University of Pennsylvania

Consolidated Financial Statements
June 30, 2023 and 2022

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Report of Independent Auditors

To the Trustees of the University of Pennsylvania

Opinion

We have audited the accompanying consolidated financial statements of University of Pennsylvania and its subsidiaries (the "University"), which comprise the consolidated statements of financial position as of June 30, 2023 and 2022, and the related consolidated statements of activities and of cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements").

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

Basis for Opinion

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

Responsibilities of Management for the Consolidated Financial Statements

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

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

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

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

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

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern for a reasonable period of time.

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

PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania
September 28, 2023

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

University of Pennsylvania
(in thousands)

	June 30,	
	2023	**2022**
ASSETS		
Cash and cash equivalents	$ 3,217,099	$ 3,163,942
Accounts receivable, net	1,816,464	1,925,027
Contributions receivable, net	447,413	513,788
Loans receivable, net	53,022	59,809
Other assets	1,244,642	1,011,588
Investments, at fair value	23,090,536	22,484,283
Property, plant and equipment, net	9,463,058	9,391,124
TOTAL ASSETS	**$ 39,332,234**	**$ 38,549,561**
LIABILITIES		
Accounts payable	$ 388,701	$ 393,273
Accrued expenses and other liabilities	4,065,419	3,847,063
Deferred income	189,706	200,658
Deposits and advances	217,594	234,653
Federal student loan advances	32,756	39,894
Accrued retirement benefits	290,669	466,605
Debt obligations	4,393,519	4,492,228
TOTAL LIABILITIES	**9,578,364**	**9,674,374**
NET ASSETS		
Without donor restrictions	18,814,722	17,808,212
With donor restrictions	10,939,148	11,066,975
TOTAL NET ASSETS	**29,753,870**	**28,875,187**
TOTAL LIABILITIES AND NET ASSETS	**$ 39,332,234**	**$ 38,549,561**

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

CONSOLIDATED STATEMENTS OF ACTIVITIES

University of Pennsylvania
for the years ended June 30, 2023 and 2022
(in thousands)

	2023	2022
WITHOUT DONOR RESTRICTIONS:		
REVENUE AND OTHER SUPPORT		
Tuition and fees, net	$ 1,361,445	$ 1,310,603
Commonwealth appropriations	36,740	35,144
Sponsored programs	1,333,422	1,270,036
Contributions and donor support	239,165	210,892
Investment income	1,121,483	873,500
Net patient service revenue	8,718,133	8,094,673
Other income	2,182,485	2,632,107
TOTAL REVENUE AND OTHER SUPPORT	**14,992,873**	**14,426,955**
EXPENSES		
Compensation and benefits	7,742,714	7,209,286
Depreciation and amortization	650,251	623,457
Interest on indebtedness	139,741	127,997
Other operating expenses	5,324,442	4,807,895
TOTAL EXPENSES	**13,857,148**	**12,768,635**
INCREASE IN NET ASSETS FROM OPERATIONS	**1,135,725**	**1,658,320**
NONOPERATING ACTIVITIES		
Return on investments, net of amounts classified as operating revenue	(472,278)	(662,663)
Pension, OPEB and other, net	204,662	854,025
Contributions and donor support for capital related activities	138,401	54,603
TOTAL NONOPERATING ACTIVITIES	**(129,215)**	**245,965**
INCREASE IN NET ASSETS WITHOUT DONOR RESTRICTIONS	**1,006,510**	**1,904,285**
WITH DONOR RESTRICTIONS:		
Contributions	450,788	582,712
Return on investments, net	175,674	3,302
Net assets released from restrictions	(754,289)	(564,182)
(DECREASE) INCREASE IN NET ASSETS WITH DONOR RESTRICTIONS	**(127,827)**	**21,832**
INCREASE IN TOTAL NET ASSETS	**878,683**	**1,926,117**
Total net assets, beginning of year	28,875,187	26,949,070
TOTAL NET ASSETS, END OF YEAR	**$ 29,753,870**	**$ 28,875,187**

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

CONSOLIDATED STATEMENTS OF CASH FLOWS

University of Pennsylvania
for the years ended June 30, 2023 and 2022
(in thousands)

	2023	2022
CASH FLOWS FROM OPERATING ACTIVITIES:		
Increase in total net assets	$ 878,683	$ 1,926,117
Adjustments to reconcile increase in total net assets to net cash provided by operating activities:		
Depreciation and amortization	631,017	601,252
Provision for bad debts	12,639	10,655
(Gain) loss on investments, net	(123,364)	367,312
Loss on disposal of property, plant and equipment	17,741	6,338
Donated equipment	(137)	(1,113)
Receipt of contributed securities	(126,050)	(132,109)
Proceeds from contributed securities	42,898	31,810
Receipt of contributions designated for the acquisition of long-lived assets and long-term investment	(259,864)	(285,814)
Pension, OPEB and other, net	(204,662)	(854,025)
Changes in operating assets and liabilities:		
Accounts and loans receivable	102,105	(205,196)
Contributions receivable	66,980	(39,936)
Other assets	(54,541)	(49,730)
Accounts payable, accrued expenses and accrued retirement benefits	(401,949)	(356,240)
Deposits and advances	(17,103)	19,141
Deferred income	(10,952)	9,961
NET CASH PROVIDED BY OPERATING ACTIVITIES	**553,441**	**1,048,423**
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of investments	(16,688,794)	(18,713,752)
Proceeds from sale of investments	16,946,009	18,958,408
Purchase of property, plant and equipment	(780,336)	(868,238)
NET CASH USED BY INVESTING ACTIVITIES	**(523,121)**	**(623,582)**
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from contributions received designated for the acquisition of long-lived assets and long-term investment	259,864	285,815
Proceeds from contributed securities received designated for the acquisition of long-lived assets and long-term investment	81,050	101,799
Federal student loan repayments	(7,139)	(7,145)
Repayment of debt obligations	(81,405)	(214,892)
Proceeds from issuances of debt obligations	16,419	125,129
NET CASH PROVIDED BY FINANCING ACTIVITIES	**268,789**	**290,706**
NET INCREASE IN CASH AND CASH EQUIVALENTS	**299,109**	**715,547**
Cash and cash equivalents, beginning of year	3,173,252	2,457,705
CASH AND CASH EQUIVALENTS, END OF YEAR	**$ 3,472,361**	**$ 3,173,252**
RECONCILIATION TO CONSOLIDATED STATEMENTS OF FINANCIAL POSITION:		
Cash and cash equivalents, Consolidated Statements of Financial Position	$ 3,217,099	$ 3,163,942
Cash included in Investments, at fair value	255,262	9,310
CASH AND CASH EQUIVALENTS, END OF YEAR	**$ 3,472,361**	**$ 3,173,252**
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest, net of amounts capitalized	$ 150,335	$ 138,357
Decrease in accrued plant, property and equipment	(6,377)	(25,198)
Operating cash flows for operating leases	78,911	76,260
Right-of-use assets obtained in exchange for lease liabilities	116,114	70,727

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

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

The University of Pennsylvania ("University"), located in Philadelphia, Pennsylvania, is an independent, nonsectarian, not-for-profit institution of higher learning founded in 1740. The University Academic Component ("Academic Component") provides educational services, primarily for students at the undergraduate, graduate, professional and postdoctoral levels and performs research, training and other services under grants, contracts and similar agreements with sponsoring organizations, primarily departments and agencies of the United States Government. The University also operates an integrated health care delivery system, the University of Pennsylvania Health System ("UPHS"). The University is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.

Basis of Presentation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and include the accounts of the University and its subsidiaries over which the University exercises control. All material transactions between the University and its subsidiaries are eliminated in consolidation. Investments in subsidiaries over which the University has the ability to exercise significant influence are reported using the equity method of accounting. Other investments in subsidiaries are reported using the measurement alternative – at cost adjusted for impairment, if any, unless an observable transaction for an identical or similar security occurs.

The net assets of the University are classified and reported as follows:

> Without donor restrictions – includes net assets that are not subject to donor-imposed restrictions.
>
> With donor restrictions – includes net assets that are (i) subject to legal or donor-imposed restrictions that will be met by actions of the University and/or the passage of time, and (ii) the original values of donor restricted net assets, the use of which is limited to investment and can only be appropriated for expenditure by the University in accordance with the Pennsylvania Uniform Principal and Income Act (Pennsylvania Act).

Expenses are reported as a decrease in net assets without donor restrictions. Gains and losses associated with property, plant and equipment disposals are included in Other income and Other operating expenses, respectively. Gains and losses on investments are included in Return on investments, net and are reported as increases or decreases in net assets without donor restrictions unless their use is restricted by explicit donor stipulation or by law. Gains or losses associated with all other activities, such as debt retirements and pension and postretirement plan actuarial valuation adjustments, are reported in Pension, other postretirement employee benefits (OPEB) and other, net. Donor-restricted resources intended for the acquisition or construction of long-lived assets are initially reported as net assets with donor restrictions and released from restrictions to net assets without donor restrictions when the asset is placed in service or in accordance with donor-specified terms.

Expirations of restrictions on contributions and investment income, reported as Net assets released from restrictions, and the corresponding amounts are included in the Consolidated Statements of Activities as follows (in thousands):

Net Assets Without Donor Restrictions	**2023**	**2022**
Contributions and donor support	$ 154,965	$ 125,506
Investment income	460,923	384,073
Contributions and donor support for capital related activities	138,401	54,603
Net assets released from restrictions	**$ 754,289**	**$ 564,182**

Net Assets With Donor Restrictions	**2023**	**2022**
Net assets released from restrictions	**$ (754,289)**	**$ (564,182)**

Fair Value

The University values certain financial and non-financial assets and liabilities by applying the Financial Accounting Standards Board (FASB) pronouncement on Fair Value Measurements. The pronouncement defines fair value and establishes a framework for measuring fair value that includes a hierarchy that categorizes and prioritizes the sources used to measure and disclose fair value. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). The hierarchy is broken down into three levels based on inputs that market participants would use in valuing the asset or liability and are developed based on market data obtained from sources independent of the University as follows:

Level 1: Unadjusted quoted market prices in active markets for identical assets or liabilities.

Level 2: Unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or inputs other than quoted prices that are observable.

Level 3: Unobservable inputs for the asset or liability.

Inputs broadly refer to the assumptions that market participants use to make valuation decisions, including assumptions about risk. Inputs may include price information, volatility statistics, specific and broad credit data, liquidity statistics and other factors. The University is required by the pronouncement to maximize the use of observable inputs (Levels 1 and 2) and minimize the use of unobservable inputs (Level 3). The University considers observable data to be that market data which is readily available, regularly distributed or updated, reliable and verifiable, not proprietary and provided by independent sources that are actively involved in the relevant market. The categorization of a financial instrument within the hierarchy is based upon the pricing transparency of the instrument and does not necessarily correspond to the University's perceived risk of that instrument.

