

**Carnegie Mellon University
Uniform Guidance Reports
Year Ended June 30, 2021
(With Independent Auditors' Reports Thereon)**

Carnegie Mellon University

Index

June 30, 2021 and 2020

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Independent Auditors' Report

The Board of Trustees
Carnegie Mellon University:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Carnegie Mellon University (the University), which comprise the consolidated statement of financial position as of June 30, 2021, and the related consolidated statements of activities, and cash flows for the year then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

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

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

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

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Carnegie Mellon University as of June 30, 2021, and the changes in its net assets and its cash flows for the year then ended in accordance with U.S. generally accepted accounting principles.

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 27, 2021 on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

KPMG LLP

Pittsburgh, Pennsylvania
October 27, 2021

Carnegie Mellon University
Consolidated Statements of Financial Position
June 30, 2021 and 2020

(dollars in thousands)

	2021	2020
Assets		
Cash and cash equivalents (Note 2)	\$ 700,526	\$ 622,309
Accrued interest and dividends	1,743	464
Accounts receivable, net (Note 4)	89,222	70,856
Pledges receivable, net (Note 5)	280,674	131,291
Student loans receivable, net (Note 4)	8,091	10,530
Investments (Notes 6 and 8)	3,880,775	2,585,809
Assets held in trust by others (Note 8)	12,450	10,605
Unexpended bond proceeds (Note 11)	25,789	53,142
Prepaid expenses and other assets (Note 2)	57,943	50,443
Right-of-use assets (Note 9)	72,575	78,937
Land, buildings and equipment, net (Note 10)	1,162,849	1,123,333
Total assets	<u>\$ 6,292,637</u>	<u>\$ 4,737,719</u>
Liabilities		
Accounts payable and other liabilities (Note 2)	\$ 243,368	\$ 221,429
Deferred revenue (Note 4)	175,076	153,015
Federal student loan funds (Note 2)	7,788	11,021
Present value of split interest agreement obligations (Note 2)	15,811	15,870
Lease obligations (Note 9)	72,851	77,885
Debt obligations (Note 11)	659,172	665,735
Total liabilities	<u>\$ 1,174,066</u>	<u>\$ 1,144,955</u>
Net assets		
Without donor restrictions (Note 12)	\$ 2,058,406	\$ 1,624,117
With donor restrictions (Note 12)	3,060,165	1,968,647
Total net assets	<u>\$ 5,118,571</u>	<u>\$ 3,592,764</u>
Total liabilities and net assets	<u>\$ 6,292,637</u>	<u>\$ 4,737,719</u>

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

Carnegie Mellon University
Consolidated Statement of Activities
Year Ended June 30, 2021

(dollars in thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
Revenue and other support			
Tuition and other educational fees revenue, net of financial aid (Note 4)	\$ 568,712	\$ -	\$ 568,712
Sponsored projects revenue (Note 4)			
Software Engineering Institute	119,677		119,677
Advanced Robotics for Manufacturing Institute	19,018	-	19,018
Other grants and contracts	309,150	-	309,150
Investment income	55,402	8,859	64,261
Contributions revenue (Note 5)	21,638	462,767	484,405
Auxiliary services revenue	20,686	-	20,686
Other revenue sources	84,903	1,909	86,812
Net assets released from donor restrictions	83,679	(83,679)	-
Total revenue and other support	<u>\$ 1,282,865</u>	<u>\$ 389,856</u>	<u>\$ 1,672,721</u>
Expenses			
Salaries	\$ 713,528	\$ -	\$ 713,528
Benefits	163,415	-	163,415
Other operating expenses	261,373	-	261,373
Depreciation and amortization	80,165	-	80,165
Interest expense	12,127	-	12,127
Total expenses	<u>\$ 1,230,608</u>	<u>\$ -</u>	<u>\$ 1,230,608</u>
Increase in net assets before nonoperating activities	\$ 52,257	\$ 389,856	\$ 442,113
Nonoperating activities			
Net realized/unrealized gains on investments (Note 6)	\$ 350,472	\$ 717,940	\$ 1,068,412
Other (Note 2)	5,020	10,103	15,123
Post-retirement plan changes other than net periodic benefit costs (Note 16)	159	-	159
Net assets released from restrictions for capital	26,381	(26,381)	-
Total nonoperating activities	<u>\$ 382,032</u>	<u>\$ 701,662</u>	<u>\$ 1,083,694</u>
Increase in net assets	<u>\$ 434,289</u>	<u>\$ 1,091,518</u>	<u>\$ 1,525,807</u>
Net assets			
Beginning of year	1,624,117	1,968,647	3,592,764
End of year	<u>\$ 2,058,406</u>	<u>\$ 3,060,165</u>	<u>\$ 5,118,571</u>

Carnegie Mellon University
Consolidated Statement of Activities
Year Ended June 30, 2020

(dollars in thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
Revenue and other support			
Tuition and other educational fees revenue, net of financial aid (Note 4)	\$ 591,078	\$ -	\$ 591,078
Sponsored projects revenue (Note 4)			
Software Engineering Institute	141,683	-	141,683
Advanced Robotics for Manufacturing Institute	16,836	-	16,836
Other grants and contracts	287,461	-	287,461
Investment income	61,165	10,456	71,621
Contributions revenue (Note 5)	24,334	169,902	194,236
Auxiliary services revenue	54,082	-	54,082
Other revenue sources (Note 2)	84,997	410	85,407
Net assets released from donor restrictions	79,623	(79,623)	-
Total revenue and other support	<u>\$ 1,341,259</u>	<u>\$ 101,145</u>	<u>\$ 1,442,404</u>
Expenses			
Salaries	\$ 722,345	\$ -	\$ 722,345
Benefits	154,292	-	154,292
Other operating expenses	327,692	-	327,692
Depreciation and amortization	76,778	-	76,778
Interest expense	12,467	-	12,467
Total expenses	<u>\$ 1,293,574</u>	<u>\$ -</u>	<u>\$ 1,293,574</u>
Increase in net assets before nonoperating activities	\$ 47,685	\$ 101,145	\$ 148,830
Nonoperating activities			
Net realized/unrealized gains on investments (Note 6)	\$ 3,388	\$ 65,366	\$ 68,754
Other (Note 2)	(14,338)	(5,358)	(19,696)
Post-retirement plan changes other than net periodic benefit costs (Note 16)	(3,392)	-	(3,392)
Net assets released from restrictions for capital	26,284	(26,284)	-
Total nonoperating activities	<u>\$ 11,942</u>	<u>\$ 33,724</u>	<u>\$ 45,666</u>
Increase in net assets	<u>\$ 59,627</u>	<u>\$ 134,869</u>	<u>\$ 194,496</u>
Net assets			
Beginning of year	1,564,490	1,833,778	3,398,268
End of year	<u>\$ 1,624,117</u>	<u>\$ 1,968,647</u>	<u>\$ 3,592,764</u>

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

Carnegie Mellon University

Consolidated Statements of Cash Flows

Years Ended June 30, 2021 and 2020

(dollars in thousands)

	2021	2020
Cash flows from operating activities		
Increase in net assets	\$ 1,525,807	\$ 194,496
Adjustments to reconcile increase in net assets to net cash provided by operating activities:		
Realized and unrealized losses (gains) on investments, net	(1,115,886)	(108,977)
Depreciation and amortization	80,165	76,778
Amortization of right-of-use assets	20,119	22,745
Amortization of bond premium and bond issuance costs, net	(5,179)	(4,394)
Gifts in kind	(3,186)	(1,296)
Asset dispositions	1,829	294
Contributions for land, buildings and equipment and endowment	(249,701)	(77,809)
Provision for bad debt and other allowances	(1,758)	3,657
Assets held in trust by others	(206)	(149)
(Increase)/decrease in assets:		
Accrued interest and dividends	(1,279)	1,358
Accounts receivable, net	(18,999)	3,789
Pledges receivable, net	(146,990)	(49,357)
Other assets	(10,155)	(4,385)
Increase/(decrease) in liabilities:		
Accounts payable and other liabilities	12,149	19,465
Lease obligations	(17,274)	(20,681)
Deferred revenue	22,061	3,181
Present value of split interest agreements payable	(59)	887
Net cash provided by operating activities	\$ 91,458	\$ 59,602
Cash flows from investing activities		
Proceeds from sale and maturity of investments	1,792,603	2,273,851
Purchases of investments	(1,973,323)	(2,228,593)
Purchases of land, buildings and equipment	(108,412)	(151,201)
Federal loan programs	(3,233)	(4,094)
Disbursements of loans to students	(20)	(166)
Repayments of loans from students	2,459	4,167
Net cash used for investing activities	\$ (289,926)	\$ (106,036)
Cash flows from financing activities		
Proceeds from issuance of indebtedness	10,000	130,806
Repayments of debt obligations	(11,384)	(1,207)
Payment of debt issuance costs	-	(288)
Contributions for land, building, and equipment and endowment	250,716	77,809
Net cash provided by financing activities	249,332	207,120
Net increase in cash and cash equivalents, and restricted cash	50,864	160,686
Cash, cash equivalents, and restricted cash at beginning of year	675,451	514,765
Cash, cash equivalents, and restricted cash at end of year	\$ 726,315	\$ 675,451
Cash and cash equivalents	\$ 700,526	\$ 622,309
Restricted cash (ACHEBA Series A 2020 escrow)	25,789	53,142
Total cash, cash equivalents, and restricted cash	\$ 726,315	\$ 675,451
Noncash transactions:		
Non-cash gifts in kind	3,186	1,296
Increase/(decrease) in accounts payable and accrued liabilities for land, buildings and equipment	9,667	(18,781)
Non-cash stock contributions	536	1,027
Loans assigned to Federal Government	-	558
Lease obligations arising from obtaining right-of-use assets	12,240	25,392

Carnegie Mellon University

Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

1. Carnegie Mellon

Carnegie Mellon University ("Carnegie Mellon" or "the university") is a private, not-for-profit educational and research institution. Carnegie Mellon currently enrolls approximately 14,190 students and granted approximately 5,150 bachelor's, master's and doctoral degrees in the last academic year. Approximately 79% of undergraduate students are from the United States of America. International students comprise approximately 21% of undergraduate, 61% of master's, and 52% of Ph.D. students.

2. Summary of Significant Accounting Policies

Basis of Accounting and Reporting

The accompanying consolidated financial statements have been prepared on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles ("GAAP") and include the accounts of Carnegie Mellon as well as the Software Engineering Institute ("SEI"), and other majority-owned entities. The consolidated entities are Advanced Robotics for Manufacturing Institute ("ARM Institute"), Benjamin Garver Lamme Scholarship Fund, Jack G. Buncher Charitable Fund for Carnegie Mellon, iCarnegie, Inc., and Carnegie Innovations, LLC. All significant inter-entity transactions and balances have been eliminated in consolidation. Carnegie Mellon is a joint sponsor with the University of Pittsburgh in MPC Corporation ("MPC"), a beneficiary of The Dietrich Foundation, and an owner as a tenant in common of the Bellefield Boiler Plant. The activities of MPC, The Dietrich Foundation, and the Bellefield Boiler Plant are not consolidated in Carnegie Mellon's consolidated financial statements (see Note 17).

The SEI is a federally funded research and development center (FFRDC) sponsored by the U.S. Department of Defense ("DoD") and operated by the university. The most recent contract provided a five-year initial term ending in June 2020 plus a five-year renewal option, which was exercised in July 2020. In January 2017, the DoD awarded the ARM Institute, a nonprofit venture led by Carnegie Mellon, a seven year contract to launch an advanced robotics manufacturing institute in Pittsburgh. Carnegie Mellon's net assets and revenues, expenses, gains and losses are classified based on the existence or absence of donor imposed restrictions. Accordingly, net assets and changes therein are classified and reported as follows:

Without Donor Restrictions

Net assets that are not subject to donor imposed stipulations.

