial Bond Principal Subaccount" and separately identified, which shall be disbursed by the Board solely for the purpose of paying principal on the Bonds of the series for which such Serial Bond Principal Subaccount was established as the same becomes due and may not be applied to the payment of principal on any other series of Bonds.

Moneys in a Serial Bond Principal Subaccount shall be used and applied solely for the purpose of paying the principal on the Bonds of the series for which such Serial Bond Principal Subaccount is established as the same becomes due and payable and may not be applied to any other series of Bonds. In the event of the issuance of all or any portion of a series of the Bonds maturing at times customarily known as maturing serially, in order to provide for the payment of principal of such Bonds of such series at the stated maturity thereof, or to pay, or reimburse the provider for a draw a Support Facility made to provide funds for the payment of such principal, unless otherwise provided in a Supplemental Resolution or Certificate of Determination authorizing the issuance of such series of Bonds, commencing with the first business day which is at least fifteen (15) calendar days prior to the stated maturity of and a principal payment of any such Bonds of such series maturing serially, there shall be credited to the Serial Bond Principal Subaccount for such Bonds of the series for which such Serial Bond Principal Subaccount is established an amount equal to the principal of any Bonds of such series maturing serially coming due on such series of Bonds on the next ensuing maturity date.

In any event there shall be credited to the University Network Bond Account such amount as shall be necessary to permit the payment on the next succeeding date of maturing principal the amount of principal becoming due on that date on all Bonds then outstanding.

(c) There shall be established a separate subaccount in the University Network Bond Account for each series of Bonds issued hereunder, each subaccount to be known as a "Term Bond Principal Subaccount" and separately identified, which shall be disbursed by the Board solely for the purpose of paying principal on the Bonds of the Series for which such Term Bond Principal Subaccount was established as the same becomes due and may not be applied to the payment of principal on any other series of Bonds.

Moneys in a Term Bond Principal Subaccount shall be used and applied solely for the purpose of providing for the respective sinking fund installment and the retirement of the Bonds of the series for which such Term Bond Principal Subaccount is established as the same becomes due and payable and may not be applied to any other series of Bonds. In the event of the issuance of all or any portion of a series of the Bonds maturing at times customarily known as term bonds, in order to provide for the sinking fund installments and the retirement of such Bonds of such series, or to pay, or reimburse the provider for a draw a Support Facility made to provide funds for the sinking fund installment and retirement of such Bonds of such series, unless otherwise provided in a Supplemental Resolution or Certificate of Determination authorizing the issuance of such series of Bonds, commencing with the first business day which is at least fifteen (15) calendar days prior to the date upon which a sinking fund installment to provide for the retirement of such term Bonds is due, there shall be credited to the Term Bond Principal Subaccount for such Bonds of the series for which such Term Bond Principal Subaccount is established an amount equal to the sinking fund installment then due for the retirement of any Bonds of such series on the next ensuing date of the sinking fund installment. The respective amounts of moneys credited to a

Term Bond Principal Subaccount for the purpose of providing for the retirement of the term Bonds of a particular series shall be applied to the redemption of such Bonds of such series on each date on which such a sinking fund installment for said Bonds is due in the respective principal amounts required by the Supplemental Resolution or Certificate of Determination authorizing the issuance of the Bonds of such series to be on credit to this Subaccount on each such date, or, if so determined in the Supplemental Resolution or Certificate of Determination authorizing the Bonds of such series, semi-annually on both such due dates and the day six months prior to such due date, in the respective principal amounts on credit to this Subaccount on such days for the Bonds of such series, so that the aggregate amount so applied in each calendar year will equal the respective principal amount required by the respective Supplemental Resolution or Certificate of Determination authorizing the issuance thereof to be credited to this Subaccount on such sinking fund installment dates. The Designated Financial Officer may also apply the moneys credited to this Subaccount for the retirement of Bonds of a particular series issued in term form to the purchase of those Bonds, in which event the principal amount of said Bonds required to be redeemed on the next respective ensuing sinking fund installment date shall be reduced by the principal amount of the Bonds so purchased; provided, however, that no Bonds shall be purchased during the interval between the date on which notice of redemption of said Bonds from such sinking fund installment is given and the date of redemption set forth in such notice, unless the Bonds so purchased are Bonds called for redemption in such notice or are purchased from moneys other than those credited to this Subaccount; and provided further, that no purchase of Bonds shall be made if such purchase would require the sale at a loss of securities credited to the Term Bond Principal Subaccount unless the difference between the actual purchase price (including accrued interest and any brokerage or other charge) paid for such Bonds and the then maximum purchase price (plus accrued interest) permitted to be paid therefor, is greater than the loss upon the sale of any such securities. Any purchase of Bonds pursuant to this paragraph (iii) may be made with or without tenders of Bonds and at either public or private sale, but in any event at a purchase price (including accrued interest and any brokerage or other charge) not to exceed the then applicable redemption price of such Bonds, plus accrued interest. All Bonds purchased or redeemed pursuant to this paragraph shall be canceled and not reissued.

In any event there shall be credited to the University Network Bond Account such amount as shall be necessary to permit the retirement of Bonds on the next succeeding on the next sinking fund installment date.

The moneys on credit in the University Network Bond Account on further credit to any Interest Subaccount, Serial Bond Principal Subaccount and Term Bond Principal Subaccount shall be transferred to the Director of Finance or the respective Paying Agents for said Bonds in such amounts and at such times as shall be necessary to pay the principal of, premium, if any, and interest on said Bonds as the same become due and payable, whether upon their maturity or upon the redemption or the purchase thereof from the moneys credited to any Term Bond Principal Subaccount or upon declaration, as hereinafter provided, or otherwise.