Assets and liabilities are disclosed in the Notes to Consolidated Financial Statements within the hierarchy based on the lowest (or least observable) input that is significant to the measurement. The University's assessment of the significance of an input requires judgment, which may affect the valuation and categorization within the fair value hierarchy. The fair value of assets and liabilities using Level 3 inputs are generally determined by using pricing models or discounted cash flow methods, which all require significant management judgment or estimation.

As a practical expedient, the University is permitted to estimate the fair value of an investment in an investment company at the measurement date using the reported net asset value (NAV). Adjustment is required if the University expects to sell the investment at a value other than NAV or if the NAV is not calculated in accordance with U.S. GAAP. The University holds investments in its portfolio which are generally valued based on the most current NAV. This amount represents fair value of these investments at June 30, 2023 and 2022. Investments reported at NAV, as a practical expedient, are not included within levels 1, 2, or 3 in the fair value hierarchy.

The University performs additional procedures, including due diligence reviews, on its investments in investment companies and other procedures with respect to the capital account or NAV provided to ensure conformity with US GAAP. The University has assessed factors including, but not limited to, managers' compliance with the Fair Value Measurement standard, price transparency and valuation procedures in place.

Cash and Cash Equivalents

Cash equivalents include demand deposits and liquid investments available for current operations with maturities of three months or less, which would be considered Level 1 investments under the fair value hierarchy. All short-term, highly liquid investments, otherwise qualifying as cash equivalents or restricted cash equivalents, included in the University's investments are treated as Investments, at fair value and are therefore excluded from Cash and cash equivalents in the Statements of Cash Flows.

Investments, at Fair Value

The majority of the University's investments are held in the Associated Investments Fund (AIF). The AIF is invested in accordance with the investment policies set out by an Investment Board which has been appointed by the Trustees of the University of Pennsylvania (the Trustees). The Office of Investments is responsible for the day-to-day management of the AIF including identifying, selecting and monitoring a variety of external investment managers to implement the strategic asset allocation set forth by the Investment Board. The AIF may include marketable and not readily marketable securities that it intends to hold for an indefinite period of time. The University also holds other investments which are not invested in the AIF due to various restrictions. The majority of these investments are in highly liquid short-term and equity type investments. Changes in the fair value of investments are reported in Return on investments, net in the Consolidated Statements of Activities. The following is a summary of the investments held in the AIF by asset allocation, as well as investment risk:

Short-Term

Short-term investments include cash equivalents and fixed income investments with maturities of less than one year. Short-term investments are valued using observable market data and are categorized as Level 1 based on quoted market prices in active markets. The majority of these short-term investments are held in a US Treasury money market account.

Equity

Equity investments consist of direct holdings of public securities in managed accounts as well as mutual funds and private funds. The securities held in managed accounts, along with mutual funds, are generally valued based on quoted market prices in active markets obtained from exchange or dealer markets for identical assets, and are accordingly categorized as Level 1. Private funds are valued at NAV.

Debt

Debt investments consist of direct holdings of securities in managed accounts and private funds. Securities such as US Treasuries, held in managed accounts, are valued based on quoted market prices in active markets and are categorized as Level 1. Securities such as corporate and sovereign bonds, also held in managed accounts, are valued based on quoted market prices or dealer or broker quotations and are categorized as Level 2 or in the cases where inputs are unobservable as Level 3. Private funds are valued at NAV.

Absolute Return

Absolute return investments are made up of allocations to private funds. The fund managers of these private funds invest in a variety of securities, based on the strategy of the fund, which may or may not be quoted in an active market. Private funds are valued at NAV.

Private Equity

Investments in private equity are in the form of private funds. The fund managers primarily invest in investments for which there is no readily determinable market value. The fund managers may value the underlying private investments based on an appraised value, discounted cash flow, industry comparables or some other method. These private fund investments are valued at NAV.

Real Assets

Investments in real assets are made up of private funds and securities in managed accounts. The fund managers of these private funds primarily invest in investments for which there is no readily determinable market value. The fund managers may value the underlying private investments based on an appraised value, discounted cash flow, industry comparables or some other method. These private fund investments are valued at NAV. The securities held in managed accounts are generally valued based on quoted market prices in active markets obtained from exchange or dealer markets for identical assets, and are accordingly categorized as Level 1.

Derivative Instruments

The University, in the normal course of business, utilizes derivative financial instruments in connection with its investment activity. Derivatives utilized by the University include futures, options, swaps and forward currency contracts and are reflected at fair value following the definition of Level 1 and 2 assets and liabilities as previously described. Investments in derivative contracts are subject to foreign exchange and equity price risks that can result in a loss of all or part of an investment. In addition, the University is also subject to additional counterparty risk should its counterparties fail to meet the terms of their contracts.

Investment Risks

The University's investing activities expose it to a variety of risks including market, credit and liquidity risks. The University attempts to identify, measure and monitor risk through various mechanisms including risk management strategies and credit policies.

Market risk is the potential for changes in the fair value of the University's investment portfolio. Commonly used categories of market risk include currency risk (exposure to exchange rate differences between functional currency relative to other foreign currencies), interest rate risk (changes to prevailing interest rates or changes in expectations of futures rates) and price risk (changes in market value other than those related to currency or interest rate risk, including the use of NAV provided).

Credit risk is the risk that one party to a financial investment will cause a financial loss for the other party by failing to discharge an obligation (counterparty risk).

Liquidity risk is the risk that the University will not be able to meet its obligations associated with financial liabilities.

Endowment

The University's endowment consists of 7,695 donor-restricted endowment funds and 1,006 quasi-endowment funds established by management for a variety of purposes. The University reports all endowment investments at fair value. Most of the endowment funds of the University have been pooled in the University's AIF. The endowment funds not pooled in the AIF are primarily invested in equities and bonds.

The Commonwealth of Pennsylvania has not adopted the Uniform Management of Institutional Funds Act (UMIFA) or the Uniform Prudent Management of Institutional Funds Act (UPMIFA). Rather, the Pennsylvania Act governs the investment, use and management of the University's endowment funds.

The Pennsylvania Act does not require the preservation of the fair value of a donor's original gift as of the gift date of a donor-restricted endowment fund, absent explicit donor stipulations to the contrary. However, based on its interpretation of the Pennsylvania Act and relevant accounting literature, the University classifies the following as net assets with donor restrictions for reporting purposes: (i) the original value of donated assets required to be invested in perpetuity; (ii) the original value of subsequent donated assets required to be invested in perpetuity; (iii) accumulations to the donated assets invested in perpetuity made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund; and (iv) donated assets and accumulations that are subject to legal or donor-imposed restrictions that will be met by actions of the University and/or the passage of time. The Pennsylvania Act allows a nonprofit to elect to appropriate for expenditure between 2% and 7% (increased to 10% for fiscal years 2020 through 2022) of the endowment fair value, determined at least annually and averaged over a period of three or more preceding years, including funds whose fair value is less than the original donated value.

In accordance with the Pennsylvania Act, the University has elected to adopt and follow an investment policy seeking a total return for the investments held by the AIF, whether the return is derived from appreciation of capital or earnings and distributions with respect to capital or both. The endowment spending policy which the Board of Trustees has elected to govern the expenditure of funds invested in the AIF, including funds whose fair value is less than the original donated value, is designed to manage annual spending levels and is independent of the cash yield and appreciation of investments for the year. For fiscal year 2023, the spending rule payout is based on the sum of: (i) 70% of the prior fiscal year distribution adjusted by an inflation factor; and (ii) 30% of the prior fiscal year-end fair value of the AIF, lagged one year, multiplied by a 5% target spending rate for all funds. The payout or allocation to operations exceeded actual income, net of expenses, by $975,606,000 and $876,619,000 in 2023 and 2022, respectively.

Property, Plant and Equipment

Property, plant and equipment (PPE) is reported net of related depreciation. Donated PPE is reported based on estimated fair value at the date of acquisition. All other PPE is reported at cost. Depreciation is computed on the straight-line method over the estimated useful lives of the assets, or the shorter of the lease term or estimated useful life for leased assets. Contributions of library materials, as well as rare books and other collectibles, are not recorded for financial statement presentation, while purchases are recorded as Other operating expenses on the Consolidated Statement of Activities in the period acquired.

Split-Interest Agreements

The University's split-interest agreements with donors consist of irrevocable charitable remainder trusts, charitable gift annuities, pooled income funds, perpetual trusts and charitable lead trusts. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements.

The University recognizes assets contributed to charitable remainder trusts, charitable gift annuities and pooled income funds, where it serves as trustee, at fair value, recognizes a liability to the beneficiaries based on the present value of the estimated future payments to beneficiaries to be made over the estimated remaining life of those beneficiaries using current market rates at the date of the contribution, and recognizes the difference as contribution revenue. Subsequently, the trust assets, invested in equity and debt securities, are measured at fair value at quoted market prices, and are categorized as Level 1, with the changes reported as an adjustment to Investments, at fair value on the Consolidated Statements of Financial Position and Return on investments, net on the Consolidated Statements of Activities. Liabilities to beneficiaries are revalued based on current market rates, and are categorized as Level 2, with the changes reported as an adjustment to Accrued expense and other liabilities on the Consolidated Statements of Financial Position and Return on investments, net on the Consolidated Statements of Activities.

Charitable remainder trust assets, where the University does not serve as trustee, are initially valued using the current fair value of the underlying assets, using observable market inputs based on its beneficial interest in the trust, discounted to a single present value using current market rates at the date of the contribution. The initially contributed assets are categorized as Level 3, and reported as Investments, at fair value on the Consolidated Statements of Financial Position and Contribution revenue on the Consolidated Statements of Activities. Subsequent valuation follows this same approach with changes in fair value reported as an adjustment to Investments, at fair value on the Consolidated Statements of Financial Position and Return on investments, net on the Consolidated Statements of Activities. The primary unobservable input used in the fair value measurement of the charitable remainder trust assets is the discount rate.

Perpetual trust assets are initially valued at the current fair value of the underlying assets using observable market inputs based on its beneficial interest in the trust. The initially contributed assets are categorized as Level 3 and are reported as Investments, at fair value on the Consolidated Statements of Financial Position and as Contribution revenue on the Consolidated Statements of Activities. Subsequent valuation follows this same approach with changes in fair value reported as an adjustment to Investments, at fair value on the Consolidated Statements of Financial Position and Return on investments, net on the Consolidated Statements of Activities. The primary unobservable inputs used in the fair value measurement of the perpetual trust assets are the underlying securities held by the trust.