With Donor Restrictions

Net assets subject to specific donor imposed or legal stipulations that can be fulfilled by actions of Carnegie Mellon pursuant to those stipulations or that expire by the passage of time. Also included in this category are net assets subject to donor imposed stipulations requiring the assets be maintained in perpetuity. Generally, the donors of these assets permit Carnegie Mellon to use all or part of the income earned on the related investments for general or specific purposes. Other restricted items in this category include annuity and life income gifts where the ultimate purpose of the proceeds is donor restricted.

Revenues are reported as increases in net assets without donor restrictions unless use of the related assets is limited by donor imposed restrictions. Expenses are reported as decreases in net assets without donor restrictions. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in net assets without donor restrictions unless their use is restricted by the donor or by law. Expiration or satisfaction of donor restrictions on net assets are reported as net assets released from donor restrictions.

Carnegie Mellon University

Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

Cash Equivalents

Cash equivalents include highly liquid investments with original maturities of three months or less when purchased. Cash equivalents are recorded at cost, which approximates fair value. These balances are held at the university's custodians, prime brokers, clearing agents, and banking institutions for investment and working capital purposes. Cash equivalents held within investments are held for long term purposes and not considered cash equivalents for purposes of the statements of cash flow.

Investments

All investments held by Carnegie Mellon are reported at fair value. The fair value of marketable debt and equity securities is based on published current market prices in active securities markets. The fair value of certain investments structured as investment companies is based on the net asset value of such investments and generally is estimated by external investment managers.

As a practical expedient, the university is permitted to estimate fair value of an investment in an investment company, at the measurement date, using the reported net asset value (NAV) without further adjustment unless the university expects to sell the investment at a value other than NAV or if the NAV is not calculated in accordance with fair value principles. Investments measured under the net asset value practical expedient primarily consist of the university's ownership in alternative investments (principally limited partnership interests in private equity, real estate, natural resources, and hedge funds) and certain investments in commingled funds.

Carnegie Mellon reviews and evaluates the valuation methods and assumptions used by investment managers in determining fair value NAV. Those estimated fair values may differ significantly from values that would result had a ready market for these securities existed. Note 8 - Fair Value provides additional information about inputs used to determine fair value for investments. Investments received as a gift are reflected as contributions at their fair value at the date of the gift.

Gains and losses, dividends, and interest income from investments are reported in the consolidated statements of activities. Internal and external investment management fees and expenses are netted against investment returns.

Investment securities, in general, are exposed to various risks, such as interest rate, credit and overall market volatility. Due to the level of risk associated with certain investment securities, changes could materially affect the amounts reported in the consolidated statements of financial position.

Endowment

Investment policy for endowment assets is the responsibility of the Investment Committee of the Board of Trustees. Substantially all endowment assets are managed by outside investment managers and overseen by the university's Investment Office.

Endowment net assets without donor restrictions include Carnegie Mellon funds, gifts without restrictions from donors, and any accumulated income, gains, and appreciation thereon, which is intended to remain in the endowment for the long-term support of Carnegie Mellon activities, but may be expended under trustee authorization. Also included is interest and dividend income on donor restricted endowment assets where distribution of such income is not subject to a donor restriction.

Endowment net assets with donor restrictions include gifts and any accumulated income, gains, and appreciation thereon which donor restrictions require to be retained in perpetuity to

Carnegie Mellon University

Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

provide a permanent source of support for the university. Also included are accumulated income, gains, and appreciation on endowment assets where distribution/spending of such returns is restricted by the donor. The Trustees of Carnegie Mellon must annually authorize release of endowment gains according to Pennsylvania law. This classification also includes term endowments and endowment gifts whereby the donor permits distributions of the principal amount of the gift and accumulated appreciation.

All endowment funds participate in a Carnegie Mellon investment pool. The investment pool provides income to its respective participants. Such income is used for the specific purpose prescribed by the donor or, if the purpose was not prescribed by the donor, the income is deemed to be without donor restrictions and used for general purposes. New endowment funds or additions to existing funds are assigned shares in the investment pool based upon the per share market value at the end of the previous month. Income distributions from the investment pool are based upon the number of shares held by each participant and the approved spending rate (see Note 7). Income distributions from the investment pool are based upon the "total return concept". Component amounts of total return not distributed currently are reinvested in the investment pool and are available for distribution from the endowment assets in future years.

Assets Held in Trust by Others

Assets held in trust by others include the value of Carnegie Mellon's beneficial interest in perpetual trusts and irrevocable trusts held by outside trustees. The present value of the perpetual trusts' estimated future cash receipts, which are measured by the fair value of the assets contributed to the trust, are recognized as assets and contribution revenues at the dates the trusts are established. The assets are adjusted periodically for changes in market values.

Various donors have established irrevocable trusts whereby Carnegie Mellon holds a remainder interest in the trust or is entitled to distributions over the life of the trusts. The present value of the portion of the trusts estimated to be distributable to Carnegie Mellon over the life of the trusts or upon the termination of the trusts are recorded as assets and contribution revenues at the dates the trusts are established. The assets are adjusted periodically for changes in market value.

Unexpended Bond Proceeds

Unexpended bond proceeds in the amount of \$25.8 million and \$53.1 million as of June 30, 2021 and 2020, respectively, represent cash proceeds from the issuance of Series 2020A bonds in February 2020 that are held by a trustee under the bond indenture for capital expenditures. See Note 11 for more information.

Prepaid Expenses and Other Assets

Prepaid expenses represent items such as prepaid insurance, prepaid rentals and other contractual payments made in advance of their use or consumption. Amounts are expensed and amortized over the periods to which the charges relate. Other assets include deferred compensation plan assets, swap assets and other costs incurred that will result in benefits to future periods.

Right-of-use Assets and Lease Obligations

Operating lease right-of-use ("ROU") assets and operating lease obligations are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. As the university's leases generally do not provide an implicit rate, the university's incremental borrowing rate at commencement date is used to determine the present value of future payments. The operating lease ROU asset also includes any lease payments made and excludes lease incentives and any initial direct costs incurred. The university's operating lease ROU assets and operating lease obligations are calculated including options to extend the lease when it is reasonably

Carnegie Mellon University

Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

certain that the university will exercise that option. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term.

Land, Buildings and Equipment

Land, buildings and equipment are recorded at cost at the date of acquisition or, if acquired by gift, at the fair value as of the date of the gift. Additions to plant assets are capitalized while scheduled maintenance and minor renovations are expensed to operations. Buildings and equipment are reflected net of accumulated depreciation which is calculated on a straight-line basis over the estimated useful lives. Carnegie Mellon capitalizes interest during periods of construction. Carnegie Mellon reviews its land, buildings, equipment and other long-lived assets for impairment whenever events or circumstances indicate that the carrying amount may not be recoverable.

Donated works of art, historical treasures and similar assets have been recognized at their estimated fair value based upon appraisals or similar valuations at the date of acquisition or donation. If purchased, the assets are recognized at cost. The assets are depreciated over 99 years.

Accounts Payable and Other Liabilities

Accounts payable and other liabilities include accounts payable, accrued payroll and benefits, swap liabilities, and other accrued expenses.

Federal Student Loan Funds

This liability represents Perkins loan funds provided to students by the federal government through Carnegie Mellon. Carnegie Mellon is required to collect the loans on behalf of the federal government. The federal government did not renew the Perkins loan program after September 30, 2017, and did not allow disbursements to be made after June 30, 2018. The university has elected to retain the outstanding loans in lieu of assigning the loans to the federal government. The liability will be repaid over the years that loan repayments are received from student borrowers. During the years ended June 30, 2021 and 2020, \$3.0 million and \$3.9 million was repaid to the federal government, respectively. The amounts due from the students are reported in the consolidated statements of financial position as a component of student loans receivable, net.

Present Value of Split Interest Agreement Obligations

Carnegie Mellon's split interest agreements with donors consist primarily of gift annuities, unitrusts, lead trusts, charitable remainder annuity trusts and life income agreements. Assets held under these agreements are included in investments. Generally, contribution revenues are recognized at the dates the agreements are established, after recording liabilities for the present value of the estimated future payments to be made to the beneficiaries. The liabilities are adjusted during the term of the trusts for changes in the value of the assets, accretion of the discount and other changes in the estimates of future benefits. The discount rates utilized for split interest agreements range from 0.06% to 6.0%. Distributions from the trusts are recorded in accordance with the donor's stipulations as contributions and the carrying value of the assets are adjusted for changes in the fair value of the trust assets.

Operating Activities

Carnegie Mellon's measure of operations without donor restrictions includes revenue from tuition, sponsored projects, investment return distributed according to Carnegie Mellon's spending policy, contributions without donor restrictions, contributions for programs, revenues from auxiliary services and other sources, and net assets released from donor restrictions. Operating expenses are reported by natural classification.

Carnegie Mellon University

Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

Revenue Recognition from Contracts with Customers

Revenue is recognized when control of the promised goods or services is transferred to customers in an amount that reflects the consideration the university expects to be entitled to receive in exchange for those goods and services.

Contributions Revenue

Contributions include gifts, grants and unconditional promises to give that are recognized as revenue, at fair value, in the period such commitments are received. Conditional promises to give may be subject to both a barrier to entitlement and a right of return of unused funds. Such contributions are recognized as revenue when the barrier is satisfied. Unconditional promises to give to be received in future years are discounted, as of the date of the gift, at a rate commensurate with the pledge payment schedule. A discount rate commensurate with fair value is used. An allowance is estimated for uncollectible contributions based upon historical patterns and any known uncollectible accounts or accounts in arrears.

Capital Contributions

Donors' contributions to fund construction projects are classified as net assets with donor restrictions and are released from donor restriction through nonoperating activities when the facility is placed in service. \$26.4 million and \$26.3 million of capital contributions were released from donor restrictions during fiscal years 2021 and 2020, respectively, and were reclassified from net assets with donor restrictions to net assets without donor restrictions through nonoperating activities.

Nonoperating Activities

Items presented in the consolidated statements of activities as "Nonoperating activities" include unrealized gains and losses and interest expense related to interest rate swap agreements, losses from adjustments of pledges receivable with donor restrictions, and other gains and losses.

Income Taxes

Carnegie Mellon is a nonprofit organization as described in Section 501(c)(3) of the Internal Revenue Code (the "Code") and is generally exempt from income taxes on related income pursuant to Section 501(a) of the Code.

The university accounts for uncertainties in income taxes in accordance with authoritative guidance, which prescribes a recognition threshold of more-likely-than-not to be sustained upon examination by the appropriate taxing authority. Measurement of the tax uncertainty occurs if the recognition threshold has been met. Management determined there were no tax uncertainties that met the recognition threshold at June 30, 2021 and 2020.

The university's federal Exempt Organization Business Income Tax Returns remain subject to examination by the Internal Revenue Service for the years subsequent to June 30, 2016.

The university's policy is to recognize interest related to unrecognized tax benefits in interest expense and penalties in operating expenses.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported consolidated financial statements and related accompanying footnote disclosures. Actual results could differ from those estimates and these differences could be material.

Carnegie Mellon University

Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

Adoption of New Accounting Pronouncements

In August 2018 the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* (ASU 2018-13). ASU 2018-13 addresses modifications to existing footnote disclosures in order to improve the effectiveness of the disclosures. The standard is effective for fiscal years beginning after December 15, 2019 with components applied retrospectively or prospectively depending on the nature of the disclosure. The university adopted this standard on July 1, 2020, the result of which did not have a material impact on its consolidated financial statements.

In August 2018 the FASB issued ASU 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* (ASU 2018-15). The standard aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license). The standard is effective for fiscal years beginning after December 15, 2019 with components applied either retrospectively or prospectively. The university adopted this standard prospectively on July 1, 2020, the result of which did not have a material impact on its consolidated financial statements.