Whenever the total of the moneys on credit in the University Network Bond Account (regardless of the Subaccount therein to which such moneys are credited) with respect to a particular series of Bonds which are not required for the payment of principal and interest and premium, if any, which has theretofore become due (whether by maturity or upon redemption or by purchase or by declaration, as hereinafter provided, or otherwise) with respect to such series of Bonds, but is unpaid, is sufficient to retire at maturity, or to redeem prior to maturity in accordance with their respective terms, all of the Bonds of such series then Outstanding, together with interest thereon to their maturity date or the date fixed for the redemption thereof, no further deposits need be made to the University Network Bond Account with respect to such series of Bonds, and without further authorization or direction of the Board, the proper officers of the Board shall call for redemption all Bonds of such series which may be redeemed by their terms, on the next succeeding redemption date for which the required redemption notice may practicably be given, and shall apply such total to such retirement or redemption.

(d) After providing for the credits described in (a) through (c) above, there shall be credited to such accounts and subaccounts as may be established for the payment of bonds, notes, certificates, warrants or other evidences of indebtedness issued as permitted in Section 6.08 of the Resolution.

University Network Repair and Replacement Account (Section 5.04)

There shall be established a University Network Repair and Replacement Account for the Network. There shall be established two separate subaccounts in the University Network Repair and Replacement Account, one such subaccount to be designated "Major Repair and Maintenance Subaccount" and the other such subaccount to be designated "Sinking Fund and Ordinary Repair and Maintenance Subaccount."

There shall be credited to the University Network Repair and Replacement Account and further credited to the Major Repair and Maintenance Subaccount therein at the times specified in the Resolution, such amount as the Board or the Designated Financial Officer shall specify; provided that the amount on credit thereto shall at all times be at least $1,000,000. In the event that any moneys are withdrawn from the Major Repair and Replacement Subaccount in the University Network Repair and Replacement Account, the Board or the Designated Financial Officer may provide for annual credits thereto in such amounts and at such times as they shall determine until there shall be on credit to the University Network Repair and Replacement Account the minimum amount specified in the preceding sentence.

Moneys on credit to the Major Repair and Replacement Subaccount in the University Network Repair and Replacement Account may be drawn on and used by for the purpose of paying the costs of unusual or extraordinary maintenance and repair, renewals or replacements, and the renovating and replacement of furniture and equipment not annually recurring, of the Network, including additions, improvements or betterments thereto, not paid as part of the ordinary and normal Current Expenses of the Network.

There shall be credited to the University Network Repair and Replacement Account and further credited to the Sinking Fund and Ordinary Repair and Maintenance Subaccount therein at the times specified in the Resolution, such amount as the Board or the Designated Financial Officer shall specify.

Moneys on credit to the Sinking Fund and Ordinary Repair and Maintenance Subaccount in the University Network Repair and Replacement Account may be drawn on and used for the purpose of paying the costs not annually recurring or paid as part of the ordinary and normal Current Expenses of the Network including without limitations, maintenance and repair, renewal or replacement, and renovation and replacement of furniture and equipment, of the Network; additions, improvements or betterments to the Network; any expenditures in improving or restoring any existing University Project and/or University Purpose in the Network; providing additional University Projects and/or University Purposes, which additional University Projects and/or University Purposes shall constitute part of the Network; or completing the restoration of University Projects and/or University Purposes included in the Network which are damaged or destroyed if the proceeds of insurance received with respect thereto are insufficient for such restoration.

University Network Reimbursable General Obligation Bond Account (Section 5.05)

There shall be established a University Network Reimbursable General Obligation Bond Account. There shall be credited to the University Network Reimbursable General Obligation Bond Account at the times and in the amounts and for the purposes specified in the Resolution.

Investment of Moneys in Accounts (Section 5.06)

Moneys on deposit in the University Revenue-Undertakings Fund for credit to the several accounts and subaccount therein established by this Article (other than a Construction Account) shall be invested in Investment Securities maturing as follows: (i) moneys on credit to the University Network Revenue Account shall, to the extent reasonable and practicable, be invested so as to mature in the amounts and at the times so that the payments and credits to be made from said account may be made as and when the same become due; (ii) moneys on credit to any Subaccount in the University Network Bond Account shall be invested so as to mature in the amounts and at the times so that the payment of the principal of and interest on the Bonds (including any required redemptions from sinking fund installments) may be made as and when the same become due; and (iii) moneys on credit to the University Network Repair and Replacement Account shall be invested so as to mature by no later than the earlier of five (5) years from the date of such investment or the last stated maturity date of any Bond then outstanding. Unless otherwise required by the Supplemental Resolution or Certificate of Determination authorizing Bonds, the earnings on all such investments shall be credited to the University Network Revenue Account.

Construction Account (Section 5.07)

There shall be established a separate account in the University Revenue-Undertakings Fund, to be known as the "Construction Account." In the event of the issuance of a series of Bonds hereunder for the purposes of paying cost of construction of University Projects to be included in the Network, the Board or the Designated Financial Officer shall in the Supplemental Resolution or Certificate of Determination authorizing such series of Bonds create a Construction Subaccount in the Construction Account from which such cost of construction shall be paid, and shall provide for a credit to such Account of that amount of the proceeds of such Bonds which are to be applied to the payment of such cost of construction. In the event that the interest on such series of Bonds is to be provided from the proceeds of such Bonds, the Supplemental Resolution or Certificate of Determination authorizing such series of Bonds shall specify the amount of such proceeds to be applied to the payment of such interest or the formula for determining such amount, and shall establish a Construction Interest Subaccount in the Construction Account, to which shall be credited the amount of the proceeds so specified.

The moneys on credit from time to time in a Construction Subaccount or Construction Interest Subaccount in the Construction Account shall be held under and subject to the Resolution; shall be subject to the liens, pledges, charges, assignments and trusts created hereby for the security and benefit of the Holders of the series of Bonds for which such Subaccounts were established; and shall be used and applied solely to the payment of cost of construction of the Network, in accordance with law.