The University reports charitable lead trust assets by discounting future cash flows using current market rates at the measurement date, matched to the payment period of the agreement. The initially contributed assets are categorized as Level 3, and reported as Investments, at fair value on the Consolidated Statements of Financial Position and as Contribution revenue on the Consolidated Statements of Activities. Subsequent valuation follows this same approach with changes in fair value reported as an adjustment to Investments, at fair value on the Consolidated Statements of Financial Position and Return on investments, net on the Consolidated Statements of Activities. The primary unobservable input used in the fair value measurement of the charitable lead trust assets is the discount rate.

Income Taxes

The University is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code. Most of its activities and income are related to its exempt purposes and are exempt from federal and state income taxes. None of its activities and income is subject to Pennsylvania income tax. Unrelated activities and income are subject to both city and federal “Unrelated Business Income Tax.”

The Tax Cuts and Jobs Act (the “Act”), enacted on December 22, 2017, impacts the University in several ways, including the addition of excise taxes on executive compensation and net investment income, as well as new rules for calculating unrelated business taxable income. The University records an estimate for related tax expense based on currently available regulatory guidance of the Act. Additionally, The University has made provisions for deferred taxes, representing future excise tax payable on unrealized gains in excess of the tax basis of investments. As of June

30, 2023, a liability of $63,764,000 was reported in Accrued expense and other liabilities on the Consolidated Statements of Financial Position and Return on investments, net of amounts classified as operating revenue on the Consolidated Statements of Activities.

The University regularly evaluates its tax position and does not believe it has any uncertain tax positions that require disclosure or adjustment to the consolidated financial statements.

Tuition and Fees

Tuition and fees includes tuition, room and board, and other student fees which are recognized as revenue over time during the fiscal year in which the related academic services are rendered. Tuition and fees received in advance of services to be rendered are reported as Deferred income on the Consolidated Statements of Financial Position. The University maintains a policy of offering qualified undergraduate applicants admission to the University without regard to financial circumstance, as well as meeting in full the demonstrated financial need of those admitted. Tuition and fees have been reduced by certain grants and scholarships in the amount of $401,396,000 and $375,596,000 in 2023 and 2022, respectively.

Sponsored Programs

Sponsored programs includes revenue from exchange and conditional non-exchange agreements with governments, foundations and private sources, generally for research activities. Revenue from exchange agreements is generally recognized at a point in time when performance obligations are met, and revenue from conditional non-exchange agreements is generally recognized as the related costs are incurred. Non-exchange agreements are considered conditional if the terms of the agreement include both a right of return/release of assets received/promised and a barrier. These agreements become unconditional as barriers are met. At June 30, 2023, the University has unrecorded conditional agreements of $2,474,380,000. In 2023 and 2022, sponsored programs revenue earned from governmental sources totaled $979,174,000 and $927,666,000, respectively. Indirect costs recovered on federally-sponsored programs are generally based on predetermined reimbursement rates which are stated as a percentage and distributed based on the modified total direct costs incurred. The University negotiates its federal indirect rates with its cognizant federal agency. Indirect costs recovered on all other grants and contracts are based on rates negotiated with the respective sponsors. Funds received for sponsored research activity are subject to audit. Based upon information currently available, management believes that any liability resulting from such audits will not materially affect the financial position or operations of the University.

Contributions

Contributions are revenues from unconditional non-exchange agreements with private sources and foundations. Contributions are recognized in the period received and reported as increases in the appropriate net asset category based on the presence or absence of donor-imposed restrictions. Non-exchange agreements are considered conditional if the terms of the agreement include both a right of return/release of assets received/promised and a barrier. These agreements become unconditional as barriers are met. Contributions and donor support without donor restrictions also includes net assets released as a result of corresponding expenditures which met donor-imposed restrictions. Contributions designated for the acquisition of long-lived assets and long-term investment are reported in Nonoperating activities.

The University reports unconditional pledges at fair value by discounting future cash flows using current market rates at the measurement date, ranging from 4.70% to 5.43%, matched to the payment period of the agreement, and accordingly categorizes these assets as Level 3. The primary unobservable input used in the fair value measurement of the University's Contributions receivable is the discount rate. Changes in the fair value of the University’s

Contributions receivable due to fluctuations in the discount rate are reported as Contribution revenue on the Consolidated Statements of Activities.

Net Patient Service Revenue

Net patient service revenue is derived from contracts with patients of UPHS in which its performance obligation is to provide health care services. Net patient service revenue is recorded over time during the period these performance obligations are satisfied and at the determined transaction price, which represents the estimated net realizable amounts due from patients, third-party payers and others for health care services rendered. Estimated net realizable amounts represent amounts due, net of implicit and explicit price concessions. Implicit price concessions are based on management's assessment of expected net collections considering economic conditions, historical experience, trends in health care coverage and other collection indicators. After satisfaction of amounts due from insurance and reasonable efforts to collect from patients have been exhausted, UPHS follows established guidelines for placing certain past-due patient balances with collection agencies, subject to terms of certain restrictions on collection efforts as determined by UPHS. Patient receivables are written off after collection efforts have been followed in accordance with UPHS' policy. Certain revenue received from third-party payers is subject to audit and retroactive adjustment. Any changes in estimates under these contracts are recorded in operations currently.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the period. Actual results could differ from those estimates.

COVID-19

In response to the COVID-19 pandemic, the federal government passed the Coronavirus Aid, Relief, and Economic Stimulus Act of 2020 (CARES Act) and the American Rescue Plan Act of 2021 (ARP) which made funds available to UPHS and the Academic Component through various provisions of the legislation. The following table summarizes the related impact on the Consolidated Financial Statements as of June 30, 2023 and 2022, and for the years then ended (in thousands):

	Line Item	2023	2022
Consolidated Statements of Activities:			
UPHS CARES Act Provider relief funding	Other income	$ 21,257	$ 18,654
UPHS ARP PA DHS Act 2 funding	Other income	-	19,239
Higher Education Emergency Relief funding	Other income	-	22,494
Higher Education Emergency Relief funding	Sponsored programs	-	17,847
Consolidated Statements of Financial Position:			
UPHS Centers for Medicare and Medicaid Services Accelerated and Advanced Payments Program	Accrued expenses and other liabilities	$ -	$ 116,304
Deferral of Social Security taxes	Accrued expenses and other liabilities	-	84,991

Recent Authoritative Pronouncements

Periodically, the FASB issues updates to the Accounting Standards Codification (ASC) which impacts the University's financial reporting and related disclosures. The paragraph that follows summarizes a relevant update.

In March 2020, January 2021, April 2022 and December 2022 the FASB issued standard updates on Reference Rate Reform in response to the planned discontinuation of the London Inter-Bank Offered Rate (LIBOR), a key interbank reference rate. The standard provides accounting relief to contract modifications and optional expedients for applying U.S. GAAP to contracts and other transactions that reference LIBOR or other reference rates that are expected to be discontinued because of rate reform. The University has determined that the standard will have no material impact on the University's results of operations or financial position.

2. UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM - SUMMARIZED FINANCIAL AND RELATED INFORMATION

The Trustees formed Penn Medicine, the governance structure which oversees the activities of UPHS and the University of Pennsylvania Perelman School of Medicine (PSOM) in order to operate, oversee and coordinate its academic, research and clinical missions.

UPHS is comprised of the following operating entities: Clinical Practices of the University of Pennsylvania; Clinical Care Associates; Hospital of the University of Pennsylvania; Penn Presbyterian Medical Center; Pennsylvania Hospital of the University of Pennsylvania Health System; Chester County Hospital and Health System; Lancaster General Health (LGH); Wissahickon Hospice of the University of Pennsylvania Health System; Princeton HealthCare System (PHCS), and Franklin Casualty Insurance Company, a wholly owned Risk Retention Group, and Quaker Insurance Company Ltd., a wholly owned offshore captive insurance company (collectively referred to as RRG/Captive).

In January 2023, UPHS, Tandigm Health, LLC and Independence Health Group, Inc. executed a Contribution, Exchange, and Warrant Purchases Agreement, whereby UPHS contributed $50,000,000 in cash and in-kind assets in exchange for 26.7% interest in Class B Units in Tandigm Health, LLC and optional warrants. UPHS executed an 18-year participation agreement whereby UPHS primary care physicians will receive population health support from Tandigm and participate in value-based opportunities from Tandigm.

In January 2023, UPHS entered into an agreement to divest the Pennsylvania College of Health Sciences (PACHS). As a result of the agreement, an impairment loss of $14,573,000 was reported in Other operating expense on the Consolidated Statements of Activities. In addition, PACHS assets and liabilities of $43,369,000 and $19,046,000 have been reclassified as "held for sale" within Other assets and Accrued expenses and other liabilities, respectively, on the Consolidated Statements of Financial Position.

Throughout the year, certain transactions (primarily billings for allocations of common costs, physicians' salaries and benefits, certain purchased services and support for PSOM) are conducted between UPHS and the University. Nonoperating, net, as shown below, includes transfers from UPHS to the University of $150,374,000 and $148,317,000 in 2023 and 2022, respectively, to further the research and educational activities of PSOM, and $11,546,000 and $11,027,000 in 2023 and 2022, respectively, for other activities. In addition, UPHS recognized operating expenses of $20,717,000 and $20,588,000 in 2023 and 2022, respectively, to support academic operating activities in the clinical departments of PSOM.

The effect of all these transactions is included in the following summarized financial information of UPHS as of and for the years ended June 30, 2023 and 2022 (in thousands):

	2023	2022
Net patient service revenue	$ 8,727,443	$ 8,104,389
Other revenue and support	1,247,254	1,100,018
Total expenses	(9,736,524)	(9,056,929)
Excess of revenue over expenses from operations	238,173	147,478
Nonoperating, net	102,549	361,326
Increase in net assets	**$ 340,722**	**$ 508,804**
Total current assets	$ 2,412,873	$ 2,240,024
Assets whose use is limited:		
Held by trustees	168,328	165,219
RRG/ Captive	201,327	304,256
Donor restricted and other	850,670	820,548
Designated	3,871,739	4,094,937
Property and equipment, net	5,915,043	5,949,333
Investments and other assets	909,654	821,977
Total assets	**$ 14,329,634**	**$ 14,396,294**
Total current liabilities	$ 1,357,052	$ 1,603,575
Long-term debt, net of current portion	2,464,585	2,541,850
Other liabilities	1,550,984	1,634,578
Total liabilities	**$ 5,372,621**	**$ 5,780,003**
Net assets		
Without donor restrictions	$ 8,094,975	$ 7,761,326
With donor restrictions	862,038	854,965
Total net assets	**$ 8,957,013**	**$ 8,616,291**
Total liabilities and net assets	**$ 14,329,634**	**$ 14,396,294**

Net Patient Service Revenue

Net Patient Service Revenue (NPSR) for the years ended June 30, 2023 and 2022 is derived from the following payers:

	2023	2022
Medicare (including Managed Medicare)	34%	33%
Medicaid (including Managed Medicaid)	12%	13%
Managed care	33%	33%
Independence Blue Cross (IBC)	16%	16%
Commercial	4%	4%
Self pay	1%	1%
	100%	100%

Third-party payers

UPHS has agreements with the following third-party payers that provide for payments at amounts that differ from its established rates:

Medicare and Medicaid

Inpatient acute care services and outpatient services rendered to Medicare program beneficiaries are paid at prospectively determined rates. These rates vary according to a patient classification system that is based on clinical, diagnostic, and other factors. Inpatient psychiatric services and medical education costs related to Medicare beneficiaries are paid based on a cost reimbursement methodology. UPHS is reimbursed for cost reimbursable items at a tentative rate with final settlement determined after submission of annual cost reports by each hospital and audits thereof by the Medicare fiscal intermediary.