In September 2020 the FASB issued ASU 2020-07, *Not-for-Profit Entities (Topic 958): Presentation and Disclosures by Not-for-Profit Entities for Contributed Nonfinancial Assets* (ASU 2020-07). ASU 2020-07 addresses current guidance on the presentation of contributed nonfinancial assets within the Consolidated Statements of Activities. The standard is effective for fiscal years beginning after June 15, 2021 with early adoption permitted and should be applied on a retrospective basis to each period presented. The university is evaluating the impact this will have on the consolidated financial statements beginning in fiscal year 2022.

3. Financial Assets and Liquidity Resources

The university continuously monitors liquidity needed to meet its operating activities while prudently investing its available capital. Possible sources of liquidity include cash and cash equivalents, short-term investments, marketable debt and equity securities, a \$50.0 million line of credit and a \$70.0 million commercial paper program which has \$60.0 million available as of June 30, 2021 (see Note 11). The university also anticipates converting certain receivables to cash within the next twelve months. As of June 30, 2021 and 2020, financial assets available within one year for general expenditure are as follows (*dollars in thousands*):

	2021	2020
Cash and cash equivalents	\$ 700,526	\$ 622,309
Accounts receivable, net	89,222	70,856
Pledge receivables donor restricted for operations	10,815	9,107
Short-term working capital investments	110,935	57,418
Subsequent year's approved endowment distributions	111,192	98,485
Subsequent year's approved long-term working capital distributions	11,221	9,857
Total financial assets available within one year	<u>\$ 1,033,911</u>	<u>\$ 868,032</u>

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For purposes of analyzing resources available for general expenditures over a 12-month period, the university considers all expenditures related to its ongoing activities of teaching and research, as well as the conduct of services undertaken to support those activities, to be general expenditures. This includes short-term working capital investments available for construction and plant activity. Long-term working capital investments are included within the university's long-term investments pool. While the university does not intend to spend from these long-term working capital investments other than the amounts appropriated for general expenditure as indicated above, the long-term working capital investments could be made available if necessary. However, the long-term investments pool contains investments with lock-up provisions that reduce the total investments that could be made available (see Notes 6 and 8).

4. Revenue from Contracts with Customers and Accounts Receivable

Tuition Revenue: Tuition revenue is recognized within the fiscal year in which educational services are provided. Revenue related to student services crossing fiscal years is recognized on a pro-rata basis based upon the number of instruction days in each period. Tuition, at published prices, from undergraduate students was \$399.3 million and \$383.5 million for the years ended June 30, 2021 and 2020, respectively. Tuition, at published prices, from graduate students was \$315.3 million and \$339.1 million for the years ended June 30, 2021 and 2020, respectively. Other education related revenue was \$31.5 million and \$39.2 million for the years ended June 30, 2021 and 2020, respectively. The transaction price for tuition revenue may be reduced directly by discounts or scholarships from the amount of the standard rates charged. These discounts are considered financial aid and were \$177.4 million and \$170.7 million for the years ended June 30, 2021 and 2020, respectively. Upon withdrawal, a student may be eligible to receive a refund, or a partial refund, the amount of which is dependent on the timing of the withdrawal during the academic term. The amount of refunds paid is not a significant portion of the university's tuition revenue.

Students are billed prior to the start of each academic term based upon the agreements they signed and payment is due prior to the start of the term. Student receivables are not collateralized; however, credit risk is minimized as a result of the diverse nature of the university's student base. The university establishes an allowance for doubtful accounts based on historical trends and other information.

Sponsored Projects Revenue: The university receives sponsored program funding from various governmental and corporate sources. The funding may represent a reciprocal transaction in exchange for an equivalent benefit in return, or it may be a nonreciprocal transaction in which the resources provided are for the benefit of the university, the funding organization's mission, or the public at large.

Revenues from exchange transactions are recognized as performance obligations are satisfied, which in most cases is as related costs are incurred. Revenue from non-exchange transactions (contributions) may be subject to conditions, in the form of both a barrier to entitlement and a refund of amounts paid (or a release from obligation to make future payments). Revenues from conditional non-exchange transactions are recognized when the barrier is satisfied. In addition, the university has elected the simultaneous release option for conditional contributions that are also subject to purpose restrictions. Under this option, net assets without donor restrictions will include the donor-restricted contributions for which the purpose restrictions are met in the same reporting period as the revenue is recognized.

Amounts recognized as sponsored projects revenue are based upon a signed contract for direct costs along with indirect cost recovery. Indirect sponsored projects revenue is recorded at rates

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established in advance by Carnegie Mellon through negotiations with the United States government and other sponsors based upon direct costs incurred. The actual federal indirect cost rate is audited by the Defense Contracts Audit Agency (DCAA) and a final fixed rate agreement is signed by the United States government and Carnegie Mellon. The variance between the negotiated fixed and the final audited indirect cost rate results in a carryforward (over or under recovery) that is included in the calculation of negotiated fixed rates in future years.

Sponsored projects revenue is invoiced per the terms of the contractual agreement. Amounts received from sponsors under agreements that require the exchange of assets, rights or other privileges between Carnegie Mellon and the sponsor are recorded as deferred revenue until the contract terms are fulfilled.

Auxiliary Services Revenue: Carnegie Mellon's auxiliaries exist primarily to furnish goods and services to students, faculty and staff. Managed as essentially self-supporting activities, Carnegie Mellon's auxiliaries consist principally of housing and dining services, parking, retail and other external services. Revenue is recognized as the services are provided based upon published prices and rates.

Other revenue sources: Other revenue is comprised of funding received for Carnegie Mellon's international locations, royalty income, licensing revenue, affiliate/membership revenue and other miscellaneous revenues. Other revenue is recognized as services are rendered or over the term of the contract and invoiced based on contractual terms.

The university has elected the practical expedient in ASC 606-10-50-14 to not disclose the information about remaining performance obligations that have original expected durations of one year or less. Federal and other sponsored grants and contracts may include fiscal funding clauses or be subject to annual appropriation. These sponsored research agreements typically span less than five years. The university estimates that its conditional awards outstanding as of June 30, 2021 approximate historical annual sponsored program activity.

Accounts receivable at June 30, 2021 and 2020, consist of the following (*dollars in thousands*):

	<u>2021</u>	<u>2020</u>
Sponsored project accounts receivable		
Software Engineering Institute	\$ 134	\$ 282
Other grants and contracts	57,571	52,188
Total sponsored projects accounts receivable	<u>\$ 57,705</u>	<u>\$52,470</u>
Student accounts	6,264	5,546
Other	27,607	14,631
Total student accounts and other	<u>\$ 33,871</u>	<u>\$20,177</u>
Allowance for doubtful accounts	<u>(2,354)</u>	<u>(1,791)</u>
Net accounts receivable	<u><u>\$ 89,222</u></u>	<u><u>\$70,856</u></u>

Other accounts receivable relates primarily to Carnegie Mellon's international programs, affiliate and membership agreements, license agreements and other miscellaneous revenue sources.

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Deferred revenue at June 30, 2021 and 2020 consists of the following (*dollars in thousands*):

	<u>2021</u>	<u>2020</u>
Sponsored projects deferred revenue		
Software Engineering Institute	\$ 11,270	\$ 7,730
ARM Institute	1,823	6,319
Other contracts and conditional grants	56,944	54,712
Total sponsored projects deferred revenue	<u>\$ 70,037</u>	<u>\$ 68,761</u>
Student accounts	19,241	15,399
Other	85,798	68,855
Total deferred revenue	<u>\$ 175,076</u>	<u>\$ 153,015</u>

Student Loans Receivable

Net student loans receivable of approximately \$8.1 million and \$10.5 million, as of June 30, 2021 and 2020, respectively, primarily represent student loans made under the Perkins federal loan program. These loans are reported net of an allowance for doubtful accounts of approximately \$0.5 million as of June 30, 2021 and 2020.

5. Contributions Revenue and Pledges Receivable

Conditional promises to give, which depend on the satisfaction of identified barriers such as matching gifts from other donors, are recognized as contributions revenue when the conditions are substantially met. Carnegie Mellon had approximately \$24.7 million and \$40.1 million as of June 30, 2021 and 2020 of conditional pledged contributions outstanding related to capital projects. In addition, the university had approximately \$26.0 million and \$12.0 million related to conditional contributions as of June 30, 2021 and 2020, respectively, recorded as deferred revenue in the consolidated statements of financial position. These amounts were not recognized as contributions revenue during the respective fiscal year as the barriers had not been met.

Pledges receivable as of June 30, 2021 and 2020 are due as follows (*dollars in thousands*):

	<u>2021</u>	<u>2020</u>
In one year or less	\$ 47,020	\$ 24,715
Between one year and five years	171,487	60,469
More than five years	98,288	74,004
Pledges receivable, gross	<u>\$ 316,795</u>	<u>\$ 159,188</u>
Unamortized discount	(24,426)	(11,489)
Allowance for unfulfilled pledges	<u>(11,695)</u>	<u>(16,408)</u>
Pledges receivable, net of discount and allowance	<u>\$ 280,674</u>	<u>\$ 131,291</u>

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6. Investments

Investments by major class at June 30, 2021 and 2020 are as follows (*dollars in thousands*):

	2021	2020
Cash equivalents	\$ 77,787	\$ 75,682
Short-term fixed income securities	77,705	24,356
Fixed income securities	466,662	300,214
Equity securities	1,124,508	897,244
Alternative investment partnerships	2,134,113	1,288,313
	<u>\$ 3,880,775</u>	<u>\$ 2,585,809</u>

Investments are held for the following purposes (*dollars in thousands*):

	2021	2020
Endowment	\$ 3,088,868	\$ 2,065,293
Reserves for working capital and plant - short-term	110,935	57,418
Reserves for working capital and plant - long-term	551,385	393,394
Other	129,587	69,704
Total investments	<u>\$ 3,880,775</u>	<u>\$ 2,585,809</u>

Fixed income securities are United States Treasury and Agency obligations, investment grade corporate debt, short-term commercial paper, and asset backed securities. Equity securities at June 30, 2021 included 48.9% domestic equities and 51.1% international and emerging market equities. Equity securities at June 30, 2020 included 52.3% domestic equities and 47.7% international and emerging market equities. Alternative investment partnerships are largely investments in buyout, venture capital, real estate, natural resources and hedge funds.

The allocation to each major class in the previous table represents the actual allocation of the short-term and long-term reserves, and other miscellaneous investments on a combined basis. Actual allocations on a combined basis should not be interpreted as an investment allocation policy for a particular investment pool.

Operating investment income as reported in the consolidated statements of activities includes dividends and interest earned on funds without donor restrictions as well as accumulated gains without donor restrictions utilized for current operations in the amounts of \$46.2 million and \$40.2 million for the years ended June 30, 2021 and 2020, respectively. The accumulated gains are reclassified from net realized gains to investment income.

Certain of Carnegie Mellon's outside investment managers are authorized to and do purchase and sell derivative instruments in order to create, increase, decrease, or hedge exposures to market position, including to manage risk due to interest rate and foreign currency fluctuations.

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Carnegie Mellon's long-term investments comprise U.S. domestic and international portfolios. Carnegie Mellon does not hedge international portfolios with respect to foreign currencies. Investment managers of these international portfolios have the discretion to, and certain do, manage foreign currencies through foreign exchange contracts to protect the portfolios from potential foreign currency losses and to benefit from potential gains. Carnegie Mellon's investment managers understand that they are assuming active management risks to the extent that they assume foreign currency exposures that differ from the foreign currency exposures in their relevant market benchmarks.

Gains or losses from derivative instruments are reported as realized and unrealized gains or losses in the consolidated statements of activities. The fair value of all derivative instruments is included in the fair value of the investments.