Proceeds of any series of Bonds may be credited in the Construction Account to be used to pay costs allocable to any portion of such series of Bonds the proceeds of which will be used to refund bonds, notes or other evidences of indebtedness or to reimburse the Board for cost paid from the University Network Repair and Replacement Account.

Moneys in the Construction Account on credit to a Construction Interest Subaccount therein shall be applied by the Board as follows: on each Interest Payment Date until the moneys in such Construction Interest Subaccount are exhausted there shall be withdrawn from the moneys credited to such account and credited to the University Network Bond Account for credit to the Interest Account established for the series of Bonds the interest on which is to be provided from the moneys on credit to such Construction Interest Subaccount an amount, together with accrued interest received upon the sale of the series of Bonds with respect to which such Construction Interest Subaccount was established, equal to the interest to become due on the next ensuing Interest Payment Date, on the series of Bonds, the interest on which is to be provided from the moneys on credit to such Construction Interest Subaccount.

Covenants to Secure Bonds (Article VI)

The Board covenants with the purchasers and holders of the Bonds that so long as the Bonds remain outstanding, the Board will (i) warrant and defend title to all property constituting a part of the Network (ii) complete construction of any University Project or University Purpose included or to be included in the Network as planned and provide the furnishings and moveable equipment necessary to the full enjoyment and occupancy of each University Project or University Purpose; (iii) operate and maintain the Network and manage the same in the most efficient manner consistent with sound economy, public advantage and the protection of bondholders; and (iv) keep the University Network in good repair and to make additions and improvements thereto in conformity with standards customarily followed for programs of like size and character.

In addition, with respect to University Projects or University Purposes included in the Network capable of producing revenue sufficient to make all such University Projects or University Purposes self-sustaining, the Board covenants to impose and collect rates, rents, fees and charges for the use or enjoyment and services of the facilities of such University Projects or University Purposes, and shall revise such rates, rents, fees and charges from time to time whenever necessary, so that portion of the Network shall be and always remain self-sustaining.

With respect to University Projects or University Purposes included in the Network not capable of producing any revenue or revenue sufficient to make such University Project or University Purpose self-sustaining, the Board shall allocate Legislative Appropriations so that portion of the Network (with such Legislative Appropriations) shall be and always remain self-sufficient.

The rates, rents, fees and charges prescribed and collected and Legislative Appropriations so allocated shall be such as will produce Revenues at least sufficient: (1) to pay the Current Expenses of the Network; (2) to pay when due all Bonds and interest thereon; to make all sinking fund installment payments or credits which may be required with respect to Bonds issued in the form customarily known as "term Bonds" in the amounts and at the times required by any Supplemental Resolution or Certificate of Determination; and to establish and maintain the Debt Service Reserve Subaccounts; (3) to establish and maintain the University Network Repair and Replacement Account; (4) to pay when due all other bonds, notes (including bond anticipation notes), certificates or other evidences of indebtedness and interest thereon, including reserves therefor, for the payment of which the Revenues shall be pledged, charged or otherwise encumbered or which are otherwise payable from the Revenues or from a special fund or account maintained or to be maintained from the Revenues; (5) if and to the extent then required by law, to reimburse the general fund of the State for any bond requirements on general obligation bonds of the State issued for the Network or any University Project or University Purpose therein; and (6) to carry out all the covenants and provisions of the Resolution.

In addition, the Board covenants (i) to pay all taxes, assessments and other governmental charges or surcharges imposed upon the Board, the Network, the Revenues, the University Revenue-Undertakings Fund or any account created by the Resolution; (ii) to pay and discharge all lawful claims for labor, materials, supplies, rents and royalties which may become a lien on the properties included in the Network, the Revenues, the University Revenue-Undertakings Fund or any account created by the Resolution, or may in any way impair the security of the Bonds; (iii) to keep proper books of accounts and financial records relating to the operation of the Network, which shall be open to inspection by the Bondholders and their agents and representatives; (iv) within 120 days after the end of each Fiscal Year, to furnish to the Director of Finance, the original purchaser of each series of Bonds and any Bondholders who request the same 90 days prior to the end of the Fiscal Year, copies of a detailed report covering the operations of the Network for such Fiscal Year; and (v) not create or permit any mortgage, lien, pledge, charge or other encumbrance upon any real or personal property comprising the Network or the Revenues and the moneys in the University Revenue-Undertakings Fund, other than as permitted under the Resolution.

The Board also covenants (i) not to issue any bonds (other than the Bonds), notes, warrants or other obligations or evidences of indebtedness which will be payable from the Revenues prior to or on a parity with the Bonds or which will be secured by or be a lien and charge on the Revenues prior to or on a parity with the lien and charge on the Revenues pursuant to the Resolution; (ii) not to sell, convey, dispose of or lease any properties constituting the Network, except upon compliance with the conditions set forth in the Resolution relating to property that is no longer economical or that is to be replaced by a facility of substantially equal revenue-producing capabilities; (iii) to insure the properties included in the Network against risks of physical loss, damage or destruction, at least to the extent that similar insurance is carried by colleges and universities operating properties similar to the Network; and (iv) to pay solely out of Revenues principal of and premium, if any, and interest on each Bond in the manner provided therein.

The Board covenants (i) not to use the proceeds of the Bonds if such use would have caused such Bonds to be "arbitrage bonds" within the meaning of the Internal Revenue Code, and agrees to comply with the requirements of said section and all applicable regulations so long as any Bond is outstanding; (ii) to comply with the provisions of the Resolution and the Bonds, all laws and regulations, and all contractual obligations contained in any agreement with respect to the Bonds or the Network or any University Project or University Purpose; and (iii) to take all actions required to preserve the lien created by the Resolution and to carry out the provisions of the Resolution.