Inpatient and outpatient services rendered to Medicaid program beneficiaries are paid at prospectively determined rates. Additional amounts are allocated to each hospital for training residents and serving a disproportionate indigent population.

Laws and regulations governing the Medicare and Medicaid programs are extremely complex and subject to interpretation. As a result, there is at least a reasonable possibility that recorded estimates will change by a material amount in the near term.

IBC and Commercial

During 2017, UPHS and IBC reached agreement on terms of a five-year agreement. Payments made for inpatient services provided to IBC traditional and managed care subscribers are effected on a per case rate basis for most services. Payment for outpatient services is principally based upon negotiated fee schedules. Hospital and physician rates also provide for annual inflationary increases. In addition, incentives are paid for high performance with regard to clinical outcomes and patient quality. On September 10, 2021, this agreement was extended from June 30, 2022 to June 30, 2025.

During 2015, UPHS and Aetna reached agreement on terms of a five-year agreement. A one-year bridge agreement was initiated effective July 1, 2020, and UPHS and Aetna subsequently extended this agreement through June 30, 2025. The new agreement consolidated all prior existing agreements across all UPHS regions and entities. Further, extensive new value-based payment models were layered on top of the existing fee-for-service framework.

UPHS also has reimbursement agreements with other commercial insurance carriers, health maintenance organizations and preferred provider organizations. The basis for reimbursement under these agreements includes prospectively determined rates per discharge, discounts from established charges and prospectively determined per diem rates.

Charity Care

UPHS provides services to patients who meet certain criteria under its charity care policy without charge or at amounts less than UPHS' established rates. Because UPHS does not pursue collections for these patients, such amounts have been excluded from NPSR. UPHS estimates the costs of providing charity care services based on data derived from a combination of UPHS' cost accounting system and the ratio of costs to charges. Of the Total expenses reported above by UPHS, an estimated $37,665,000 and $31,336,000 were incurred as a result of providing services to charity patients for the years ended June 30, 2023 and 2022, respectively.

Medical Professional Liability Claims

The University is insured for medical professional liability claims through the combination of the Medical Care Availability and Reduction of Error Fund (Mcare), various commercial insurance companies and risk retention programs.

Mcare levies health care provider surcharges, as a percentage of the Pennsylvania Joint Underwriters Association rates for basic coverage, to pay claims and pay administrative expenses of Mcare participants. These surcharges are recognized as expenses in the period incurred. Mcare operates on a pay-as-you-go basis and no provision has been made for any future Mcare assessments in the accompanying financial statements, as the University's portion of the unfunded Mcare liability cannot be estimated.

Anticipated insurance recoveries and estimated liabilities for medical malpractice claims or similar contingent liabilities are presented separately on the Consolidated Statements of Financial Position in Accounts receivable, net and Accrued expenses and other liabilities, respectively. The University accrues for estimated risks arising from both asserted and unasserted medical professional liability claims. The estimate of the gross liability and corresponding receivable for unasserted claims arising from unreported incidents is based on analysis of historical claims data by an independent actuary, which is recorded utilizing a 2.25% discount rate as of June 30, 2023 and 2022. The gross liability recorded under this program is $866,118,000 and $797,620,000 at June 30, 2023 and 2022, respectively, with a corresponding receivable of $200,145,000 and $119,795,000 at June 30, 2023 and 2022, respectively.

3. ACCOUNTS RECEIVABLE

Accounts receivable are reported at their net realizable value. The major components of receivables, net of allowances for doubtful accounts of $34,878,000 and $31,546,000 at June 30, 2023 and 2022, respectively, are as follows (in thousands):

	2023	2022
Patient	$ 1,028,058	$ 1,012,942
Intellectual property	71,054	350,346
Sponsored research	208,431	175,259
Malpractice	200,145	119,795
Trade	62,740	66,726
Student	25,383	33,973
Other	220,653	165,986
TOTAL ACCOUNTS RECEIVABLE, NET	**$ 1,816,464**	**$ 1,925,027**

4. LOANS RECEIVABLE

Loans receivable, and related allowances for doubtful accounts, consist of the following at June 30, 2023 and 2022 (in thousands):

2023

	Receivable	Allowance	Net
Student Loans:			
Federally-sponsored	$ 28,472		$ 28,472
Other	10,748	$ 2,434	8,314
Total Student loans	$ 39,220	$ 2,434	$ 36,786
Other	16,710	474	16,236
TOTAL	**$ 55,930**	**$ 2,908**	**$ 53,022**

2022

		Receivable		Allowance		Net
Student Loans:						
Federally-sponsored	$	35,478			$	35,478
Other		11,860	$	2,897		8,963
Total Student loans	$	47,338	$	2,897	$	44,441
Other		15,787		419		15,368
TOTAL	**$**	**63,125**	**$**	**3,316**	**$**	**59,809**

Loans receivable primarily consists of student loans. Student loans include federally-sponsored student loans and donor-restricted student loans with mandated interest rates and repayment terms. The federally-sponsored student loans represent amounts due from current and former students under various Federal Government funded loan programs offered to graduate and undergraduate students. Loans disbursed under these programs are able to be assigned to the Federal Government upon default by the borrower; therefore, no related allowance is considered necessary. Funding received under these programs is ultimately refundable to the Federal Government in the event the University no longer participates and accordingly is reported as a liability in Federal student loan advances in the Consolidated Statements of Financial Position. Determination of the fair value of student loans receivable is not practicable.

Loans receivable are reported at their net realizable value. The University regularly assesses the adequacy of the allowances for expected credit losses of its loans by performing ongoing evaluations, including such factors as aging, differing economic risks associated with each loan category, financial condition of specific borrowers, economic environment in which the borrowers operate, level of delinquent loans, value of collateral and existence of guarantees or indemnifications.

5. CONTRIBUTIONS RECEIVABLE

A summary of contributions receivable at June 30, 2023 and 2022, is as follows (in thousands):

		2023		2022
Unconditional promises expected to be collected in:				
Less than one year	$	166,125	$	192,660
One year to five years		265,356		282,350
Over five years		101,064		126,151
		532,545		601,161
Less: Discount		(59,402)		(57,500)
Less: Allowances for doubtful amounts		(25,730)		(29,873)
TOTAL CONTRIBUTIONS RECEIVABLE, NET	**$**	**447,413**	**$**	**513,788**

At June 30, 2023 and 2022, the University has outstanding unrecorded conditional promises to give, including non-legally binding bequests, of $542,287,000 and $516,618,000, respectively. When conditional promises to give become unconditional or non-legally binding bequests cash payments are received, they are recorded and are generally restricted for operations, endowment and capital projects as stipulated by the donors.

6. INVESTMENTS, AT FAIR VALUE

A summary of investments, including the AIF, as of June 30, 2023 and 2022, categorized in accordance with the fair value hierarchy, is as follows (in thousands):

2023	Level 1	Level 2	Level 3	Investments at NAV	Total
Short-term:	$ 980,619				$ 980,619
Equity:					
US equities	560,700			$ 1,735,579	2,296,279
International equities	394,339			1,297,292	1,691,631
Emerging market equities				1,398,031	1,398,031
Total Equity	955,039			4,430,902	5,385,941
Debt:					
US treasuries	1,483,760	$ 3,173			1,486,933
Corporate bonds	34,782	14,545			49,327
Total Debt	1,518,542	17,718			1,536,260
Split-interest agreements	83,249		$ 366,820		450,069
Absolute return				4,275,853	4,275,853
Real assets	85	59		2,603,378	2,603,522
Private equity			23,080	7,829,756	7,852,836
Derivative instruments		2,784			2,784
Other			2,652		2,652
TOTAL INVESTMENTS, AT FAIR VALUE	**$ 3,537,534**	**$ 20,561**	**$ 392,552**	**$ 19,139,889**	**$ 23,090,536**

2022	Level 1	Level 2	Level 3	Investments at NAV	Total
Short-term:	$ 1,325,507				$ 1,325,507
Equity:					
US equities	647,907			$ 1,265,830	1,913,737
International equities	183,787			1,153,652	1,337,439
Emerging market equities				1,457,588	1,457,588
Total Equity	831,694			3,877,070	4,708,764
Debt:					
US treasuries	822,001	$ 37,217			859,218
Corporate bonds	101,929	150,064			251,993
Total Debt	923,930	187,281			1,111,211
Split-interest agreements	84,635		$ 350,812		435,447
Absolute return				4,332,605	4,332,605
Real assets	148,845	59	3,547	2,469,399	2,621,850
Private equity			20,234	7,891,341	7,911,575
Derivative instruments		34,680			34,680
Other			2,644		2,644
TOTAL INVESTMENTS, AT FAIR VALUE	**$ 3,314,611**	**$ 222,020**	**$ 377,237**	**$ 18,570,415**	**$ 22,484,283**

Included in Short-term investments is $15,196,000 and $24,380,000 of amounts held by trustees under indenture and escrow agreements at June 30, 2023 and 2022, respectively.

At June 30, 2023 and 2022, Short-term investments include $23,091,000 and $50,264,000, respectively, of outstanding receivables from trading activities. At June 30, 2023 and 2022, Short-term investments also include $27,333,000 and $23,803,000, respectively, of outstanding payables from trading activities.

Liabilities related to equity short positions of $957,869,000 and $492,721,000 at June 30, 2023 and 2022, respectively, are reported in Accrued expenses and other liabilities on the Consolidated Statements of Financial Position. These liabilities are valued using observable market data and are categorized as Level 1 based on quoted market prices in active markets.

Split-interest agreement investments included in Level 1 above are readily marketable assets invested by the University separately from the AIF where the University serves as trustee. These amounts include assets related to the Academic Component charitable gift annuities totaling $42,477,000 and $41,332,000 at June 30, 2023 and 2022, respectively. Included in these split-interest agreement investments are amounts held to meet legally mandated annuity reserves of $24,306,000 and $25,853,000 as of June 30, 2023 and 2022, respectively, as required by the laws of the following states where certain individual donors reside: California, Maryland, New Jersey and New York. Level 3 split-interest agreement investments are managed and invested outside of the University by external trustees.