Under the terms of certain limited partnership agreements, Carnegie Mellon is obligated to periodically advance additional funding for venture capital, buyout, real estate, and natural resources fund investments. At June 30, 2021 and 2020, Carnegie Mellon had unfunded commitments of approximately \$599.1 million and \$677.5 million, respectively, for which capital calls had not been exercised. Such commitments generally have fixed expiration dates or other termination clauses. Carnegie Mellon maintains sufficient liquidity in its investment portfolio to cover such calls.

Alternative investments, including certain equity funds, measured at NAV are less liquid than Carnegie Mellon's other investments. The following tables summarize these investments by strategy type at June 30, 2021 and 2020 (*dollars in thousands*):

	Number of Funds	2021 Fair Value	Number of Funds	2020 Fair Value
Commingled funds	6	\$ 357,814	6	\$ 246,017
Hedge funds	15	283,017	15	159,230
Natural resources	20	125,983	21	119,227
Private equity (buyout) funds	61	274,223	60	180,573
Real estate	20	129,206	21	110,998
Venture capital	181	1,302,283	167	690,531
Other	12	19,401	15	27,754
Total	<u>315</u>	<u>\$ 2,491,927</u>	<u>305</u>	<u>\$ 1,534,330</u>

Commingled funds and hedge fund investments held by the university may be subject to restrictions related to the initial investment that limit the university's ability to redeem capital from such investments during a specified period of time subsequent to the university's investment of capital in such funds, typically known as a lock-up period. Capital available for redemption after the lock-up period has expired may also be subject to limits which restrict the available redemption period to semi-monthly, monthly, quarterly, semi-annually, annually, or triennially and require 2 – 180 days prior written notice, potentially limiting the university's ability to respond quickly to changes in market conditions. All commingled funds have passed the initial lock-up period as of June 30, 2021.

Natural resources, private equity, real estate, venture capital, and other alternative investments cannot be redeemed upon request. Instead, the nature of these investments is that distributions are received through the liquidation of the underlying assets of the fund. It is estimated that the underlying assets of these funds would be liquidated over approximately four to eight years.

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7. Endowments

The following tables outline the endowment net asset composition by type of fund as of June 30, 2021 and 2020 (*dollars in thousands*):

2021			
	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds	\$ -	\$ 2,524,564	\$ 2,524,564
Board-designated funds	567,500	-	567,500
Total funds	<u>\$ 567,500</u>	<u>\$ 2,524,564</u>	<u>\$ 3,092,064</u>

2020			
	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds	\$ -	\$ 1,644,699	\$ 1,644,699
Board-designated funds	424,161	-	424,161
Total funds	<u>\$ 424,161</u>	<u>\$ 1,644,699</u>	<u>\$ 2,068,860</u>

The following tables provide a summary of the changes in value of the endowment net assets excluding endowment pledges for the years ended June 30, 2021 and 2020 (*dollars in thousands*):

2021			
	Without Donor Restrictions	With Donor Restrictions	Total
Endowment net assets, beginning of year	\$ 424,161	\$ 1,644,699	\$ 2,068,860
Gifts and other additions	\$ 13	\$ 217,250	\$ 217,263
Investment income			
Interest and dividends	\$ 5,836	\$ 7,532	\$ 13,368
Net realized gains on sale of securities	30,714	119,094	149,808
Net unrealized gains	150,630	592,579	743,209
Total investment income	<u>\$ 187,180</u>	<u>\$ 719,205</u>	<u>\$ 906,385</u>
Income distributed			
Cash and accrued interest and dividends	\$ (5,836)	\$ (7,532)	\$ (13,368)
Accumulated realized investment gains	(38,018)	(49,058)	(87,076)
Total income distributed	<u>\$ (43,854)</u>	<u>\$ (56,590)</u>	<u>\$ (100,444)</u>
Endowment net assets, end of year	<u>\$ 567,500</u>	<u>\$ 2,524,564</u>	<u>\$ 3,092,064</u> ⁽¹⁾

⁽¹⁾Includes \$3.2 million of endowment gifts and other transfers pending investment and other accruals.

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	2020		
	Without	With	
	Donor Restrictions	Donor Restrictions	Total
Endowment net assets, beginning of year	\$ 438,497	\$ 1,563,803	\$ 2,002,300
Gifts and other additions	\$ 21	\$ 55,945	\$ 55,966
Investment income			
Interest and dividends	\$ 7,491	\$ 9,098	\$ 16,589
Net realized gains on sale of securities	57,191	203,958	261,149
Net unrealized losses	(37,511)	(138,017)	(175,528)
Total investment income	\$ 27,171	\$ 75,039	\$ 102,210
Income distributed			
Cash and accrued interest and dividends	\$ (7,491)	\$ (9,098)	\$ (16,589)
Accumulated realized investment gains	(34,037)	(40,990)	(75,027)
Total income distributed	\$ (41,528)	\$ (50,088)	\$ (91,616)
Endowment net assets, end of year	\$ 424,161	\$ 1,644,699	\$ 2,068,860 ⁽¹⁾

⁽¹⁾Includes \$3.6 million of endowment gifts and other transfers pending investment and other accruals.

Unless the donor specifies that only a certain amount of the endowment may be spent, Pennsylvania Act 141 ("Act 141") allows organizations to choose a total return spending policy strategy, whereby the board of trustees may annually elect to spend between 2.0% and 7.0% of the fair market value of the endowment. On July 23, 2020, Pennsylvania 2020 Act 71 ("Act 71") was signed into law. Act 71 modifies Act 141 in that it permits the university's Board of Trustees to spend up to 10% during calendar years 2020, 2021, and 2022, or for the corporation's fiscal years that end during those calendar years. Carnegie Mellon maintains a total return spending policy. Endowment income distributions can consist of dividend and interest income and a withdrawal of accumulated capital gains, when necessary. The main objective of the total return spending policy is to separate spending policy from investment policy. This approach permits asset allocation decisions to be made independently of the need for current income. Carnegie Mellon targets a diversified asset allocation to achieve its long-term objectives with prudent risk constraints. The endowment spending rate is determined annually pursuant to a smoothing formula whereby an approved spending rate percentage is applied to the trailing 36 month average of endowment market values at December 31. For fiscal years 2021 and 2020, the approved spending rate was set at 5.0%. As a result of the spending rate formula, the effective spending rate (defined as the endowment draw totals for the fiscal years 2021 and 2020 divided by the June 30 endowment market values for the those fiscal years) was 3.2% for June 30, 2021 and 4.4% for June 30, 2020.

8. Fair Value

ASC Topic 820, *Fair Value Measurement*, establishes a hierarchy to prioritize valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity and unobservable inputs reflect the entity's own assumptions about how market participants would value an asset or liability based on the best information available.

The following is a description of the university's valuation methodologies for assets and liabilities measured at fair value:

Level 1

Based upon quoted prices in active markets that the university has the ability to access for identical assets and liabilities. Market price data is generally obtained from exchange or dealer markets. The university does not adjust the quoted price for such assets and liabilities, which include active listed equities, mutual funds, government supported obligations and cash equivalents.

Level 2

Based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active or assets subject to transfer restrictions. Inputs are obtained from various sources including market participants, dealers, and brokers.

Level 3

Based on valuation techniques that use significant inputs that are unobservable as they trade infrequently or not at all.

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The following tables present the financial instruments carried at fair value as of June 30, 2021 and 2020 by caption in the consolidated statements of financial position by the valuation hierarchy defined above (*dollars in thousands*).

	2021			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments				
Cash equivalents ^(a)	\$ 55,120	\$ 22,667	\$ -	\$ 77,787
Equity securities				
U.S. - equity funds and common stocks ^(a)	525,436	3,962	58,785	588,183
Mutual funds - international developed	20,323	-	-	20,323
Mutual funds - international emerging	158,188	-	-	158,188
Short-term fixed income	-	77,705	-	77,705
Fixed income funds & securities ^(a)	466,662	-	-	466,662
	\$1,225,729	\$ 104,334	\$ 58,785	\$ 1,388,848
Investments measured under the NAV practical expedient ^(b)				2,491,927
Total investments				\$ 3,880,775
Assets held in trust by others				
Beneficial interests held by third party	\$ -	\$ -	\$ 2,619	\$ 2,619
Perpetual trusts held by third party	-	-	9,831	9,831
Total assets held in trust by others	-	-	12,450	12,450
Unexpended bond proceeds	\$ 25,789	\$ -	\$ -	\$ 25,789
Prepaid expenses and other assets				
Deferred compensation plan assets	\$ 19,144	\$ 8,047	\$ 3,187	\$ 30,378
Interest rate swap receivable	-	1,631	-	1,631
Total prepaid expenses and other assets	\$ 19,144	\$ 9,678	\$ 3,187	\$ 32,009
Total assets at fair value	\$1,270,662	\$ 114,012	\$ 74,422	\$ 3,951,023
Liabilities				
Interest rate swaps payable	-	29,659	-	29,659
Total liabilities at fair value	\$ -	\$ 29,659	\$ -	\$ 29,659

(a) *Presentation as a single class is appropriate based on the nature and risks of these investments.*

(b) *In accordance with ASC Subtopic 820-10, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated statements of financial position. This includes commingled funds of \$357.8 million, and hedge and private equity funds of \$2,134.1 million as of June 30, 2021.*

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	2020			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Investments				
Cash equivalents ^(a)	\$ 28,626	\$ 47,056	\$ -	\$ 75,682
Equity investments				
U.S. - equity funds and common stocks ^(a)	464,294	-	6,932	471,226
Mutual funds - international developed	55,903	-	-	55,903
Mutual funds - international emerging	124,098	-	-	124,098
Short-term fixed income	-	24,356	-	24,356
Fixed income funds & securities ^(a)	300,214	-	-	300,214
	<u>\$ 973,135</u>	<u>\$ 71,412</u>	<u>\$ 6,932</u>	<u>\$ 1,051,479</u>
Investments measured under the NAV practical expedient ^(b)				1,534,330
Total investments				<u>\$ 2,585,809</u>
Assets held in trust by others				
Beneficial interests held by third party	\$ -	\$ -	\$ 2,413	\$ 2,413
Perpetual trusts held by third party	-	-	8,192	8,192
Total assets held in trust by others	<u>-</u>	<u>-</u>	<u>10,605</u>	<u>10,605</u>
Unexpended bond proceeds	\$ 53,142	\$ -	\$ -	\$ 53,142
Prepaid expenses and other assets				
Deferred compensation plan assets	\$ 13,943	\$ 6,159	\$ 3,074	\$ 23,176
Interest rate swap receivable	-	2,382	-	2,382
Total prepaid expenses and other assets	<u>\$ 13,943</u>	<u>\$ 8,541</u>	<u>\$ 3,074</u>	<u>\$ 25,558</u>
Total assets at fair value	<u>\$ 1,040,220</u>	<u>\$ 79,953</u>	<u>\$ 20,611</u>	<u>\$ 2,675,114</u>
Liabilities				
Interest rate swaps payable	-	39,085	-	39,085
Total liabilities at fair value	<u>\$ -</u>	<u>\$ 39,085</u>	<u>\$ -</u>	<u>\$ 39,085</u>

(a) *Presentation as a single class is appropriate based on the nature and risks of these investments*

(b) *In accordance with ASC Subtopic 820-10, certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated statements of financial position. This includes commingled funds of \$246.0 million, and hedge and private equity funds of \$1,288.3 million as of June 30, 2020.*

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Deferred compensation plan assets are valued using market quotations or prices obtained from independent pricing services (Level 1), market quotations or prices obtained from independent pricing sources who may employ various pricing methods (Level 2), and at contract value (Level 3), which approximates fair value.