Adoption of Supplemental Resolution (Sections 8.01 and 8.02)

(b) Without the consent or concurrence of any Bondholder, the Board may adopt a supplemental resolution (i) for the purpose of providing for the issuance of Additional Bonds; (ii) to make any changes, modifications, amendments or deletions to the Resolution which may be required to permit the Resolution to be qualified under the Trust Indenture Act of 1939 of the United States of America; and (iii) if the provisions of the supplemental resolution shall not adversely affect the rights of the holder of the Bonds then outstanding, for any one or more of the following purposes:

(1) to make any changes or corrections in the Resolution or any supplemental resolution as to which the Board shall have been advised by its counsel that the same are verbal corrections or changes or are required for the purpose of curing or correcting any ambiguity or defective or inconsistent provision or omission or mistake or manifest error contained in the Resolution or any supplemental resolution, or to insert in the Resolution such provisions clarifying matters or questions arising under the Resolution as are necessary or desirable;

(2) to add additional covenants and agreements of the Board for the purpose of further securing the payment of the Bonds;

(3) to surrender any right, power or privilege reserved to or conferred upon the Board by the terms of the Resolution or any supplemental resolution;

(4) to confirm as further assurance any lien, pledge or charge, or the subjection to any lien, pledge or charge, created or to be created by the provisions of the Resolution or any supplemental resolution;

(5) to grant to or confer upon the holders of the Bonds any additional rights, remedies, powers, authority or security that lawfully may be granted to or conferred upon them;

(6) to prescribe further limitations and restrictions upon the issuance of the Bonds and the incurring of other indebtedness payable from or secured by the Revenues; and

(7) to modify in any other respect any of the provisions of the Resolution or any supplemental resolution, provided that such modifications shall have no effect as to any Bond or Bonds which are outstanding as of the time of effectiveness of such supplemental resolution.

(c) With the consent of the holders of not less than 51% of the Bonds then outstanding, the Board may adopt a supplemental resolution amending or supplementing the provisions of the Resolution, for the purpose of adding any provisions to, or changing in any manner or eliminating any of the provisions of, the Resolution or any supplemental resolution, or modifying or amending the rights of the holders of the Bonds; provided that, without the specific consent of the holders of each Bond which would be affected thereby, no supplemental resolution shall: (a) extend the fixed maturity date for the payment of the principal of any Bond, or reduce the principal amount of any Bond, or reduce the rate or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof, or advance the date upon which any Bond may first be called for redemption prior to its fixed maturity date; or (b) reduce the amounts of any required sinking fund installment or extend the date on which such installment is required to be made, or reduce the amount of Bonds required to be redeemed from such installment or extend the date on which such redemption is required to be made; or (c) reduce the aforesaid percentage of Bonds, the holders of which are required to consent to any supplemental resolution amending or supplementing the provisions of the Resolution; or (d) give to any Bond any preference over any other Bond; or (e) permit the creation of any mortgage or lien upon any of the University Projects included in the Network; or (f) authorize the creation of any pledge of the Revenues, or any lien thereon, prior or superior or equal to the pledge of and lien and charge thereon created in the Resolution for the payment of the Bonds; or (g) deprive any holder of the Bonds of the security afforded by the Resolution. A modification or amendment of the provisions of the Resolution with respect to the University Revenue-Undertakings Fund or the University Network Revenue Account, the University Network Bond Account or the University Network Repair and Replacement Account shall not be deemed a change in the terms of payment; provided that no such modification or amendment shall, except upon the consent of the holders of all Bonds then outstanding affected thereby, reduce the amount or amounts of the Revenues required to be credited to the University Network Bond Account.

Events of Default and Remedies (Article IX)

(a) The following constitute "Events of Default":

(1) If payment of the principal and premium (if any) of any Bond is not made after the same becomes due and payable, whether at maturity or by proceedings for redemption or by declaration;

(2) If payment of any installment of interest on any Bond is not made within 30 days after the same becomes due and payable;

(3) If the credits to the University Network Bond Account are not made or satisfied in any year ending June 30 in the amounts required and such failure continues for 60 days after the expiration of such year;

(4) The Board fails to perform any of the other provisions or obligations contained in the Bonds, the Resolution or any supplemental resolution on the part of the Board to be performed, and such failure continues for 90 days after written notice is given to the Board and the Director of Finance by the holders of not less than 25% in principal amount of the Bonds then outstanding;

(5) If any proceedings shall be instituted, with the consent of the Board or the State, for the purpose of effecting a composition between the Board or the State and the creditors thereof and if the claims of the creditors are payable from the Revenues or any other moneys pledged under the Resolution or any supplemental resolution, or for the purpose of adjusting the claims of such creditors, pursuant to any federal or State statute;

(6) If any order or decree is entered with or without the consent of the Board or the State, appointing a receiver for the University System or any building thereof and such order or decree is not vacated or discharged or stayed on appeal within 60 days after entry;

(7) If, under any laws for the relief of debtors, any court assumes custody of the Network or any building thereof and such custody is not terminated with 90 days after the date of assumption; or

(8) If the Board is incapable of fulfilling its obligations under the Resolution.

(b) The Director of Finance must mail to all Bondholders whose names appear on the books of registry written notice of the occurrence of an Event of Default described in paragraphs (1), (2) and (3) above within 30 days after its occurrence.

(c) If any Event of Default shall occur and be continuing, the holders of not less than 25% in principal amounts of the Bonds then outstanding (i) may, by written notice to the Board filed in the office of the Board and with the Director of Finance, declare the principal of and accrued interest on all the Bonds then outstanding (if not then due and payable) to be due and payable immediately, as provided in the Resolution; and (ii) shall be entitled to the appointment of a receiver, who may take possession of the Network and apply all Revenues in the same manner as the Board might do, as provided in the Resolution.

If any Event of Default shall occur and be continuing, the holder of any Bond outstanding shall have the right, for the equal benefit and protection of all holders similarly situated, and subject to the provisions of the Resolution relating to the appointment of a receiver or the acceleration of the principal of all Outstanding Bonds, to bring an action at law or in equity to enforce the Resolution or to bring suit upon the Bonds, as provided in the Resolution.