A summary of Level 3 assets included in split-interest agreement investments, where the University is not trustee, measured at fair value, as of June 30, 2023 and 2022 is as follows (in thousands):

	2023	2022
Charitable remainder trusts	$ 16,553	$ 18,197
Charitable lead trusts	4,119	4,266
Perpetual trusts	346,148	328,349
Total	**$ 366,820**	**$ 350,812**

Changes to the reported amounts of split-interest agreement investments measured at fair value using unobservable (Level 3) inputs as of June 30, 2023 and 2022 are as follows (in thousands):

2023	**Charitable Remainder Trusts**	**Charitable Lead Trusts**	**Perpetual Trusts**	**Total**
June 30, 2022	$ 18,197	$ 4,266	$ 328,349	$ 350,812
Net realized gains (losses)			(2,380)	(2,380)
Net unrealized gains (losses)	(1,276)	(147)	22,206	20,783
Acquisitions			3,630	3,630
Liquidations	(368)		(5,657)	(6,025)
June 30, 2023	$ 16,553	$ 4,119	$ 346,148	$ 366,820

2022	**Charitable Remainder Trusts**	**Charitable Lead Trusts**	**Perpetual Trusts**	**Total**
June 30, 2021	$ 18,874	$ 6,523	$ 370,297	$ 395,694
Net realized gains (losses)			9,830	9,830
Net unrealized gains (losses)	730	(1,931)	(53,298)	(54,499)
Acquisitions			1,520	1,520
Liquidations	(1,407)	(326)		(1,733)
June 30, 2022	$ 18,197	$ 4,266	$ 328,349	$ 350,812

The following tables set forth the fair value, related gains (losses) and notional amounts of the University's derivative instruments by contract type as of June 30, 2023 and 2022 (in thousands):

2023	**Notional Amount**	**Gross Derivative Assets**	**Gross Derivative Liabilities**	**Derivative Gains (Losses)**
Foreign currency contracts	$ 261,012		$ 25,186	$ (15,362)
Futures contracts				(9,497)
Options contracts	149,044	$ 2,784	648	453
Total	**$ 410,056**	**$ 2,784**	**$ 25,834**	**$ (24,406)**

2022	**Notional Amount**	**Gross Derivative Assets**	**Gross Derivative Liabilities**	**Derivative Gains (Losses)**
Foreign currency contracts	$ 145,227		$ 13,948	$ (24,855)
Futures contracts	(529,474)	$ 30,032		75,133
Options contracts	153,941	4,648	446	(533)
Total	**$ (230,306)**	**$ 34,680**	**$ 14,394**	**$ 49,745**

The notional amount is representative of the volume and activity of the respective derivative type during the years ended June 30, 2023 and 2022.

Gross derivative assets and liabilities are shown on the Consolidated Statements of Financial Position in Investments, at fair value and Accrued expenses and other liabilities, respectively. Derivative gains (losses) are shown in Return on investments, net on the Consolidated Statements of Activities, in the appropriate net asset classification.

Details on the fair value, remaining estimated life, outstanding commitments, current redemption terms and restrictions by strategy and type of investment (excluding Split-interest agreements, Derivative instruments, and Other investments) are provided below (in thousands):

Strategy	Fair Value at June 30, 2023	Fair Value at June 30, 2022	Outstanding Commitments	Redemption Terms	Redemption Restrictions
Short-term	$ 980,619	$ 1,325,507		Daily	None
Equity:					
Managed accounts	729,498	650,227		Daily and semi-annually with varying notice periods	None
Mutual funds	225,542	181,468		Daily	None
Private funds (1)	4,430,901	3,877,069	$ 55,892	Weekly to annually with varying notice periods	Lock-up provisions ranging from 0 to 5 years and side pocket investments (2)
Total Equity	**5,385,941**	**4,708,764**	55,892		
Debt:					
Managed accounts	1,536,260	1,111,211		Daily	None
Total Debt	**1,536,260**	**1,111,211**			
Absolute return	**4,275,853**	**4,332,605**	313,073	Range from monthly to annually and close-ended funds not available for redemption	Lock-up provisions ranging from 0 to 5 years with earlier redemptions subject to redemption fee, close-ended funds not available for redemption, and side pocket investments (2)
Private equity	**7,852,836**	**7,911,575**	3,328,468	Close-ended funds not available for redemption	Close-ended funds not available for redemption
Real assets:					
Managed accounts	-	152,392		Daily	None
Private funds (1)	2,603,522	2,469,458	1,298,306	Close-ended funds not available for redemption	Close-ended funds not available for redemption
Total Real assets	**2,603,522**	**2,621,850**	1,298,306		
Total	**$ 22,635,031**	**$ 22,011,512**	$ 4,995,739		

(1) Private funds consist of close-ended and open-ended funds generally in the form of limited partnerships. Close-ended funds have varying remaining fund terms between 1 to 16 years.

(2) Side pocket investments represent investments designated by a manager that are not available for liquidity in an otherwise liquid fund vehicle.

Invested in the AIF with an aggregate fair value of $211,464,000 and $217,928,000 at June 30, 2023 and 2022, respectively, is a perpetual trust managed by an external trustee who has delegated investment decisions to the University. The University invests the assets of this trust in accordance with its endowment policy.

The University has made investments in various long-lived partnerships and, in other cases, has entered into contractual agreements that may limit its ability to initiate redemptions due to notice periods, lock-ups and gates. The University has also made commitments to various limited partnerships. The University expects these funds to be called over the next 5 years. The total amount of unfunded commitments is $4,995,739,000 which represents 24.5% of the AIF value as of June 30, 2023.

A summary of the University's total investment return, net of external and direct internal investment expenses, for the years ended June 30, 2023 and 2022 is presented below (in thousands):

	2023	2022
AIF investment income	$ 94,743	$ 146,425
AIF realized and unrealized gains (losses)	174,201	(99,940)
Total return on AIF	268,944	46,485
Other investment gains (losses)	95,012	(216,419)
Total return on investments, net	**$ 363,956**	**$ (169,934)**

7. ENDOWMENT

The composition and changes to the amount of the University's endowment at June 30, 2023 are as follows (in thousands):

	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds		$ 9,918,510	$ 9,918,510
Quasi-endowment funds	$ 11,044,431		11,044,431
June 30, 2023	**$ 11,044,431**	**$ 9,918,510**	**$ 20,962,941**

	Without Donor Restrictions	With Donor Restrictions	Total
Net assets, June 30, 2022	$ 10,672,892	$ 10,051,459	$ 20,724,351
Investment return	120,222	130,346	250,568
New gifts	18,442	201,429	219,871
Allocation of endowment assets for expenditure	(975,606)		(975,606)
Other investment allocation	(8,730)		(8,730)
Transfers to create board designated funds	721,087		721,087
Donor-imposed income reinvestments		31,660	31,660
Other transfers	32,377	(32,637)	(260)
Released from restriction	463,747	(463,747)	-
Net assets, June 30, 2023	**$ 11,044,431**	**$ 9,918,510**	**$ 20,962,941**

The composition and changes to the amount of the University's endowment at June 30, 2022 are as follows (in thousands):

	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds		$ 10,051,459	$ 10,051,459
Quasi-endowment funds	$ 10,672,892		10,672,892
June 30, 2022	**$ 10,672,892**	**$ 10,051,459**	**$ 20,724,351**

	Without Donor Restrictions	With Donor Restrictions	Total
Net assets, June 30, 2021	$ 10,337,266	$ 10,186,280	$ 20,523,546
Investment return	(26,114)	(57,799)	(83,913)
New gifts	9,498	319,291	328,789
Allocation of endowment assets for expenditure	(876,619)		(876,619)
Other investment allocation	(10,097)		(10,097)
Transfers to create board designated funds	810,005		810,005
Donor-imposed income reinvestments		26,629	26,629
Other transfers	41,567	(35,556)	6,011
Released from restriction	387,386	(387,386)	-
Net assets, June 30, 2022	**$ 10,672,892**	**$ 10,051,459**	**$ 20,724,351**

At June 30, 2023 and 2022, the aggregate amount of funds reported in Net assets with donor restrictions for which the fair value was below historic value was $12,456,000 and $5,636,000, respectively.

8. PROPERTY, PLANT AND EQUIPMENT, NET

The components of PPE at June 30, 2023 and 2022 are as follows (in thousands):

	Estimated Useful Life in years	2023	2022
Land and land improvements	N/A to 20	$ 450,931	$ 447,993
Buildings and fixed equipment	5 to 50	13,526,265	13,255,569
Moveable equipment and other	4 to 20	2,550,102	2,543,589
Construction-in-progress		690,888	420,071
		17,218,186	16,667,222
Less: Accumulated depreciation		(7,755,128)	(7,276,098)
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET		**$ 9,463,058**	**$ 9,391,124**

The University recorded $648,551,000 and $622,720,000 of depreciation expense for the years ended June 30, 2023 and 2022, respectively.

The University capitalized $14,528,000 and $26,203,000 of interest costs for the years ended June 30, 2023 and 2022, respectively.

9. SPLIT-INTEREST AGREEMENTS

Changes in the value of assets, liabilities and net assets pursuant to split-interest agreements as of June 30, 2023 and 2022 are as follows (in thousands):

2023	Assets	Liabilities	Net Assets
June 30, 2022	$ 435,447	$ (46,408)	$ 389,039
New contributions	5,462	(2,513)	2,949
Investment income	1,645	(1,169)	476
Realized and unrealized gain, net	22,611		22,611
Payments and settlements	(15,096)	6,666	(8,430)
Actuarial adjustment		(1)	(1)
Net change	**14,622**	**2,983**	**17,605**
June 30, 2023	$ 450,069	$ (43,425)	$ 406,644

2022	Assets	Liabilities	Net Assets
June 30, 2021	$ 498,822	$ (53,017)	$ 445,805
New contributions	2,705	(1,903)	802
Investment income	1,957	(1,611)	346
Realized and unrealized gain, net	(57,840)		(57,840)
Payments and settlements	(10,197)	8,374	(1,823)
Actuarial adjustment		1,749	1,749
Net change	**(63,375)**	**6,609**	**(56,766)**
June 30, 2022	$ 435,447	$ (46,408)	$ 389,039

10. CONTINGENCIES, GUARANTEES, AND COMMITMENTS

The University offers various loan programs for students and families to pay tuition, fees and other costs. Certain loans issued by private lending institutions are guaranteed by the University totaling $23,557,000 and $17,101,000 at June 30, 2023 and 2022, respectively. Upon default by the borrower, the University is required to pay all or a portion of the outstanding loan balance. The University recognized a liability totaling $3,209,000 and $2,648,000 at June 30, 2023 and 2022, respectively, to cover both the fair value of the guarantee and any expected defaults in the portfolio of guaranteed loans.

Various lawsuits, claims and other contingent liabilities arise in the ordinary course of the University's education and health care activities, including specific matters described below. While it is not possible to determine the ultimate outcome of any such actions, the University believes that the outcome will not have a material adverse effect on the University's financial position.