Beneficial remainder and lead trusts held by third parties are valued at the present value of the future distributions expected to be received upon termination of the trust or over the term of the trust agreement and approximate fair value. Perpetual trusts are valued based upon the university's percentage interest in the fair value of the underlying trust assets.

Interest rate swaps are valued using observable inputs, such as quotations received from the counterparty, dealers or brokers, whenever available and considered reliable. The valuation methods described above may produce fair value calculations that may not be indicative of net realizable value or reflective of future fair values.

The following table includes a roll forward of the consolidated statements of financial position amounts for financial instruments classified by the university within Level 3 of the fair value hierarchy (*dollars in thousands*):

	Deferred Compensation	Common Stock	Trusts Held by Others	Total
Fair value, June 30, 2019	\$ 2,460	\$ 6,249	\$ 10,702	\$ 19,411
Unrealized gains/(losses)	81	683	(97)	667
Purchases	229	-	-	229
Transfers in	304	-	-	304
Fair value, June 30, 2020	<u>\$ 3,074</u>	<u>\$ 6,932</u>	<u>\$ 10,605</u>	<u>\$ 20,611</u>
Unrealized gains	91	51,344	1,845	53,280
Purchases	204	100	-	304
Transfers in	-	409	-	409
Transfers out	(182)	-	-	(182)
Fair value, June 30, 2021	<u>\$ 3,187</u>	<u>\$ 58,785</u>	<u>\$ 12,450</u>	<u>\$ 74,422</u>

During the fiscal year ended June 30, 2021, the university recognized \$50.0 million in unrealized gains from the university's investment in Duolingo, Inc., a mobile global learning platform. The university holds this equity investment as a result of a technology license agreement. The unrealized gain reflects the fair value of the university's shares based upon historical data for private offerings of Duolingo's common stock. Please see Note 20-Subsequent Events, for additional information.

9. Lease Arrangements

The university has operating leases primarily for campus facilities, student housing, and office space. Variable lease payments based on an index or rate, such as the consumer price index, are initially measured using the index or rate in effect at lease commencement. The university has elected the short-term lease exception for all leases and, as such, leases with an initial term of 12 months or less are not recorded on the consolidated statements of financial position. The university recognizes lease expense for short-term leases on a straight-line basis over the lease term.

The components of lease cost for the fiscal years ended June 30, 2021 and 2020, respectively, included operating lease costs of \$20.8 million and \$23.4 million and short-term lease costs of \$4.7

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million and \$4.4 million. Cash payments for operating leases were \$19.5 million and \$22.8 million for the year ended June 30, 2021 and 2020, respectively.

The following table displays the undiscounted cash flows due to operating leases as of June 30, 2021 along with a reconciliation to the discounted amount recorded on the June 30, 2021 consolidated statements of financial position (*dollars in thousands*):

2022	\$	18,808
2023		12,982
2024		10,037
2025		8,428
2026		5,624
Thereafter		20,939
Total undiscounted cash flows (weighted average term 7.9 years)	\$	76,818
Impact of present value discount (weighted average discount rate 1.5%)		(3,967)
Amount reported on consolidated statements of financial position	\$	<u>72,851</u>

10. Land, Buildings and Equipment

Land, buildings and equipment at June 30, 2021 and 2020 consist of the following (*dollars in thousands*):

	Useful Lives	2021	2020
Buildings	35-50 years	\$ 1,594,163	\$ 1,514,198
Moveable equipment	5-20 years	280,077	266,735
Utilities and building-related assets	20 years	120,015	115,844
Land improvements	15 years	19,841	19,841
Software costs	2-10 years	54,847	54,277
Leasehold improvements	2-20 years	35,075	35,395
Subtotal		\$ 2,104,018	\$ 2,006,290
Accumulated depreciation		(1,077,577)	(1,021,101)
Subtotal		\$ 1,026,441	\$ 985,189
Land		55,767	55,456
Construction and equipment in progress		80,641	82,688
Land, buildings and equipment, net		<u>\$ 1,162,849</u>	<u>\$ 1,123,333</u>

Carnegie Mellon acquired \$16.7 million and \$7.1 million in equipment through grants for the years ended June 30, 2021 and 2020, respectively.

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11. Debt Obligations

Debt obligations consist of the following as of June 30, 2021 and 2020 (*dollars in thousands*):

	<u>Maturity</u>	<u>Interest %</u>	<u>2021</u>	<u>2020</u>
Allegheny County Higher Education Building				
Authority Revenue Bonds				
Fixed Rate				
Series 2012 A	03/01/24	2.5-5.0%	\$ 32,805	\$ 32,805
Premium, net of debt issuance costs			1,491	2,050
Series 2013	03/01/43	4.0-5.0%	42,250	52,250
Premium, net of debt issuance costs			2,430	2,980
Series 2017	08/01/29	5.0%	62,165	62,165
Premium, net of debt issuance costs			9,828	11,209
Series 2019 A	08/01/27	5.0%	49,600	49,600
Premium, net of debt issuance costs			7,531	8,752
Series 2020 A	02/01/30	5.0%	45,565	45,565
Premium, net of debt issuance costs			12,849	14,346
Variable Rate				
Series 2008 A	12/01/37	0.05%	120,820	120,820
Debt issuance costs			(274)	(290)
Series 2012 B	02/01/33	0.64%	50,000	50,000
Debt issuance costs			(87)	(94)
Series 2019 B	02/01/42	0.5%	60,140	60,140
Debt issuance costs			(126)	(132)
Collaborative Innovation Center Tax				
Increment Financing	11/01/22	8.5%	685	1,050
Collaborative Innovation Center Mortgage				
Obligation	03/01/25	6.78%	11,500	12,519
Taxable Senior Notes	02/01/47	3.6%	70,000	70,000
Taxable Senior Notes	02/01/50	3.2%	70,000	70,000
Taxable Commercial Paper	Rolling, up to 270 days	Various	10,000	-
Total debt obligations			<u>\$659,172</u>	<u>\$665,735</u>

The university borrows its tax-exempt debt through public conduit issuers. As of June 30, 2021, all of Carnegie Mellon's tax-exempt debt was issued by the Allegheny County Higher Education Building Authority (ACHEBA). The debt is a general unsecured obligation of the university. Although ACHEBA is the issuer, the university is responsible for the debt service of these bonds.

Carnegie Mellon University

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Years Ended June 30, 2021 and 2020

On September 30, 2014, Carnegie Mellon acquired the Collaborative Innovation Center (CIC) from the Regional Industrial Asset District (RIDC) when Carnegie Mellon and RIDC agreed to terminate the long-term ground lease for the land on which the CIC building was built. The CIC building was originally built and owned by RIDC on land owned and leased by Carnegie Mellon to RIDC pursuant to a long-term ground lease. Prior to the termination of the ground lease, the CIC was recorded as a capital lease by Carnegie Mellon.

As part of the agreement to terminate the ground lease, Carnegie Mellon assumed a \$16.8 million mortgage note. The mortgage note requires monthly principal and interest payments, bears interest at a fixed rate of 6.78% and matures on March 1, 2025. The mortgage note is secured by the CIC building (carrying value of \$22.6 million), the land where CIC is located, and rents derived from the operation of CIC.

Carnegie Mellon also assumed the sole responsibility to make semi-annual payments of any shortfall between the amount of real estate and parking taxes collected and pledged under a Tax Increment Financing (TIF) agreement, and the debt service and annual cost of the TIF. Carnegie Mellon is obligated to timely fund that shortfall until the TIF is satisfied in full on October 5, 2022. The balance of the outstanding TIF note was \$0.7 million and \$1.1 million at June 30, 2021 and 2020, respectively. The TIF note bears interest at a rate of 8.5% through maturity.

Series 2020 A bonds were issued in February 2020 in the amount of \$45.6 million bearing interest of 5.0% and maturing on February 1, 2030. The bonds include an original issue premium of 15.2 million. Proceeds from the issuance of these notes are restricted to capital projects involving two residence halls on the Pittsburgh campus.

In February 2020, Carnegie Mellon issued three senior notes in the aggregate amount of \$70.0 million to a life insurance company. These notes bear interest at 3.2% with principal due on February 1, 2050. Proceeds from the issuance of these notes may be used to finance capital projects.

The university maintains a taxable commercial paper program which allows the university to issue in aggregate up to \$70.0 million in commercial paper notes. Proceeds of the notes may be used to refund outstanding debt, finance capital projects, support operations, and for any other lawful activity of the university. The notes are sold at a discount to par. The maturities of individual notes cannot exceed 270 days. The university issued \$10.0 million in notes during fiscal year 2021 that are outstanding at June 30, 2021. The notes outstanding at June 30, 2021 were sold at a discount of 0.08% and are payable in July 2021.

The university had a \$50.0 million unsecured line of credit agreement that expired on October 19, 2021. No advances were outstanding at June 30, 2021. Advances accrue at a variable rate based on LIBOR plus 100 basis points. The unsecured line of credit arrangement was renewed through October 19, 2022, with advances accruing at a variable rate based on the daily simple SOFR rate plus 46.5 basis points.

Interest Expense

Cash paid for interest on debt obligations for the fiscal years ended June 30, 2021 and 2020 totaled \$18.3 million and \$16.5 million, respectively. The university utilizes interest rate swaps to synthetically adjust its exposure to variable rates. Including the swap expense, cash paid for interest for the fiscal years ended June 30, 2021 and 2020 was \$22.6 million and \$20.0 million, respectively. For the fiscal years ended June 30, 2021 and 2020, interest expense of \$0.8 million and \$0.9 million was capitalized related to construction in progress.

Carnegie Mellon University
Notes to Consolidated Financial Statements
Years Ended June 30, 2021 and 2020

Aggregate Maturities

Aggregate maturities of bonds and other debt instruments, excluding commercial paper, for each of the next five years ending June 30, are as follows (*dollars in thousands*):

2022	1,410
2023	1,365
2024	33,961
2025	8,254
2026	-
Thereafter	<u>570,540</u>
Total	<u><u>\$615,530</u></u>

Debt obligations are reflected in the table above based on stated final maturity dates. The outstanding Series 2008 A bonds are variable rate demand bonds which are subject to daily optional tender by the bondholders. In the event that a bondholder tenders these variable rate demand bonds, the purchase price will be repaid from the remarketing of the bonds to a new investor. However, in the event that none of the bonds could be remarketed, Carnegie Mellon has entered into a Standby Bond Purchase Agreement (SBPA) with a financial institution that will purchase the Series 2008 A Bonds at the amount of the bonds outstanding plus related interest. The bonds would then become bank bonds, payable to the liquidity provider per the terms of the agreement. This SBPA was renewed in January 2021 for a three-year term ending January 12, 2024.