Nothing in the Resolution shall be construed to limit the rights or remedies of any holders of the Bonds under any applicable statute.

Defeasance (Article XI)

(a) The obligations of the Board under the Resolution and any supplemental resolution, and the liens, pledges, covenants and agreements of the Board therein, shall be fully discharged and satisfied and the Bonds shall no longer be deemed outstanding when:

(1) the Bonds have been purchased by the Board and surrendered to the Director of Finance for cancellation or otherwise surrendered to the Director of Finance or other paying agent, transfer agent or registrar and be canceled or subject to cancellation by him or them; or

(2) payment of the principal of and applicable redemption premium (if any) of the Bonds, plus interest, either (i) has been made or (ii) has been provided by depositing with the Director of Finance or other paying agent for such Bonds, in trust and irrevocably set aside exclusively for such payment (a) moneys sufficient to make such payment or (b) Governmental Obligations, maturing as to principal and interest at such time as will insure the availability of sufficient moneys to make such payment. Governmental Obligations are defined in the Original Resolution as securities listed in clauses (1) through (iv) of the definition of Investment Securities.

(b) If any Bond is not presented for payment when it becomes due, whether at maturity or upon redemption or by declaration or otherwise, and if sufficient moneys or Government Obligations have been deposited with any paying agent therefor other than the Director of Finance, to pay the principal, interest and premium (if any) on the Bonds, then all liability of the Board for such payment shall terminate, and it will be the duty of the paying agent to hold said moneys or Government Obligations without liability for interest, in trust for the benefit of the holders.

(c) Two (2) years after the Bonds or any portion thereof become due and payable (whether at maturity or upon redemption or declaration or otherwise), any moneys or Government Obligations held by the paying agent (other than the Director of Finance) and not applied to the payment of Bonds shall, upon the written request of the Board or the Director of Finance, be paid to the Director of Finance. Thereafter, the holders of Bonds shall be entitled to look only to the Board and the Director of Finance for payment.

No Personal Liability (Section 12.02)

No officer, member, agent or employee of the Board shall be individually or personally liable for the payment of the principal of or interest or premium, if any, on the Bonds.

APPENDIX D

BOOK-ENTRY ONLY SYSTEM
PROVISIONS FOR BOOK-ENTRY ONLY 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 (DTC, Euroclear and Clearstream together, the "Clearing Systems") currently in effect. The information in this APPENDIX D concerning the Clearing Systems has been obtained from sources believed to be reliable, but the Issuer does not take any responsibility for the accuracy, completeness or adequacy of the information in this APPENDIX D. 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 Issuer 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 Series 2020 Bonds held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

So long as Cede & Co. is the registered owner of the Series 2020 Bonds, as nominee for DTC, references herein and in the Trust Agreement to the Bondholders, registered owners or owners (or similar terms) of the Series 2020 Bonds shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners of the Series 2020 Bonds.

DTC Book-Entry-Only System

DTC will act as securities depository for the Series 2020 Bonds. The Series 2020 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 will be issued for each maturity of each series of the Series 2020 Bonds, in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of the Series 2020 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2020 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2020 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 Series 2020 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 interest in the Series 2020 Series 2020 Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Series 2020 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 Series 2020 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 Series 2020 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2020 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. Beneficial Owners of the Series 2020 Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the Series 2020 Bonds, such as redemptions, tenders, defaults, and proposed amendments to the security documents. For example, Beneficial Owners of Series 2020 Bonds may wish to ascertain that the nominee holding the Series 2020 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2020 Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2020 Bonds unless authorized by a Direct Participant in accordance with DTC's Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2020 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series 2020 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 Participant's accounts upon DTC's receipt of funds and corresponding detail information from the Issuer or Trustee, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee, or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2020 Bonds at any time by giving reasonable notice to the Issuer or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Bond certificates are required to be printed and delivered.

The Issuer may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, Bond certificates will be printed and delivered.

NEITHER THE ISSUER NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DTC PARTICIPANTS, INDIRECT PARTICIPANTS OR THE PERSONS FOR WHICH THEY ACT AS NOMINEES WITH RESPECT TO THE SERIES 2020 BONDS, OR FOR ANY PRINCIPAL OF OR INTEREST PAYMENT THEREON.

The Issuer and the Trustee may treat DTC (or its nominee) as the sole and exclusive registered owner of the Series 2020 Bonds registered in its name for the purposes of payment of the principal of, or interest on, the Series 2020 Bonds, giving any notice permitted or required to be given to registered owners under the Trust Agreement, registering the transfer of the Series 2020 Bonds, or other action to be taken by registered owners and for all other purposes whatsoever. The Issuer and the Trustee shall not have any responsibility or obligation to any Direct or Indirect Participant, any person claiming a beneficial ownership interest in the Series 2020 Bonds under or through DTC or any Direct or Indirect Participant, or any other person which is not shown on the registration books of the Issuer (kept by the Trustee) as being a registered owner, with respect to the accuracy of any records maintained by DTC or any Direct or Indirect Participant; the payment by DTC or any Direct or Indirect Participant of any amount in respect of the principal of or interest on the Series 2020 Bonds; any notice which is permitted or required to be given to registered owners thereunder or under the conditions to transfers or exchanges adopted by the Issuer; or other action taken by DTC as registered owner.

Global Clearance Procedures

Beneficial interests in the Series 2020 Bonds may be held through DTC, Clearstream Banking, S.A. ("Clearstream") or Euroclear Bank SA/NV ("Euroclear") as operator of the Euroclear System, directly as a participant or indirectly through organizations that are participants in such system.