UPHS is involved in a legal matter whereby a jury awarded $182,738,000 to a plaintiff in a medical malpractice case against UPHS. UPHS is appealing the verdict.

The University is currently involved in various projects that have resulted in capital and property acquisition commitments from the University. As of June 30, 2023, approximately $695,503,000 has been committed by the University.

11. PENSION AND OTHER POSTRETIREMENT BENEFITS COSTS

Retirement benefits are principally provided to employees through contributory defined contribution plans. The Academic Component's policy with respect to its contribution is to provide up to 10% of eligible employees' salaries, while the UPHS contribution can be up to 6.5%. The University's contributions to these plans amounted to $315,728,000 and $266,373,000 as of June 30, 2023 and 2022, respectively.

The University also has non-contributory defined benefit pension plans. Benefits under the plans generally are based on the employee's years of service and compensation during the years preceding retirement. Contributions to the plans are made in amounts necessary to at least satisfy the minimum required contributions as specified in the Internal Revenue Service Code and related regulations. The Academic Component's plan was frozen to new full-time entrants effective July 1, 2000 and part-time entrants effective July 1, 2018. UPHS' primary plan was frozen to new entrants effective July 1, 2010; the benefit accruals for all participants of the LGH and PHCS plans were frozen effective June 30, 2013 and December 31, 2011, respectively. On December 31, 2022, the LGH and PHCS plans were merged into the UPHS plan with no changes to existing benefits and coverages.

The University also has faculty retirement incentive plans which are included in Other retirement programs shown below. The net liability under these plans is $20,683,000 and $55,413,000 as of June 30, 2023 and 2022, respectively, with the decrease primarily attributable to the University's offering of a special one-time faculty retirement plan during the year ended June 30, 2021.

Additionally, the University provides certain healthcare and life insurance benefits (OPEB) for retired employees. Only a limited number of employees may become eligible for such benefits if they reach retirement age while working for the University. These and similar benefits for active and certain retired employees are provided through insurance contracts.

The University uses a measurement date of June 30 for its defined benefit pension and OPEB plans.

Change in Plan Assets/Obligation and Funded Status

The funded status of the plans is measured as the difference between the plan assets at fair value and the projected benefit obligation (PBO) for Pension Benefits or accumulated postretirement benefit obligation (APBO) for Other Postretirement Benefits. The resulting net liability is recorded in Accrued retirement benefits on the Statements of Financial Position. The following shows changes in the benefit obligation, plan assets and funded status for the years ended June 30, 2023 and 2022 (in thousands):

2023	Pension Benefits	Other Postretirement Benefits	Total
Change in Benefit Obligation:			
Benefit obligation, beginning of year (PBO/APBO)	$ 3,380,668	$ 842,820	$ 4,223,488
Service cost	51,435	26,954	78,389
Interest cost	160,960	41,039	201,999
Plan participants' contributions	158	10,986	11,144
Net actuarial (gain)/loss	(330,086)	(51,873)	(381,959)
Benefits paid	(127,611)	(35,078)	(162,689)
Benefit obligation, end of year (PBO/APBO)	$ 3,135,524	$ 834,848	$ 3,970,372
Change in Plan Assets:			
Fair value of plan assets, beginning of year	$ 3,238,768	$ 712,371	$ 3,951,139
University contributions	17,089	31,852	48,941
Plan participants' contributions	158	10,986	11,144
Actual return on plan assets	(11,011)	35,799	24,788
Benefits paid	(127,611)	(35,078)	(162,689)
Fair value of plan assets, end of year	$ 3,117,393	$ 755,930	$ 3,873,323
Funded status, end of year	**$ 18,131**	**$ 78,918**	**$ 97,049**
Other retirement programs			145,328
			242,377
Plan with fair value of plan assets in excess of PBO/APBO*			48,292
ACCRUED RETIREMENT BENEFITS			**$ 290,669**

* Included in Other assets on the Consolidated Statements of Financial Position

2022		Pension Benefits		Other Postretirement Benefits		Total
Change in Benefit Obligation:						
Benefit obligation, beginning of year (PBO/APBO)	$	4,177,955	$	1,096,142	$	5,274,097
Service cost		76,716		43,127		119,843
Interest cost		124,362		35,617		159,979
Plan participants' contributions		156		11,186		11,342
Net actuarial (gain)/loss		(880,613)		(307,658)		(1,188,271)
Benefits paid		(117,908)		(35,594)		(153,502)
Benefit obligation, end of year (PBO/APBO)	$	3,380,668	$	842,820	$	4,223,488
Change in Plan Assets:						
Fair value of plan assets, beginning of year	$	3,486,533	$	717,335	$	4,203,868
University contributions		35,045		32,056		67,101
Plan participants' contributions		156		11,186		11,342
Actual return on plan assets		(165,058)		(12,612)		(177,670)
Benefits paid		(117,908)		(35,594)		(153,502)
Fair value of plan assets, end of year	$	3,238,768	$	712,371	$	3,951,139
Funded status, end of year	**$**	**141,900**	**$**	**130,449**	**$**	**272,349**
Other retirement programs						170,889
						443,238
Plan with fair value of plan assets in excess of PBO*						23,367
ACCRUED RETIREMENT BENEFITS					**$**	**466,605**

* Included in Other assets on the Consolidated Statements of Financial Position

The Accumulated Benefit Obligation for the Pension Benefits was $2,952,298,000 and $3,137,299,000 at June 30, 2023 and 2022, respectively.

For the year ended June 30, 2023, the primary drivers of the net actuarial gains in the Benefit Obligations were increases in the weighted average discount rates from 4.74% to 5.48% for Pension and from 4.96% to 5.59% for Other Postretirement. For the year ended June 30, 2022, the primary drivers of the net actuarial gains in the Benefit Obligations were increases in the weighted average discount rates from 3.04% to 4.74% for Pension and from 3.29% to 4.96% for Other Postretirement.

Net Periodic Benefit Cost

The components of net periodic benefit cost for pension benefits and other postretirement benefits are detailed below (in thousands). In the Consolidated Statements of Activities, service cost is reported as Compensation and benefits while the remaining components of net periodic benefit cost are reported as Pension, OPEB and other, net.

2023		Pension Benefits		Other Postretirement Benefits		Total
Service cost	$	51,435	$	26,954	$	78,389
Interest cost		160,960		41,039		201,999
Expected return on plan assets		(183,109)		(53,386)		(236,495)
Amortization of:						
Net prior service cost/(credit)				(325)		(325)
Net losses		619		(6,219)		(5,600)
Net periodic benefit cost	**$**	**29,905**	**$**	**8,063**	**$**	**37,968**

2022		Pension Benefits		Other Postretirement Benefits		Total
Service cost	$	76,716	$	43,127	$	119,843
Interest cost		124,362		35,617		159,979
Expected return on plan assets		(208,682)		(53,884)		(262,566)
Amortization of:						
Net prior service cost/(credit)				(339)		(339)
Net losses		22,643		311		22,954
Net periodic benefit cost	**$**	**15,039**	**$**	**24,832**	**$**	**39,871**

Net Assets Without Donor Restrictions

The University recorded the following year-end valuation adjustments to its Pension and Other Postretirement Benefit Plans in Pension, OPEB and other, net in the Consolidated Statements of Activities (in thousands):

2023		Pension Benefits		Other Postretirement Benefits		Total
Net Assets Without Donor Restrictions:						
Net actuarial (gain)/loss	$	(14,769)	$	(200,261)	$	(215,030)
Net prior service cost/(credit)				(1,322)		(1,322)
Total	$	(14,769)	$	(201,583)	$	(216,352)
Adjustment to net assets without donor restrictions (gain)/loss	**$**	**(136,584)**	**$**	**(27,656)**	**$**	**(164,240)**

2022		Pension Benefits		Other Postretirement Benefits		Total
Net Assets Without Donor Restrictions:						
Net actuarial (gain)/loss	$	121,815	$	(172,280)	$	(50,465)
Net prior service cost/(credit)				(1,647)		(1,647)
Total	$	121,815	$	(173,927)	$	(52,112)
Adjustment to net assets without donor restrictions (gain)/loss	**$**	**(529,518)**	**$**	**(241,137)**	**$**	**(770,655)**

Actuarial Assumptions

The expected long-term rate of return on plan assets is management's best estimate of the average investment return expected to be received on the assets invested in the plan over the benefit period. The expected long-term rate of return on plan assets has been established by considering historical and future expected returns of the asset classes invested in by the pension trust, and the allocation strategy currently in place among those classes.

	Pension Benefits		Other Postretirement Benefits	
Weighted-Average Assumptions Used to Determine Benefit Obligations at Year End	**2023**	**2022**	**2023**	**2022**
Discount rate	5.48%	4.74%	5.59%	4.96%
Salary increase	3.19%	3.17%	N/A	N/A
Weighted-Average Assumptions Used to Determine Net Periodic Benefit Cost				
Discount rate	5.07%	3.12%	4.98%	3.32%
Expected long-term return on plan assets	6.85%	6.77%	7.50%	7.50%
Salary increase	3.19%	3.21%	N/A	N/A
Assumed Health Care Cost Trend Rates				
Initial trend rate	N/A	N/A	5.95%	6.20%
Ultimate trend rate	N/A	N/A	4.69%	4.70%
Fiscal year end that ultimate trend rate is reached	N/A	N/A	2046	2046

Expected Contributions

The University expects to contribute $19,015,000 and $31,737,000 for pension benefits and other postretirement benefits, respectively, during the fiscal year ending June 30, 2024.

Expected Benefits Payments (in thousands):

Expected benefit payments for the year ending:	Pension Benefits	Other Postretirement Benefits before Medicare Part D Subsidy	Medicare Part D Subsidy
June 30, 2024	$ 159,953	$ 33,855	$ 75
June 30, 2025	164,289	35,796	78
June 30, 2026	172,434	37,830	81
June 30, 2027	180,362	40,028	83
June 30, 2028	188,303	42,096	84
June 30, 2029 to June 30, 2033	1,042,993	241,978	422

Plan Assets and Allocations

The principal investment objectives for the pension and other postretirement benefits plans are to ensure the availability of funds to pay pension benefits as they become due under a broad range of future economic scenarios, to maximize long-term investment returns with an acceptable level of risk based on the pension obligations, and to invest the pension trust in a diversified manner.

The University's Office of Investments is responsible for the day-to-day management of the majority of the investments of the pension and other postretirement benefits. The investments are made in accordance with policies set out by the Investment Board which has been appointed by the Trustees. The pension and other postretirement benefit investments are similar in nature to those investments discussed in Notes 1 and 6 – Investments, at Fair Value. However, the actual allocations to specific investments within each asset class may vary due to certain restrictions imposed by investment managers and ERISA regulations.