12. Net Assets

Net assets consists of gifts and other unexpended revenues and gains and are available for the following purposes supporting the university's educational and research mission as of June 30, 2021 (*dollars in thousands*):

	2021		
	Without	With	
	Donor Restrictions	Donor Restrictions	Total
Board-designated endowment funds	\$ 567,500	\$ -	\$ 567,500
Reserves for working capital and plant- long-term	551,385	-	551,385
Donor-restricted endowment funds	-	1,147,708	1,147,708
Unexpended endowment gains	-	1,376,856	1,376,856
Capital and other designations	937,048	217,692	1,154,740
Pledges and assets held in trust by others	-	293,124	293,124
Split-interest agreements and other donor designations	-	14,919	14,919
Term endowments	-	7,670	7,670
Loan funds	<u>2,473</u>	<u>2,196</u>	<u>4,669</u>
Total Net assets	<u>\$ 2,058,406</u>	<u>\$ 3,060,165</u>	<u>\$5,118,571</u>

Carnegie Mellon University
Notes to Consolidated Financial Statements
Years Ended June 30, 2021 and 2020

Net assets consists of gifts and other unexpended revenues and gains and are available for the following purposes supporting the university's educational and research mission as of June 30, 2020 (*dollars in thousands*):

	2020		
	Without	With	Total
	Donor Restrictions	Donor Restrictions	
Board-designated endowment funds	\$ 424,161	\$ -	\$ 424,161
Reserves for working capital and plant- long-term	393,394	-	393,394
Donor-restricted endowment funds	-	930,458	930,458
Unexpended endowment gains	-	714,241	714,241
Capital and other designations	803,790	164,377	968,167
Pledges and assets held in trust by others	301	141,595	141,896
Split-interest agreements and other donor designations	-	8,822	8,822
Term endowments	-	7,174	7,174
Loan funds	2,471	1,980	4,451
Total Net assets	<u>\$ 1,624,117</u>	<u>\$ 1,968,647</u>	<u>\$3,592,764</u>

13. Derivative Instruments and Hedging Activities

Carnegie Mellon has entered into the following interest rate swap agreements to adjust the exposure to variable interest rates on long-term debt (*dollars in thousands*):

Swap Agreement	Effective Date	Notional Amount	Rate paid by CMU	Interest Received	Term (in years)	Termination Date	Cancellation Option
Apr 2006	Dec 2006	\$ 100,000	3.4%	67% of 1M LIBOR	22	Dec 2028	Dec 2016
May 2007	Jun 2007	\$ 5,125	3.8%	67% of 1M LIBOR	20	Mar 2027	N/A
May 2007	Mar 2012	\$ 40,325	3.8%	67% of 1M LIBOR	20	Mar 2032	N/A
Feb 2012	Mar 2012	\$ 38,000	SIFMA	1.92%	12	Mar 2024	N/A

The following fair values of the swap agreements were recorded as accounts payable and other liabilities and other assets in the consolidated statements of financial position as of June 30, 2021 and 2020 (*dollars in thousands*):

Date of Swap Agreement	Derivatives Reported as (Liabilities)/Assets	
	2021	2020
Apr 2006	\$ (19,003)	\$ (25,260)
May 2007	(890)	(1,178)
May 2007	(9,766)	(12,647)
Feb 2012	1,631	2,382
Total	<u>\$ (28,028)</u>	<u>\$ (36,703)</u>

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Notes to Consolidated Financial Statements

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The fair value of these agreements is estimated to be an amount that Carnegie Mellon would receive (receivable) or pay (liability) to voluntarily terminate the agreement. Based upon the university's credit rating, the university is required to post collateral equal to the amount by which the liability value exceeds \$30.0 million for each of its counterparties. No collateral was required as of June 30, 2021 and June 30, 2020.

The following interest expense/income and fair value losses/gains were recorded as other sources under nonoperating activities in the consolidated statements of activities for the years ended June 30, 2021 and 2020 (*dollars in thousands*):

Date of Swap Agreement	Interest (Expense) Income		Fair Value (Loss) Gain		Total (Loss) Gain	
	2021	2020	2021	2020	2021	2020
Interest rate swaps:						
Sep 2004*	\$ -	\$ (186)	\$ -	\$ 186	\$ -	\$ -
Apr 2006	(3,337)	(2,360)	6,257	(6,547)	2,920	(8,907)
May 2007	(189)	(139)	288	(232)	99	(371)
May 2007	(1,484)	(1,096)	2,881	(3,013)	1,397	(4,109)
Feb 2012	698	286	(751)	1,089	(53)	1,375
Total	<u>\$ (4,312)</u>	<u>\$ (3,495)</u>	<u>\$ 8,675</u>	<u>\$ (8,517)</u>	<u>\$ 4,363</u>	<u>\$ (12,012)</u>

*The interest rate swap agreement matured in fiscal year 2020 and was not renewed.

Carnegie Mellon utilizes energy forward contracts, which are physically settled, to hedge against the future changes in the cost of electricity and natural gas. These contracts limit Carnegie Mellon's exposure to higher rates; however, they could also limit the benefit of decreases in rates. These contracts qualify for normal purchases and sales exemptions and are not required to be recognized on the statements of financial position at fair value because Carnegie Mellon takes physical delivery of the electricity and natural gas and the gains and losses are already recognized in the cost.

14. Expenses by Functional Category

Operating expenses by functional category for the year ended June 30, 2021 are as follows (*dollars in thousands*):

	SEI/ARM							Total
	Instruction & Dpt Research	Sponsored Research	Sponsored Research	Admin & Instl Support	Academic Support	Student Services	Auxiliary	
Salaries	\$ 302,049	\$ 154,532	\$ 81,105	\$ 76,052	\$ 69,176	\$28,334	\$ 2,280	\$ 713,528
Benefits	66,161	19,903	20,988	26,965	20,593	8,141	664	163,415
Other Operating Expenses	50,435	55,230	35,735	31,992	51,554	10,770	25,657	261,373
Depreciation and Amortization	28,443	14,462	5,694	5,137	10,302	8,187	7,940	80,165
Interest	3,534	1,797	707	638	1,280	1,017	3,154	12,127
Total	<u>\$ 450,622</u>	<u>\$ 245,924</u>	<u>\$ 144,229</u>	<u>\$ 140,784</u>	<u>\$152,905</u>	<u>\$56,449</u>	<u>\$39,695</u>	<u>\$1,230,608</u>

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Notes to Consolidated Financial Statements
Years Ended June 30, 2021 and 2020

Operating expenses by functional category for the year ended June 30, 2020 are as follows (*dollars in thousands*):

	Instruction & Dpt Research	Sponsored Research	SEI/ARM Sponsored Research	Admin & Instl Support	Academic Support	Student Services	Auxiliary	Total
Salaries	\$ 307,203	\$ 145,360	\$ 84,569	\$ 81,217	\$ 70,879	\$29,977	\$ 3,140	\$ 722,345
Benefits	65,157	19,575	21,589	18,038	20,567	8,551	815	154,292
Other Operating Expenses	68,852	61,993	47,875	38,702	57,073	17,015	36,182	327,692
Depreciation and Amortization	27,138	13,821	5,828	5,100	9,668	7,669	7,554	76,778
Interest	3,617	1,842	777	680	1,289	1,022	3,240	12,467
Total	<u>\$ 471,967</u>	<u>\$ 242,591</u>	<u>\$ 160,638</u>	<u>\$ 143,737</u>	<u>\$159,476</u>	<u>\$64,234</u>	<u>\$50,931</u>	<u>\$1,293,574</u>

Natural expenses attributable to more than one functional expense category are allocated using a variety of cost allocations such as square footage, time, and effort.

Total fundraising expense of \$27.6 million and \$33.4 million (\$24.7 million and \$30.6 million in administration and institutional support) is included above for the years ended June 30, 2021 and 2020, respectively.

15. Commitments and Contingencies

Carnegie Mellon is a defendant in a number of legal actions seeking damages and other relief. While the final outcome of each action cannot be determined at this time, management records a reserve in operating activities for those cases in which the loss is both probable and estimable. For the other legal actions that are not reserved, legal counsel and management are of the opinion that the liability, if any, will not have a material effect on Carnegie Mellon's consolidated financial statements.

Carnegie Mellon receives significant financial assistance from the federal government, including the sponsorship of federal research projects. Research grants and contracts normally provide for the recovery of direct and indirect costs. Entitlement to the recovery of the applicable direct and related indirect costs is generally conditional upon compliance with the terms and conditions of the grant agreements and applicable federal regulations, including the expenditure of the resources for eligible purposes. Substantially all grants and Carnegie Mellon's indirect cost rate are subject to financial and compliance reviews and audits by the grantors. In management's opinion, the likelihood of an adverse material outcome upon its financial position from those reviews and audits is remote.

Alternative investment partnership commitments totaled \$599.1 million at June 30, 2021. These funds may be drawn down at the request of the general partners over the course of the next several years. Carnegie Mellon expects to finance these commitments through available cash and expected proceeds from the sales of securities.

At June 30, 2021 and 2020 Carnegie Mellon had contractual obligations of approximately \$82.5 million and \$29.5 million, respectively, in connection with major construction projects.

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Notes to Consolidated Financial Statements

Years Ended June 30, 2021 and 2020

16. Retirement Plans and Other Post-Employment Benefits

Carnegie Mellon sponsors two defined contribution retirement plans for eligible faculty and staff, healthcare plans for retirees, and participates in a multi-employer pension fund for union staff. Retirement plan expense for the years ended June 30, 2021 and 2020 totaled \$41.9 million and \$37.7 million, respectively. Carnegie Mellon contributed \$0.9 million to the Central Pension Fund of the International Union of Operating Engineers, a multi-employer plan in fiscal years 2021 and 2020, respectively. See below for a discussion of the assets held in trust to fund post-retirement healthcare and other post-employment benefits.

Carnegie Mellon provides certain health care benefits for eligible retired employees. The liability for post-retirement benefit obligations is recorded in the consolidated statements of financial position in accounts payable and other liabilities.

Net periodic benefit costs recognized in the consolidated statements of activities totaled \$1.7 million and \$1.1 million for the years ended June 30, 2021 and 2020, respectively. Other gains/(losses) in benefit obligations recognized in non-operating activities totaled \$0.2 million and (\$3.4 million) for the years ended June 30, 2021 and 2020, respectively. Cumulative net actuarial gains of \$10.8 million and \$10.6 million have been recognized as of June 30, 2021 and 2020, respectively.

During fiscal year 2022, amortization of \$0.6 million actuarial gain is expected to be recognized as components of net periodic benefit cost. The discount rate used in determining the net periodic benefit cost was 3.1% and 3.7% for the years ended June 30, 2021 and 2020, respectively.

The reconciliation of the accumulated benefit obligation and funded status at June 30 is as follows (*dollars in thousands*):

	2021	2020
Benefit obligation, beginning of year	\$ 24,734	\$ 20,594
Service cost	1,486	1,159
Interest cost	807	799
Assumption changes and actuarial gain/loss	(747)	2,530
Benefit payments	(401)	(348)
Benefit obligation, end of year	<u>\$ 25,879</u>	<u>\$ 24,734</u>
Fair value of plans' assets	<u>-</u>	<u>-</u>
Funded status	<u>\$ 25,879</u>	<u>\$ 24,734</u>

The assumed discount rate used for calculating the benefit obligation for the fiscal years ended June 30, 2021 and 2020 was 3.1%. An annual rate of increase in the per capita cost of covered health care benefits for the fiscal years ended June 30, 2021 and 2020 of 6.25% and 6.5%, respectively, was assumed. For the fiscal years ended June 30, 2021 and 2020, the rate was assumed to decrease gradually to 5.0% by 2026 and remain at 5.0% thereafter.

Carnegie Mellon University
Notes to Consolidated Financial Statements
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Expected benefits to be paid in future fiscal years are as follows (*dollars in thousands*):

June 30	Retiree Contributions	Employer Payments	Total Expected Benefit Payments
2022	\$ 709	\$ 419	\$ 1,128
2023	1,048	596	1,644
2024	1,368	760	2,128
2025	1,650	896	2,546
2026	1,904	1,003	2,907
2027-2031	12,591	5,851	18,442

In conjunction with an agreement made with the federal government, Carnegie Mellon has established a separate trust, which is available to general creditors only in the event of insolvency. Assets in the trust to fund post-retirement health care and other post-employment benefits are \$22.7 million as of June 30, 2021 and 2020. These assets are reflected as investments in the accompanying consolidated statements of financial position.

17. Related Party Transactions

Sponsored projects revenue for fiscal years 2021 and 2020 includes \$3.0 million and \$3.4 million respectively, received from MPC, a nonprofit related entity of Carnegie Mellon and the University of Pittsburgh. The revenue primarily represents federal funding from various contracts received by MPC, for which MPC has subcontracted to Carnegie Mellon for support of a supercomputer and related activities.