Euroclear and Clearstream. Euroclear and Clearstream 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 provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream also deal with domestic securities markets in several countries through established depositary and custodial relationships. Euroclear and Clearstream have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream customers are worldwide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream 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 Series 2020 Bonds sold in offshore transactions will be initially issued to investors through the book-entry facilities of DTC, or Clearstream 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 Series 2020 Bonds, the record holder will be DTC's nominee. Clearstream and Euroclear will hold omnibus positions on behalf of their participants through customers' securities accounts in Clearstream'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 or Euroclear participant as a result of a transaction with a participant, other than a depository holding on behalf of Clearstream or Euroclear, will be credited during the securities settlement processing day, which must be a business day for Clearstream 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 participant on that business day. Cash received in Clearstream or Euroclear as a result of sales of securities by or through a Clearstream participant or Euroclear participant to a DTC Participant, other than the depository for Clearstream or Euroclear, will be received with value on the DTC settlement date but will be available in the relevant Clearstream or Euroclear cash account only as of the business day following settlement in DTC.

Transfer Procedures. Transfers between participants will occur in accordance with DTC rules. Transfers between Clearstream 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 participants or Euroclear participants, on the other, will be effected by 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 participants or Euroclear participants may not deliver instructions directly to the depositories.

The Issuer will not impose any fees in respect of holding the Series 2020 Bonds; however, holders of book-entry interests in the Series 2020 Bonds may incur fees normally payable in respect of the maintenance and operation of accounts in DTC, Euroclear and Clearstream.

Initial Settlement. Interests in the Series 2020 Bonds will be in uncertified book-entry form. Purchasers electing to hold book-entry interests in the Series 2020 Bonds through Euroclear and Clearstream accounts will follow the settlement procedures applicable to conventional Eurobonds. Book-entry interests in the Series 2020 Bonds will be credited to Euroclear and Clearstream participants' securities clearance accounts on the business day following the date of delivery of the Series 2020B Bonds against payment (value as on the date of delivery of the Series 2020 Bonds). DTC participants acting on behalf of purchasers electing to hold book-entry interests in the Series 2020 Bonds through DTC will follow the delivery practices applicable to securities eligible for DTC's Same Day Funds Settlement system. DTC participants' securities accounts will be credited with book-entry interests in the Series 2020 Bonds following confirmation of receipt of payment to the Issuer on the date of delivery of the Series 2020 Bonds.

Secondary Market Trading. Secondary market trades in the Series 2020 Bonds will be settled by transfer of title to book-entry interests in Euroclear, Clearstream or DTC, as the case may be. Title to such book-entry interests will pass by registration of the transfer within the records of Euroclear, Clearstream or DTC, as the case may be, in accordance with their respective procedures. Book-entry interests in the 2020 Bonds may be transferred within Euroclear and within Clearstream and between Euroclear and Clearstream in accordance with procedures established for these purposes by Euroclear and Clearstream. Book-entry interests in the Series 2020 Bonds may be transferred within DTC in accordance with procedures established for this purpose by DTC. Transfer of book-entry interests in the Series 2020 Bonds between Euroclear or Clearstream and DTC may be effected in accordance with procedures established for this purpose by Euroclear, Clearstream and DTC.

Special Timing Considerations. Investors should be aware that investors will only be able to make and receive deliveries, payments and other communications involving the Series 2020 Bonds through Euroclear or Clearstream on days when those systems are open for business. In addition, because of time-zone differences, there may be complications with completing transactions involving Clearstream and/or Euroclear on the same business day as in the United States. U.S. investors who wish to transfer their interests in the Series 2020 Bonds, or to receive or make a payment or delivery of the Series 2020 Bonds, on a particular day, may find that the transactions will not be performed until the next business day in Luxembourg if Clearstream is used, or Brussels if Euroclear is used.

Clearing Information. It is expected that the Series 2020 Bonds will be accepted for clearance through the facilities of Euroclear and Clearstream. The CUSIP numbers for the Series 2020 Bonds are set forth on the inside cover of the Official Statement.

General. Neither Euroclear nor Clearstream is under any obligation to perform or continue to perform the procedures referred to above, and such procedures may be discontinued at any time.

NEITHER THE ISSUER NOR THE UNDERWRITERS WILL HAVE ANY RESPONSIBILITY FOR THE PERFORMANCE BY EUROCLEAR OR CLEARSTREAM 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.

APPENDIX E

PROPOSED FORM OF OPINION OF BOND COUNSEL FOR SERIES 2020 BONDS

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October 28, 2020

Board of Regents of the University of Hawaii
Honolulu, Hawaii

$217,165,000
Board of Regents of the University of Hawaii University Revenue Bonds,
Series 2020A (Taxable), Series 2020B (Refunding), Series 2020C (Taxable Refunding),
Series 2020D (Refunding) and Series 2020E (Taxable Refunding)

Dear Regents:

We have examined a record of proceedings relating to the issuance of the $10,045,000 aggregate principal amount of University Revenue Bonds, Series 2020A (Taxable) (the "Series 2020A Bonds"), $44,555,000 aggregate principal amount of University Revenue Bonds, Series 2020B (Refunding) (the "Series 2020B Bonds"), $54,300,000 aggregate principal amount of University Revenue Bonds, Series 2020C (Taxable Refunding) (the "Series 2020C Bonds"), $77,135,000 aggregate principal amount of University Revenue Bonds, Series 2020D (Refunding) (the "Series 2020D Bonds" and, together with the Series 2020B Bonds, the "Tax-Exempt Bonds") and $31,130,000 aggregate principal amount of University Revenue Bonds, Series 2020E (Taxable Refunding) (the "Series 2020E Bonds" and, collectively with the Series 2020A Bonds and the Series 2020C Bonds, the "Taxable Bonds"; and, the Taxable Bonds together with the Tax-Exempt Bonds, the "Bonds") of the Board of Regents of the University of Hawaii (the "Board"), pursuant to a Resolution adopted by the Board on November 16, 2001 (as amended and supplemented to date, including by that certain Supplemental Resolution adopted by the Board on September 17, 2020, the "Resolution"). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the Resolution.