A summary of plan assets, measured at fair value, as of June 30, 2023 and 2022, is as follows (in thousands):

Pension Benefits:

2023	Level 1	Level 2	Level 3	Investments at NAV	Total
Assets:					
Short-term	$ 118,081				$ 118,081
Equity:					
US equities	44,344			$ 136,200	180,544
International equities	11,611			157,063	168,674
Emerging market equities	871			31,794	32,665
Debt:					
US treasuries	1,321,335				1,321,335
Corporate bonds	16,597	$ 23			16,620
Absolute return				596,572	596,572
Real assets	16,784			171,690	188,474
Private equity				507,400	507,400
Total assets	$ 1,529,623	$ 23	$ -	$ 1,600,719	$ 3,130,365
Liabilities:					
Derivative instruments		$ 12,972			$ 12,972
Total liabilities	$ -	$ 12,972	$ -	$ -	$ 12,972
Fair value of plan assets, end of year	**$ 1,529,623**	**$ (12,949)**	**$ -**	**$ 1,600,719**	**$ 3,117,393**

2022	Level 1	Level 2	Level 3	Investments at NAV	Total
Assets:					
Short-term	$ 267,580				$ 267,580
Equity:					
US equities	43,294			$ 133,219	176,513
International equities	28,495			196,037	224,532
Emerging market equities	901			166,740	167,641
Debt:					
US treasuries	893,167				893,167
Corporate bonds	106,109	$ 21			106,130
Absolute return				662,583	662,583
Real assets	47,628		$ 1,419	170,741	219,788
Private equity				520,834	520,834
Fair value of plan assets, end of year	**$ 1,387,174**	**$ 21**	**$ 1,419**	**$ 1,850,154**	**$ 3,238,768**

Other Postretirement Benefits:

2023	Level 1	Level 2	Level 3	Investments at NAV	Total
Assets:					
Short-term	$ 34,995				$ 34,995
Equity:					
US equities	6,383			$ 57,639	64,022
International equities				104,523	104,523
Emerging market equities				47,795	47,795
Debt:					
US treasuries	17,182				17,182
Corporate bonds					
Absolute return				230,496	230,496
Real assets	27,378			75,690	103,068
Private equity				153,905	153,905
Total assets	$ 85,938	$ -	$ -	$ 670,048	$ 755,986
Liabilities:					
Derivative instruments		$ 56			$ 56
Total liabilities	$ -	$ 56	$ -	$ -	$ 56
Fair value of plan assets, end of year	**$ 85,938**	**$ (56)**	**$ -**	**$ 670,048**	**$ 755,930**

2022	Level 1	Level 2	Level 3	Investments at NAV	Total
Assets:					
Short-term	$ 41,712				$ 41,712
Equity:					
US equities	6,235			$ 52,670	58,905
International equities				82,149	82,149
Emerging market equities				49,845	49,845
Debt:					
US treasuries	17,436				17,436
Corporate bonds					-
Absolute return				213,457	213,457
Real assets	26,751		$ 455	71,086	98,292
Private equity				150,704	150,704
Total assets	$ 92,134	$ -	$ 455	$ 619,911	$ 712,500
Liabilities:					
Derivative instruments		$ 129			$ 129
Total liabilities	$ -	$ 129	$ -	$ -	$ 129
Fair value of plan assets, end of year	**$ 92,134**	**$ (129)**	**$ 455**	**$ 619,911**	**$ 712,371**

As of June 30, 2023, the University has unfunded commitments to limited partnerships totaling $442,619,000, which are expected to be called over the next 5 years.

Plan asset allocations by category are as follows:

2023	Pension Benefits		Other Postretirement Benefits	
Allocation of Plan Assets	**Target**	**Actual**	**Target**	**Actual**
Short-term	0.0%	3.4%	0.0%	4.6%
Equity:				
US equities	5.1%	5.8%	9.0%	8.5%
International equities	5.8%	5.4%	12.0%	13.8%
Emerging markets equities	5.7%	1.1%	9.0%	6.3%
Debt:				
US treasuries	34.0%	42.4%	5.0%	2.3%
Corporate bonds	0.0%	0.5%	0.0%	0.0%
Absolute return	20.5%	19.1%	29.0%	30.5%
Real assets	9.3%	6.0%	16.0%	13.6%
Private equity	19.6%	16.3%	20.0%	20.4%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

12. DEBT OBLIGATIONS

Debt obligations at June 30, 2023 and 2022 are as follows (in thousands):

	Final Maturity	Effective Interest Rate at June 30, 2023	2023	2022
Academic Component:				
Fixed rate debt obligations:				
The Trustees of the University of Pennsylvania				
Series A of 2020 Taxable Bonds	10/2050	2.40%	$ 300,000	$ 300,000
Series A of 2019 revenue bonds	02/2119	3.61%	300,000	300,000
Series 2012 Taxable Bonds	09/2112	4.67%	300,000	300,000
Pennsylvania Higher Educational Facilities Authority (PHEFA)				
Series B of 2019 revenue bonds	08/2045	2.40% - 2.97%	213,585	213,585
Series A of 2018 revenue bonds	02/2048	2.28% - 4.70%	172,180	176,410
Series A of 2017 revenue bonds	08/2046	2.26% - 3.72%	178,395	178,395
Series A of 2016 revenue bonds	08/2041	1.54% - 2.93%	117,465	118,360
Series A of 2015 revenue bonds	10/2045	1.99% - 2.63%	33,665	38,775
Series B of 2015 revenue bonds	10/2038	1.99% - 3.38%	132,055	145,110
Series C of 2015 revenue bonds	10/2035	3.680%	8,020	8,020
Other loans	05/2031	3.00% - 5.53%	19,225	19,659
Variable rate debt obligation:				
Washington County Authority Series of 2004	07/2034	3.88%	40,700	43,700
Total Academic Component outstanding bonds payable			1,815,290	1,842,014
Unamortized issuance costs, premiums and discounts, net			46,882	52,562
Total Academic Component debt obligations			$ 1,862,172	$ 1,894,576
UPHS:				
Fixed rate debt obligations:				
Lancaster County Hospital Authority (LCHA)				
Series A of 2016 revenue bonds	08/2042	1.90% - 3.52%	$ 142,915	$ 147,640
Series B of 2016 revenue bonds	08/2046	1.86% - 3.58%	107,890	119,485
PHEFA				
Series A of 2021 revenue bonds	08/2044	1.61% - 2.11%	79,810	79,810
Series B of 2021 revenue bonds	08/2042	0.82% - 2.70%	109,735	109,735
Series A of 2019 revenue bonds	08/2049	1.67% - 3.22%	534,870	534,870
Series A of 2017 revenue bonds	08/2047	2.60% - 3.68%	400,000	400,000
Series C of 2016 revenue bonds	08/2041	1.43% - 3.08%	124,255	127,800
Series A of 2015 revenue bonds	08/2045	2.22% - 4.00%	194,245	209,870
Series A of 2012 revenue bonds	08/2042		-	8,305
New Jersey Health Care Facilities Financing Authority (NJHCFFA)				
Princeton Healthcare System Series A of 2016	07/2039	2.08% - 3.88%	157,075	162,875
University of Pennsylvania Health System Taxable Note	08/2047	4.01%	200,000	200,000
Lancaster General Hospital 2015 Taxable Note	08/2032	2.25%	60,453	62,518
Mortgages, notes and other	Various	Various	95,500	96,591
Variable rate debt obligations:				
PHEFA Series A of 2008 revenue bonds	01/2038	3.47%	69,995	69,995
NJHCFFA Princeton Healthcare System Series B of 2016	07/2045	4.66%	65,000	65,000
NJHCFFA Princeton Healthcare System Series C of 2016	07/2045	4.61%	20,000	20,000
Total UPHS outstanding bonds payable			2,361,743	2,414,494
Unamortized issuance costs, premiums and discounts, net			169,604	183,158
Total UPHS debt obligations			2,531,347	2,597,652
TOTAL DEBT OBLIGATIONS			**$ 4,393,519**	**$ 4,492,228**

Contractual maturities of debt obligations are as follows (in thousands):

Fiscal Year	Academic Component	UPHS	Total
2024	$ 32,151	$ 66,768	$ 98,919
2025	29,128	64,272	93,400
2026	44,537	67,279	111,816
2027	30,923	69,513	100,436
2028	32,290	65,523	97,813
Thereafter	1,646,261	2,028,388	3,674,649
Total Principal	1,815,290	2,361,743	4,177,033
Unamortized issuance costs, premiums & discounts	46,882	169,604	216,486
TOTAL DEBT OBLIGATIONS	**$ 1,862,172**	**$ 2,531,347**	**$ 4,393,519**

To secure certain self-insured liabilities, the University has letters of credit with various financial institutions totaling $14,268,000 and $12,557,000 at June 30, 2023 and 2022, respectively, of which $4,971,000 and $4,709,000 were issued under a line of credit. The letters of credit have evergreen provisions for automatic renewal. There have been no draws under the letters of credit.

Academic Component

The University has variable rate debt in the amount of $40,700,000 which is subject to optional tender by the holders upon seven days' notice. These bonds are reflected in the table above based on original scheduled maturities. In the event that the University receives notice of any optional tender on its variable rate demand bonds, the purchase price will be repaid from the remarketing of the bonds. However, in the event that the entire remarketing effort were to fail, the University would have the general obligation to purchase the bonds.

On June 14, 2021, the University entered into a new five-year agreement with a financial institution to provide a line of credit in the amount of $100,000,000 for general purposes of the University. The University pays a fee annually on the unused amount of the line of credit. There were no outstanding balances as of June 30, 2023 and 2022.

UPHS

The PHEFA Revenue Bonds, Lancaster County Hospital Authority (LCHA) Revenue Bonds and New Jersey Health Care Facilities Financing Authority (NJHCFFA) Revenue Bonds are secured by master notes issued under the UPHS Master Trust Indenture (MTI). The MTI and related agreements contain certain restrictive covenants which limit the issuance of additional indebtedness, and among other things, require UPHS to meet an annual debt service coverage requirement of "income available for debt service" (excess of revenue over expenses plus depreciation, amortization, interest expense and extraordinary items) at an amount equal to 110% of the annual debt service requirements. If the coverage requirement for a particular year is not met, within six months of the close of that fiscal year, UPHS must retain the services of a consultant to make recommendations to improve the coverage requirement. UPHS must also implement the recommendations of the consultant to the extent that they can be feasibly implemented. UPHS will not be considered to be in default of the provisions of the MTI so long as UPHS has sufficient cash flow to pay total operating expenses and debt service for the fiscal year. In both 2023 and 2022, UPHS met its debt service coverage requirement under the MTI. Additionally, UPHS has pledged its gross revenues to secure its obligation under the MTI.