Carnegie Mellon is an owner as a tenant in common of the Bellefield Boiler Plant ("Bellefield") for the purpose of sharing of the steam produced by the plant. Bellefield operates such that all of the operating costs of the plant are passed to the owners in the form of steam prices. Carnegie Mellon is obligated for a percent of liabilities based upon use of steam produced by Bellefield. As of June 30, 2021 and 2020, Carnegie Mellon's percentage obligation was 15.2%. Included in other assets is \$1.0 million and \$0.6 million of advances resulting primarily from operating surpluses at June 30, 2021 and 2020, respectively. Included in occupancy and related expenses is \$4.0 million and \$3.7 million for steam costs paid to Bellefield for the years ended June 30, 2021 and 2020, respectively.

Carnegie Mellon is one of fifteen designated institutions of higher learning and other charitable organizations named as beneficiaries of The Dietrich Foundation (the "Foundation") created by William S. Dietrich II pursuant to an Amended and Restated Declaration of Trust dated August 23, 2011. The Foundation came into existence as a Pennsylvania charitable trust on October 6, 2011 and was granted exemption from Federal income tax under section 501(c)(3) of the Internal Revenue Code, specifically as a Type I charitable supporting organization under section 509(a)(3). The Foundation's primary mission is to provide ongoing and increasing financial support to a number of educational institutions, largely in the greater Pittsburgh area, including Carnegie Mellon. The Foundation is governed by a Board of nine (9) Trustees, of which two (2) are appointed by Carnegie Mellon.

The Foundation is expected to make annual distributions that will be allocated among the pre-specified supported organizations. As of June 30, 2021, Carnegie Mellon's distribution share remained at 53.5%.

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The distributions to Carnegie Mellon have been recorded as contribution revenue with donor restrictions as received and held in endowment net assets with donor restrictions designated as Dietrich Foundation Endowment Funds. The endowed funds will be managed in accordance with Carnegie Mellon's generally applicable investment and disbursement policies in effect for its other permanently restricted endowments. Distributions made from the endowed funds will be used for the purposes authorized by the Foundation's Trustees. Distributions of \$17.3 million and \$15.2 million were received in fiscal years 2021 and 2020, respectively.

18. Guarantees

In the ordinary course of business, Carnegie Mellon engages in transactions with third parties involving the provision of goods and/or services. The contracts for these transactions may require Carnegie Mellon to indemnify the third party or others under certain circumstances. The terms of indemnity vary from contract to contract. The amount of the liability associated with such indemnification obligations, if any, is not expected to be material.

Carnegie Mellon has contractually agreed to indemnify its trustees and officers, and in some cases its employees and agents, against certain liabilities incurred as a result of their service on behalf of or at the request of Carnegie Mellon and also advances, on behalf of those indemnified, the costs incurred by them in defending certain claims. Carnegie Mellon carries insurance that limits its exposure for this indemnification obligation. The amount of the liability associated with any known pending or threatened claims covered by this indemnification obligation, if any, is not expected to be material.

Carnegie Mellon has contractually agreed to indemnify specified parties in connection with bond offerings in which it has been involved. The indemnification obligation covers losses, claims, damages, liabilities and other expenses incurred by the underwriters as a result of any untrue statements or material omissions made by Carnegie Mellon in connection with the bond offerings. The amount of the liability associated with any known pending or threatened claims covered by this indemnification obligation, if any, is not expected to be material.

19. COVID-19 Pandemic

In March 2020, the World Health Organization declared the novel coronavirus ("COVID-19") a pandemic. As a result of the pandemic, in March 2020, the university suspended in-person education and other campus-based activities and provided a combination of credits and refunds of residence and dining revenues to students aggregating \$8.4 million. During fiscal 2021, the university operated under a modified campus posture, utilizing a hybrid education model, de-densified residence and dining facilities, and on-campus core campus based activities. Beginning July 1, 2021, the university is operating under a transitional campus posture, with instruction predominately in person, increased residence and dining facility density, and the transition of other campus-based activities to on campus with flexible arrangements. The university provided emergency financial aid to students under the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) totaling \$2.9 million and \$1.1 million during the years ended June 30, 2021 and 2020, respectively. The university recognized revenue from federal and other governmental funding related to the COVID-19 pandemic totaling \$7.3 million for the year ended June 30, 2021, which is included in other revenue sources on the consolidated statement of activities. While future impacts of the COVID-19 pandemic cannot be quantified at this time, the university continues to monitor legislative developments, future relief

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funding opportunities and directives from federal, state and local governments and, if necessary, is prepared to take additional measures to ensure the health and welfare of the university.

20. Subsequent Events

As described in Note 8, the university holds an equity investment in Duolingo resulting from a technology license agreement. On July 28, 2021, Duolingo completed an initial public offering (IPO) at a price per share of \$102. The university's ability to sell this investment is subject to a 180-day lockup period as a result of an agreement with the IPO underwriters.

The university has performed an evaluation of subsequent events through October 27, 2021, the date on which the consolidated financial statements were issued.

Schedule of Expenditures of Federal Awards

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
US DEPARTMENT OF HOMELAND SECURITY							
Disaster Grants- Public Assistance	97.036		402,491	Pennsylvania Emergency Management Agency		402,491	
US DEPARTMENT OF HEALTH AND HUMAN SERVICES							
Child Care and Development Block Grant	93.575		319,400	PA Office of Child Development and Early Learning		319,400	
US DEPARTMENT OF EDUCATION							
COVID-19 - Education Stabilization Fund - Student Portion	84.425E	2,915,387				2,915,387	
COVID-19 - Education Stabilization Fund - Institutional Portion	84.425F	16,601,294				16,601,294	
COVID-19 - Governor's Emergency Education Relief Fund	84.425C		112,614	Commonwealth of Pennsylvania	251-20-146	112,614	
Subtotal 84.425		\$ 19,516,681	\$ 112,614			\$ 19,629,295	\$ -
STUDENT FINANCIAL ASSISTANCE CLUSTER							
US DEPARTMENT OF EDUCATION							
Office Of Federal Student Aid							
Federal Supplemental Educational Opportunity Grants (FSEOG)	84.007	2,077,677	-			2,077,677	-
Federal Work-Study Program (FWS)	84.033	1,034,451	-			1,034,451	-
Federal Perkins Loan Program	84.038	9,146,494	-			9,146,494	-
Federal Pell Grant Program (Pell)	84.063	5,183,918	-			5,183,918	-
Federal Direct Student Loans (Direct Loan)	84.268	44,303,258	-			44,303,258	-
Total Student Financial Assistance Cluster		\$ 61,745,798				\$ 61,745,798	\$ -
Total US Department of Education		\$ 81,262,479	\$ 112,614			\$ 81,375,093	\$ -
RESEARCH AND DEVELOPMENT CLUSTER							
US DEPARTMENT OF AGRICULTURE							
National Institute Of Food and Agriculture							
Specialty Crop Research Initiative	10.309	-	(181)	Cornell University	7640110607	(181)	-
Agriculture and Food Research Initiative (AFRI)	10.310	866,395	-			866,395	-
Total US Department Of Agriculture		\$ 866,395	\$ (181)			\$ 866,214	\$ -
US DEPARTMENT OF COMMERCE							
National Institute Of Standards and Technology (NIST)							
Measurement and Engineering Research Standards	11.609	932,442	-			932,442	-
Measurement and Engineering Research Standards	11.609	-	197,073	Iowa State University	022284A	197,073	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	31,121	Iowa State University	4261702A	31,121	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	(34)	University Of Delaware	49409	(34)	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	261,815	University Of Delaware	PC10038	261,815	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	4,456	University Of Delaware	PC10039	4,456	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	132,368	University Of Delaware	PC22105	132,368	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	97,338	University Of Delaware	PC22109	97,338	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	147	University Of Delaware	PO0000055090	147	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	118,820	University Of Delaware	PO58088PC31127	118,820	-
Total US Department Of Commerce		\$ 932,442	\$ 843,104			\$ 1,775,546	\$ -
DEPARTMENT OF DEFENSE							
DEPARTMENT OF THE NAVY							
Intergovernmental Personnel Act (IPA) Agreement	12.1141325	262,695	-			262,695	-
US Navy Fellow	12.A024370	26,098	-			26,098	-
Built-In Adaptive Systems Testing BAST	12.N0042121C0002	447,008	-			447,008	-
Sharpfocus: Attaining Sub-Millimeter And Millisecond Resolution For Noninvasive Stimulation And Sensing	12.N6523619C8017	1,986,017	-			1,986,017	69,295
A18008 DARPA Ascot	12.RD	-	83,162	Azure Summit Technology Inc.	10109001CMU	83,162	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
CUES: Cyber-Mediated Usable Emotional Sensors	12.RD		31,534	Carley Technologies Inc.	A023881	31,534	-
Glow II	12.RD	-	20,715	Charles River Analytics Inc.	SC1719002	20,715	-
N151-009 Sbir-Phase II: Novel Isogeometric Analysis Based Automation Of High-Fidelity Finite Element Analysis Model Creation From Computer Aided Design	12.RD	-	7,073	Global Engineering And Materials Inc.	FFP2017CMU0807	7,073	-
Draping Simulation Using Isogeometric Shell Structure	12.RD	-	(2)	Global Engineering And Materials Inc.	FFP2018CMU1015	(2)	-
Hexahedral Dominant Auto-Mesh Generator	12.RD	-	70,000	Global Engineering And Materials Inc.	FFP2020CMU0427	70,000	-
Recognizing Gz Campaigns With Optimal Active Sensing (Rose)	12.RD	-	43,484	Lockheed Martin Corp	PO4104105008	43,484	-
Rapid, Low Cost, High-Quality Component Qualification Using Multi-Scale, Multi-Physics Analytical Toolset For The Optimization Of Metal Additive Manufacturing Process Parameters	12.RD	-	118,732	Technical Data Analysis, Inc.	210800101	118,732	-
Machine Learning Tools To Optimize Metal Additive Manufacturing Process Parameters To Enhance Fatigue Performance Of Aircraft Components	12.RD	-	42,000	Technical Data Analysis, Inc.	212100101	42,000	-
Office Of the Chief Of Naval Research			-				
Basic and Applied Scientific Research	12.300	10,374,783	-			10,374,783	1,214,710
Basic and Applied Scientific Research	12.300	-	364,604	Boston University	4500002946	364,604	-
Basic and Applied Scientific Research	12.300	-	224,820	Georgia Institute of Technology	AWD102969G1	224,820	-
				Johns Hopkins University Applied Physics Laboratory	146615	80,675	-
Basic and Applied Scientific Research	12.300	-	80,675			80,675	-
Basic and Applied Scientific Research	12.300	-	51,973	Northwestern University	60053155CMU	51,973	-
Basic and Applied Scientific Research	12.300	-	56,780	Pennsylvania State University	S000296ONR	56,780	-
Basic and Applied Scientific Research	12.300	-	34,412	South Dakota School Of Mines & Technology	SDSMTCMU1905	34,412	-
Basic and Applied Scientific Research	12.300	-	220,474	The Regents Of The University Of California	1015GTA244	220,474	-
Basic and Applied Scientific Research	12.300	-	198,354	University Of Maryland	43350Z8665001	198,354	-
Basic and Applied Scientific Research	12.300	-	148,045	William Marsh Rice University	R1A841	148,045	-
Advanced Research Projects Agency			-				
Research and Technology Development	12.910	9,677	-			9,677	-
Research and Technology Development	12.910	-	437,803	The Regents Of The University Of California	00010216	437,803	-
Total Department Of the Navy		\$ 13,106,278	\$ 2,234,638			\$ 15,340,916	\$ 1,284,005