In connection with the foregoing, we have reviewed the Resolution, the Certificate of Determination of the Board dated September 17, 2020 (the "Certificate of Determination"), the Tax Certificate of the Board dated October 28, 2020 (the "Tax Certificate"), an opinion of counsel of the Board, certificates of the Board and others, and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

We have assumed the genuineness of all documents and signatures presented to us (whether as originals or as copies) and the due and legal execution and delivery thereof by, and validity against, all parties thereto other than the Board. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the preceding paragraph. Furthermore, we have assumed compliance with all covenants and agreements contained in the Resolution, the Certificate of Determination and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Tax-Exempt Bonds to be included in gross income for federal income tax purposes.

The rights and obligations under the Bonds, the Resolution, the Certificate of Determination and the Tax Certificate and their enforceability may be limited by bankruptcy, insolvency or other laws affecting creditors' rights and remedies heretofore or hereafter enacted. We express no opinion with respect to any indemnification, contribution, penalty, choice of law, choice of forum or waiver provisions contained in the aforementioned documents. Finally, we undertake no responsibility for the accuracy, completeness or fairness of any offering material relating to the Bonds and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Bonds constitute valid and binding limited obligations of the Board payable from Revenues pledged therefor under the Resolution.

2. The Resolution has been duly adopted by, and constitutes the valid and binding obligation of, the Board, and the Certificate of Determination has been duly executed and delivered by, and constitutes the valid and binding obligation of, the Board.

3. Interest on the Tax-Exempt Bonds is not includable in the gross income of the owners thereof for federal income tax purposes. If there is continuing compliance with the requirements of the Internal Revenue Code of 1986 (the "Code"), we are of the opinion that interest on the Tax-Exempt Bonds will continue to be excluded from the gross income of the owners thereof for federal income tax purposes. We are further of the opinion that the Tax-Exempt Bonds are not "private activity bonds" within the meaning of Section 141(a) of the

Code. Accordingly, interest on the Tax-Exempt Bonds is not an item of tax preference for purposes of the federal alternative minimum tax. Interest on the Taxable Bonds is not excludable from gross income for federal income tax purposes. The Bonds and the income therefrom are exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes. We express no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds.

Certain agreements, requirements and procedures contained or referred to in the Resolution, the Certificate of Determination, the Tax Certificate and other relevant documents may be changed and certain actions (including, without limitation, the defeasance of the Bonds) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. No opinion is expressed herein as to the effect on any Bond or the interest thereon if any such change occurs or action is taken or omitted that is not in accordance with the terms and conditions set forth in such documents.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and judicial decisions and cover certain matters not directly addressed by such authorities. We have not undertaken to determine, or to inform any person, as to any change in any existing law, regulation, ruling or judicial decision or the effect of any such change. Our engagement with respect to the Bonds has concluded with their issuance, and we disclaim any obligation to update this letter.

Very truly yours,

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APPENDIX F

FORM OF CONTINUING DISCLOSURE CERTIFICATE

Dated October 28, 2020

BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII
University Revenue Bonds, Series 2020A (Taxable), Series 2020B (Refunding), Series 2020C (Taxable Refunding), Series 2020D (Refunding) and Series 2020E (Taxable Refunding)

This Continuing Disclosure Certificate (this "*Disclosure Certificate*") is provided in connection with the issuance by the Board of Regents of the University of Hawaii (the "*Board*") of $217,165,000 University Revenue Bonds, Series 2020A (Taxable), Series 2020B (Refunding), Series 2020C (Taxable Refunding), Series 2020D (Refunding) and Series 2020E (Taxable Refunding) (collectively the "*Series 2020 Bonds*"). The Series 2020Bonds are being issued pursuant to Chapter 304A, Hawaii Revised Statutes, and a resolution of the Board adopted November 16, 2001 (the "*Resolution*"), as amended to date, including by a Supplemental Resolution of the Board adopted September 17, 2020 (the "*Supplemental Resolution*"). The Board covenants and agrees as follows:

Section 1. Purpose of Disclosure Certificate. This Disclosure Certificate is being executed and delivered on behalf of the Board for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with Securities and Exchange Commission Rule 15c2-12(b)(5).

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

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

"*Beneficial Owner*" shall mean any person which (a) has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries) or (b) is treated as the owner of any Bonds for federal income tax purposes.

"*Dissemination Agent*" shall mean initially the Vice President of Budget and Finance/Chief Financial Officer of the University, or any successor Dissemination Agent designated in writing by the Board and which has filed with the Board a written acceptance of such designation.

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

"*Holder*" shall mean the person in whose name any Bond shall be registered.

"*Listed Events*" shall mean any of the events listed in subsection 5(a) of this Disclosure Certificate.

"*MSRB*" shall mean the Municipal Securities Rulemaking Board or any other entity designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access ("*EMMA*") website of the MSRB, currently located at http://emma.msrb.org.

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

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

Section 3. <u>Provision of Annual Reports</u>. (a) The Board shall, or shall cause the Dissemination Agent to, not later than nine months after the end of the University's Fiscal Year (presently June 30), commencing with the report for the Fiscal Year ending June 30, 2020, provide to the MSRB an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Certificate. The Annual Report may cross-reference other information as provided in Section 4 of this Disclosure Certificate; provided that the audited financial statements of the University may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the University's Fiscal Year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(c). The Annual Report shall be submitted on a standard form in use by industry participants or other appropriate form and shall identify the Bonds by name and CUSIP number.

(b) Not later than fifteen (15) business days prior to the date set forth in subsection (a) above, the Board shall provide the Annual Report to the Dissemination Agent. If the Board is unable to provide to the MSRB an Annual Report by the date required in subsection (a) above, the Board shall send or cause to be sent, in a timely manner, a notice to the MSRB in substantially the form attached as Exhibit A.