On August 1, 2022, the University executed an agreement to facilitate the extension of the Lancaster General Hospital ("LGH") 2015 Taxable Note with an aggregate principal amount not to exceed $62,525,000. The LGH 2015

Taxable Note was extended for a ten-year period with a maturity date of August 1, 2032, with a fixed interest rate of 2.25%.

On May 18, 2022, Pennsylvania Higher Educational Facilities Authority (PHEFA) issued Series B of 2021 Refunding Revenue Bonds (PHEFA 2021B bonds), which was a forward delivery, with an aggregate principal amount of $109,735,000. The proceeds were used to fund an escrow which was used to refund $122,275,000 from the PHEFA Series A of 2012 revenue bonds. The refunded bonds were legally defeased and are no longer included among UPHS' reported liabilities. Interest on the PHEFA 2021B bonds is fixed with coupons ranging between 0.82% and 2.70%. As a result of the legal defeasance of debt associated with the issuance of PHEFA 2021B bonds, the University reported a gain on early extinguishment of debt in Pension, OPEB and other, net on the Consolidated Statement of Activities in the amount of $3,398,000 for the year ended June 30, 2022.

UPHS has certain variable rate debt in the amount of $69,995,000 which is subject to optional tender by the holders upon seven days' notice. These bonds are reflected in the debt obligations maturity table above based on original scheduled maturities. In the event that UPHS receives notice of any optional tender on its variable rate demand bonds, the purchase price will be repaid from the remarketing of the bonds. However, in the event that the entire remarketing effort were to fail, UPHS has in place a renewable direct pay letter of credit issued by Bank of America with an original expiration date of April 15, 2023, which has been extended through April 15, 2028. In the event that the letter of credit cannot be drawn upon, UPHS would have the general obligation to purchase the bonds.

UPHS maintains a $100,000,000 line of credit with a maturity date of April 12, 2025 to supplement liquidity and issue letters of credit to cover balances due on construction projects and reinsurance agreements. There were no outstanding balances as of June 30, 2023 and 2022.

Interest Rate Swap Agreements

The University enters into interest rate swap agreements to synthetically modify the interest rate terms of its long-term debt portfolio. These agreements are not entered into for trading or speculative purposes. Fair value of these agreements is determined by obtaining quotes from Goldman Sachs Mitsui Marine Derivative Products, L.P. (GSMMDP) and Merrill Lynch, respectively, which are based on the income approach, using observable market data to discount future net payment streams. Accordingly, the University considers this to be a Level 2 measurement. The quotes provided also represent the amount the University would accept or be required to pay to transfer the agreement to GSMMDP and Merrill Lynch, respectively, or exit price as defined by the Fair Value Measurements standard. The University also takes into account the risk of nonperformance.

The following table summarizes the terms of the University's remaining interest rate swap agreements (in thousands):

	Academic Component	UPHS		
Notional Amounts	$ 99,150	$ 3,140	$ 3,140	$ 19,525
Trade Date	11/6/2007	7/15/2009	1/7/2010	7/28/2006
Maturity Date	7/1/2034	8/15/2023	8/15/2023	7/1/2041
Rates:				
Receive	67% of 1-Month LIBOR	3.184%	2.902%	70% of 1-Month LIBOR
Pay	3.573%	SIFMA Index	SIFMA Index	3.980%

The following table summarizes the fair value of the interest rate swap agreements, not designated as hedging instruments, as of June 30, 2023 and 2022, and the related gains on the interest rate swap agreements, both realized and unrealized, for the years ended June 30, 2023 and 2022 (in thousands):

	Line Item	2023	2022
Consolidated Statements of Financial Position:			
Asset interest rate swaps:			
UPHS	Other assets	$ -	$ 110
Total asset interest rate swaps		**$ -**	**$ 110**
Liability interest rate swaps:			
Academic Component	Accrued expenses and other liabilities	$ 5,172	$ 10,248
UPHS	Accrued expenses and other liabilities	2,246	3,506
Total liability interest rate swaps		**$ 7,418**	**$ 13,754**
Consolidated Statements of Activities:			
Academic Component	Return on investments, net	$ 3,956	$ 7,934
UPHS	Return on investments, net	1,150	2,264
Total		**$ 5,106**	**$ 10,198**

13. NET ASSETS

The major components of net assets at June 30, 2023 and 2022 are as follows (in thousands):

2023	**Without donor restrictions**	**With donor restrictions**	**Total**
General operating	$ 7,722,223	$ 819,419	$ 8,541,642
Sponsored programs	42,320		42,320
Capital		146,938	146,938
Student loans	5,748		5,748
Planned giving agreements		54,281	54,281
Quasi-endowment	11,044,431		11,044,431
Endowment, subject to spending rule		4,774,969	4,774,969
Endowment, held in perpetuity		5,143,541	5,143,541
TOTAL NET ASSETS	**$ 18,814,722**	**$ 10,939,148**	**$ 29,753,870**

2022	**Without donor restrictions**	**With donor restrictions**	**Total**
General operating	$ 7,075,269	$ 744,870	$ 7,820,139
Sponsored programs	53,805		53,805
Capital		216,955	216,955
Student loans	6,246		6,246
Planned giving agreements		53,691	53,691
Quasi-endowment	10,672,892		10,672,892
Endowment, subject to spending rule		5,099,668	5,099,668
Endowment, held in perpetuity		4,951,791	4,951,791
TOTAL NET ASSETS	**$ 17,808,212**	**$ 11,066,975**	**$ 28,875,187**

14. OTHER INCOME

The components of Other income for the years ended June 30, 2023 and 2022, are as follows (in thousands):

	2023	2022
Commercialization of intellectual property*	$ 637,467	$ 1,258,637
UPHS ambulatory pharmacy	868,480	717,287
Government relief funding	21,257	60,387
Other	655,281	595,796
TOTAL OTHER INCOME	**$ 2,182,485**	**$ 2,632,107**

*Net of distributions to external parties

15. LEASES

The University leases research labs and office space under operating leases expiring through December 2043. On the Consolidated Statements of Financial Position, lessees are required to record Right-of-Use assets, representing the right to use the underlying assets for the lease term, and Lease liabilities, representing the obligation to make lease payments arising from the lease based on the present value of lease payments over the lease term. The University has made the following elections: (1) to adopt a package of practical expedients relating to reassessment, (2) to exclude leases with a term of less than one year, and (3) to use an incremental borrowing rate for discounting leases, as applicable. At June 30, 2023 and 2022, Right-of-Use assets recorded in Other assets were $556,028,000 and $489,323,000, respectively, and Lease liabilities recorded in Accrued expenses and other liabilities were $571,002,000 and $503,880,000, respectively. At June 30, 2023, the weighted average remaining lease term was 10.9 years and the weighted average discount rate was 2.8%. At June 30, 2022, the weighted average remaining lease term was 9.2 years and the weighted average discount rate was 2.3%. Rental expense, for the years ended June 30, 2023 and 2022, totaled $153,907,000 and $148,595,000 (including amortizations related to Right-of-Use assets and Lease liabilities of $78,544,000 and $75,758,000), respectively. Rental expense is included in Other operating expenses on the Consolidated Statements of Activities.

Future maturities of total lease liabilities at June 30, 2023 are as follows (in thousands):

Year ending June 30,		
2024	$	83,931
2025		83,620
2026		74,407
2027		63,734
2028		57,033
Thereafter		348,815
Total lease payments	$	711,540
Less imputed interest		(140,538)
Total Future lease payments	**$**	**571,002**

16. FUNCTIONAL CLASSIFICATION OF EXPENDITURES

Expenses for the years ended June 30, 2023 and 2022 are categorized on a functional basis as follows (in thousands):

2023	Instruction, student services & academic support	Hospital & physician practices	Research	Institutional support	Enterprises & independent operations	Total
Compensation and benefits	$ 1,244,495	$ 5,328,699	$ 621,319	$ 307,415	$ 240,786	$ 7,742,714
Depreciation and amortization	94,400	414,521	52,167	21,809	67,354	650,251
Interest on indebtedness	17,158	81,549	26,932	203	13,899	139,741
Other operating expense	650,914	3,910,686	454,109	97,784	210,949	5,324,442
Total operating expense	2,006,967	9,735,455	1,154,527	427,211	532,988	13,857,148
Non-service net periodic benefit cost	(6,499)	(27,818)	(3,242)	(1,605)	(1,257)	(40,421)
Total	**$ 2,000,468**	**$ 9,707,637**	**$ 1,151,285**	**$ 425,606**	**$ 531,731**	**$ 13,816,727**

2022	Instruction, student services & academic support	Hospital & physician practices	Research	Institutional support	Enterprises & independent operations	Total
Compensation and benefits	$ 1,108,535	$ 5,053,976	$ 551,364	$ 279,727	$ 215,684	$ 7,209,286
Depreciation and amortization	96,489	387,958	50,769	21,325	66,916	623,457
Interest on indebtedness	17,387	69,468	26,925	185	14,032	127,997
Other operating expense	594,544	3,528,636	422,024	76,664	186,027	4,807,895
Total operating expense	1,816,955	9,040,038	1,051,082	377,901	482,659	12,768,635
Non-service net periodic benefit cost	(12,301)	(56,060)	(6,118)	(3,103)	(2,391)	(79,973)
Total	**$ 1,804,654**	**$ 8,983,978**	**$ 1,044,964**	**$ 374,798**	**$ 480,268**	**$ 12,688,662**

Operation and maintenance of PPE and depreciation are allocated to functional classifications based on square footage. Interest expense is generally allocated to functional classifications of the activity that directly benefited from the proceeds of the debt. Non-service net periodic benefit cost is allocated to functional classifications based on compensation and benefits.

17. LIQUIDITY AND AVAILABILITY

As of June 30, 2023 and 2022, respectively, financial assets and liquidity resources available within one year for general expenditure, such as operating expenses, scheduled principal payments on debt and capital construction costs not financed with debt, were as follows (in thousands):

	2023	2022
Financial assets:		
Cash & cash equivalents	$ 3,217,099	$ 3,163,942
Receivables, net	1,620,356	1,809,271
Pledge payments available for operations	77,478	79,634
Investments	7,637,515	7,657,637
Total financial assets available within one year	**12,552,448**	**12,710,484**
Liquidity resources:		
Bank lines of credit	195,029	195,291
Total financial assets and liquidity resources available within one year	**$ 12,747,477**	**$ 12,905,775**

The University's cash flows have seasonal variations during the year attributable to tuition billing, patient service reimbursement and a concentration of contributions received at calendar and fiscal year-end. To manage liquidity, the University maintains lines of credit with several banks that are drawn upon as needed during the year to manage cash flows. Management has the discretion to utilize the full amount of quasi-endowment funds for general expenditures.

18. SUBSEQUENT EVENTS

The University has evaluated subsequent events for the period from June 30, 2023 through September 28, 2023, the date the consolidated financial statements were issued.