Section 4. <u>Contents of Annual Reports</u>. The University's Annual Report shall contain or include by reference information of the type included in the final Official Statement (the "*Official Statement*") dated October 14, 2020, relating to the Bonds, as set forth under the following headings or in the following tables or appendices: "**THE UNIVERSITY OF HAWAII — Table 1**", **APPENDIX A – "THE UNIVERSITY OF HAWAII – Tables A-1 through A-20"**, and **APPENDIX B – AUDITED FINANCIAL STATEMENTS**".

The audited financial statements of the University for the prior Fiscal Year shall be prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board. If the University's audited financial statements are not available by the time the Annual Report is required to be filed pursuant to subsection 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

Any or all of the items listed above may be set forth in one or a set of documents or may be included by specific reference to other documents, including official statements of debt issues of the Board or related public entities, which have been made available to the public on the MSRB's website. The Board shall clearly identify each such other document so included by reference.

If the inclusion or format of the information referenced above is changed in any future official statement, thereafter the Annual Report shall instead contain or include by reference information of the type included in that official statement as so changed or, if different, the type of equivalent information included in the Board's most recent official statement.

Section 5. <u>Reporting of Significant Events</u>. (a) The Board shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Bonds in a timely manner not later than ten (10) New York business days after the occurrence of the event:

i. Principal and interest payment delinquencies;

ii. Non-payment related defaults, if material;

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

iv. Unscheduled draws on credit enhancements reflecting financial difficulties;

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

vi. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determination of taxability. Notices of Proposed Issue (IRS Form 5701 TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;

vii. Modifications to rights of Bondholders, if material;

viii. Optional or unscheduled Bond calls, if material, and tender offers;

ix. Defeasances;

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

xi. Rating changes;

xii. Bankruptcy, insolvency, receivership or similar event of the Board; or

xiii. The consummation of a merger, consolidation, or acquisition involving the Board or the sale of all or substantially all of the assets of the Board, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

xiv. Appointment of a successor or additional trustee or the change of name of a trustee, if material; or

xv. Incurrence of a Financial Obligation of the Board, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Board, any of which affect Bond holders, if material.

xvi. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Board, any of which reflect financial difficulties.

For the purposes of the event identified in subparagraph (9), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

(b) The Board shall give, or cause to be given, notice of a failure to provide the annual financial information on or before the date specified in Section 4, as provided in Section 4.

(c) Whenever the Board obtains knowledge of the occurrence of a Listed Event described in Section 5(b), the Board shall determine if such event would be material under applicable federal securities laws.

(d) If the Board learns of the occurrence of a Listed Event described in Section 5(a), or determines that knowledge of a Listed Event described in Section 5(b) would be material under applicable federal securities laws, the Board shall within ten business days of occurrence file a notice of such occurrence with the MSRB. Notwithstanding the foregoing, notice of the Listed Event described in subsections (a)(7) or (b)(3) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected Bonds pursuant to the Resolution.

Section 6. Termination of Reporting Obligation. The Board's obligations under this Disclosure Certificate shall terminate upon the legal defeasance or payment in full of all of the Bonds. If such termination occurs prior to the final maturity of the Bonds, the Board shall give notice of such termination in a filing with the MSRB.

Section 7. Dissemination Agent. The Board may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the Board pursuant to this Disclosure Certificate.

Section 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Certificate, the Board may amend this Disclosure Certificate, and any provision of this Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of subsection 3(a), Section 4 or subsections 5(a) or (b), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (i) is approved by the Holders of the Bonds in the same manner as provided in the Resolution for amendments to the Resolution with the consent of Holders or (ii) does not materially impair the interests of the Holders or Beneficial Owners of the Bonds, as determined by a party unrelated to the Board (such as a trustee or bond counsel).

In the event of any amendment or Waiver of a provision of this Disclosure Certificate, the Board shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the Board. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given in a filing with the MSRB, and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Section 9. Additional Information. Nothing in this Disclosure Certificate shall be deemed to prevent the Board from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event or of any other notice required to be filed hereunder, in addition to that which is required by this Disclosure Certificate. If the Board chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Certificate, the Board shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event, or any other event required to be reported.

Section 10. Default. In the event of a failure of the Board to comply with any provision of this Disclosure Certificate, any Holder or Beneficial Owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Board to comply with its obligations under this Disclosure Certificate. A default under this Disclosure Certificate shall not be deemed an event of default under the Resolution with respect to the Bonds, and the sole remedy under this Disclosure Certificate in the event of any failure of the Board to comply with this Disclosure Certificate shall be an action to compel performance.

Section 11. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the Board, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the Bonds and shall create no rights in any other person or entity.

Section 12. Governing Law. This Disclosure Certificate shall be construed and interpreted in accordance with the laws of the State of Hawaii, and any suits and actions arising out of this Disclosure Certificate shall be instituted in a court of competent jurisdiction in the State of Hawaii; provided, however, that to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Agreement shall be construed in accordance with such federal securities laws and official interpretations thereof.

UNIVERSITY OF HAWAII

By: ____
KALBERT YOUNG
Vice President for Budget and Finance
Chief Financial Officer

EXHIBIT A

FORM OF NOTICE TO THE MUNICIPAL SECURITIES RULEMAKING BOARD OF FAILURE TO FILE ANNUAL REPORT

Name of Issuer:	Board of Regents of the University of Hawaii
Names of Bond Issues:	University Revenue Bonds, Series 2020A (Taxable), Series 2020B (Refunding), Series 2020C (Taxable Refunding), Series 2020D (Refunding) and Series 2020E (Taxable Refunding)
Date of Issuance:	October 28, 2020

NOTICE IS HEREBY GIVEN that the Board of Regents of the University of Hawaii has not provided an Annual Report with respect to the above named Bonds as required by its Continuing Disclosure Certificate dated October 28, 2020. The Board anticipates that the Annual Report will be filed by _______________.

Dated:

UNIVERSITY OF HAWAII

By _______[to be signed only if filed]_______________

Title ____

BOARD OF REGENTS OF THE UNIVERSITY OF HAWAII • UNIVERSITY REVENUE BONDS

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