DEPARTMENT OF THE ARMY

U.S. Army War College Fellows W/Institute for Politics and Strategy	12.FP000000184	19,038	-			19,038	-
Army War College Fellowships FY2018-2021	12.FP000000085	38,058	-			38,058	-
Unmanned and Autonomous Systems Test (UAST) Science & Technology (S&T) - Robustness Inside-Out Testing (RIOT): Automated White-Box Stress Testing Of UAS Software	12.W900KK16C0006	429,881	-			429,881	39,373
Autonomous Delivery Of Trauma Care In The Field	12.W81XWH19C0083	779,551	-			779,551	-
Enabling Enhanced Situational Awareness And Human Augmentation Through Efficient Autonomous Systems	12.W911QX20D0008	126,334	-			126,334	-
Developing an A41 Innovation Framework for the US Army	12.W911NF20F0015	1,107,372	-			1,107,372	-
PMX	12.W911NF20F0015	658,320	-			658,320	-
Prometheus II: Leveraging Synthetic Data To Enhance Computer Vision Algorithmic Performance (A41 Innovation Framework IDIQ Project)	12.W911NF20F0015	689,530	-			689,530	-
Synthetics And Low Shot Object Recognition	12.W911NF20F0015	136,620	-			136,620	-
Toward Streamlined Collaborative AI Development	12.W911NF20F0025	1,124,314	-			1,124,314	-
ATR-MCAS Automate Target Recognition Using Mobile Cooperative And Autonomous Sensor	12.W911NF20F0017	7,840,606	-			7,840,606	277,950
Accelerating Human Augmentation Through Artificial Intelligence & Autonomous Systems - Efficient Human Augmentation Of Visual AI For Operational Success	12.W911QX20F0106	1,049,573	-			1,049,573	383,794
NREC Support of the GVSC GVR Robotics Technology Toolkit	12.RD	-	425,002	DCS Corporation	DCSS19020PO210994	425,002	-
NREC SUPPORT FOR THE AGVRA EFFORT	12.RD	-	64,146	DCS Corporation	DCSS19020PO211001	64,146	-
NREC Support of the GVSC GVR Robotics Technology Toolkit	12.RD	-	59,026	DCS Corporation	DCSS19020PO211008	59,026	-
NREC Support of the DARPA Assured Autonomy Program	12.RD	-	130,234	DCS Corporation	DCSS19020PO211021	130,234	-
Scorpion: Continuing Development, Testing, And Support Phase 4	12.RD	-	81,818	Fibertek, Inc.	PO820732101	81,818	-
				Semiconductor Equipment And Materials International	FT1921P208	13,836	-
CMOS MEMS High-Stability Accelerometer Through Machine Learning	12.RD	-	13,836			13,836	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Mat Sinking Barge Prototype Component & Prototype Process Control Development, Manufacture And Testing	12.RD	-	3,949,472	SIA Solutions LLC	2111MDCARMOR12018	3,949,472	-
Trauma Care In a Ruckshack (TRACIR)	12.RD	-	297,766	University Of Pittsburgh	AWD000003811	297,766	-
US Army Medical Command			-			-	-
Military Medical Research and Development	12.420	306,234	-			306,234	65,377
Military Medical Research and Development	12.420	-	38,955	Boston University	4500002827	38,955	-
Military Medical Research and Development	12.420	-	42,301	University Of Pittsburgh	AWD000029514170191	42,301	-
US Army Materiel Command			-			-	-
Basic Scientific Research - RECOVERY	12.431	10,762,253	-			10,762,253	2,940,855
Basic Scientific Research - RECOVERY	12.431	-	194,014	California Institute of Technology	S429044	194,014	-
Basic Scientific Research - RECOVERY	12.431	-	16,942	Duke University	3130860	16,942	-
Basic Scientific Research - RECOVERY	12.431	-	164,413	Duke University	3131034	164,413	-
Basic Scientific Research - RECOVERY	12.431	-	418,953	National Center for Manufacturing Sciences	201909130715	418,953	-
Basic Scientific Research - RECOVERY	12.431	-	76,181	Princeton University	SUB0000251	76,181	-
Basic Scientific Research - RECOVERY	12.431	-	160,943	University of Central Florida	64016420	160,943	-
Basic Scientific Research - RECOVERY	12.431	-	107,778	University Of Illinois At Urbana-Champaign	09243017089	107,778	-
Basic Scientific Research - RECOVERY	12.431	-	124,986	University Of Southern California	92688877	124,986	-
Basic Scientific Research - RECOVERY	12.431	-	21,190	University Of Sydney	G207324	21,190	-
Basic Scientific Research - RECOVERY	12.431	-	51,651	University Of Texas Dallas	1806008	51,651	-
Office Of the Secretary Of Defense			-			-	-
Basic, Applied, and Advanced Research in Science and Engineering	12.630	377,921	-			377,921	181,534
Basic, Applied, and Advanced Research in Science and Engineering	12.630	-	30,320	Pennsylvania State University	S000283ARMY	30,320	-
Basic, Applied, and Advanced Research in Science and Engineering	12.630	-	755,670	Pennsylvania State University	4938CMUARMY0045	755,670	-
	12.630	-	90,693	University Of Pennsylvania	581208	90,693	-
Basic, Applied, and Advanced Research in Science and Engineering (Advanced Robotics for Manufacturing Institute - ARM)	12.630	18,160,301	-			18,160,301	-
Research and Technology Development	12.910	684,867	-			684,867	-
Research and Technology Development	12.910	-	153,931	University of Maryland	86179Z9448202	153,931	-
Research and Technology Development	12.910	-	107,300	University Of Pittsburgh	00584714139331	107,300	-
Total Department Of the Army		\$ 44,290,773	\$ 7,577,521			\$ 51,868,294	\$ 3,888,883
DEPARTMENT OF THE AIR FORCE							
SEI 2015 Contract	12.FA870115D0002	119,872,117	-			119,872,117	2,694,195
IPA-018 Rhoades	12.IPA-018	267,251	-			267,251	-
IPA-019 Boleng	12.IPA-019	146,167	-			146,167	-
IPA-020 Cunningham	12.IPA-020	157,654	-			157,654	-
The Causal Modeling for Knowledge Transfer, Exploration, and Temporal Simulation	12.RD	-	28,139	BAE Systems	975028	28,139	-
Cognitive Decentralized Classification Onboard	12.RD	-	5,615	BAE Systems	1018286	5,615	-
Multi-Domain Adaptive Request Service (MARS)	12.RD	-	457,189	BAE Systems	1038072	457,189	-
COGDECON: Cognitive Decentralized Classification Onboard	12.RD	-	6,116	BAE Systems	10182863	6,116	-
Information Extraction For New Emerging Noisy User-Generated Micro Text	12.RD	-	34,385	Intuidex Inc.	A023918	34,385	-
Deep Neural Networks For Speech Recognition	12.RD	-	7,744	Massachusetts Institute Of Technology	PO700509480	7,744	-
Autonomous Search And Rescue (Asar) With Multimodal Identification For Large Scale Operations System	12.RD	-	45,599	Perceptronics Solutions Inc.	1043097	45,599	-
Air Force STTR Service Design Accelerator	12.RD	-	(33)	Skylight Digital	A025312	(33)	-
A Software Toolkit For Predicting The Neural Signatures Of Cognitive States Using EEG To Identify Critical Events In An Extended Task	12.RD	-	208,349	Soar Technology Inc.	SC20001	208,349	-
ML-Driven Search For Colloidal Cds Clusters Based Quantum Dots With Desired Absorption Spectra	12.RD	-	49,946	UES, Inc.	S114006008	49,946	-
Expressive TTS for Machine Translation	12.RD	-	133,157	University Of Southern California	88509027	133,157	-
Cognito Veritas: Scaling the Cognitive Foundations of Online Social Behavior	12.RD	-	155,873	University of Virginia	GG12204PO2169967	155,873	-
NIAP Reference Mobile Apps & Developer Training	12.RD	-	7,046	Viaforencics	1043016	7,046	-
NIAP Reference Mobile Apps & Developer Training	12.RD	-	7,954	Viaforencics	1043017	7,954	-
Information Maneuver Games And Bots	12.RD	-	153,261	Wright State Applied Research Corporation	11076CMU	153,261	-
Office of the Chief of Naval Research			-			-	-
Basic and Applied Scientific Research	12.300	2,001,927	-			2,001,927	362,524

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Basic and Applied Scientific Research	12.300	-	23,176	Duke University	3131041	23,176	-
US Army Materiel Command		-	-			-	-
Basic, Applied, and Advanced Research in Science and Engineering	12.630	341,813	-			341,813	-
Material Command		-	-			-	-
Air Force Defense Research Science Program	12.800	5,032,716	-			5,032,716	316,949
Air Force Defense Research Science Program	12.800	-	98,923	Aim Photonics	1043046	98,923	-
Air Force Defense Research Science Program	12.800	-	217,567	California Institute Of Technology	681098507S414837	217,567	-
Air Force Defense Research Science Program	12.800	-	96,815	California Institute Of Technology	S421546	96,815	-
Air Force Defense Research Science Program	12.800	-	88,921	Pennsylvania State University	S000728AFQSR	88,921	-
Air Force Defense Research Science Program	12.800	-	133,391	Syracuse University	2871704936S01	133,391	-
Air Force Defense Research Science Program	12.800	-	150,679	University Of Pittsburgh	CNVA00617584144221	150,679	-
Air Force Defense Research Science Program	12.800	-	321,213	University Of San Diego	A210038S001	321,213	-
Air Force Defense Research Science Program	12.800	-	49,179	University Of San Diego	A210038S002	49,179	-
Air Force Defense Research Science Program	12.800	-	30,077	University Of Texas At Austin	UTA20001226	30,077	-
Air Force Defense Research Science Program	12.800	-	72,665	University Of Texas At El Paso	226030260A	72,665	-
Air Force Defense Research Science Program	12.800	-	74,838	University Of Washington	UWSC10811BPO35507	74,838	-
Air Force Defense Research Science Program	12.800	-	251,511	University Of Washington	UWSC11380	251,511	-
Air Force Defense Research Science Program	12.800	-	195,213	University Of Washington	UWSC11418BPO43188	195,213	-
Advanced Research Project Agency		-	-			-	-
Research and Technology Development	12.910	3,152,982	-			3,152,982	-
Research and Technology Development	12.910	-	104,846	University Of Michigan	SUBK00009959Po3005523666	104,846	-
Research and Technology Development	12.910	-	133,209	University Of Southern California	124133807	133,209	-
Research and Technology Development	12.910	-	115,195	University Of Tulsa	142120354894802	115,195	-
Total Department of the Air Force		\$ 130,972,627	\$ 3,457,758			\$ 134,430,385	\$ 3,373,668

DEFENSE ADVANCED RESEARCH PROJECT AGENCY (DARPA)

Intergovernmental Personnel Act (IPA) Agreement	12.A023514	316,364	-			316,364	-
Intergovernmental Personnel Act Agreement	12.A025215	294,636	-			294,636	-
A Robust And Adaptive Agent That Supports High Performance Teams	12.HR001120C0036	1,096,589	-			1,096,589	259,135
Agile Dimorphic Execution	12.HR001117C0051	994,825	-			994,825	-
Phase-Change Ratcheting Actuators For High Work Density (PRAWN)	12.HR001119C0037	1,670	-			1,670	-
AI Driven Investigation Of The Physics Of Field-Matter Coupling For Materials Synthesis FP00001704	12.HR00111990030	11,869	-			11,869	-
The Physics of Artificial Intelligence	12.RD	-	1,405	Aimdyn Inc.	1042845	1,405	-
Network Back-Haul Layers Architecture	12.RD	-	78,680	BAE Systems	970997	78,680	-
SAGAMORE: Stochastic Adaptive Game Analytic Multi-Player Optimal Resilient Executive	12.RD	-	3,774	BAE Systems	1025530	3,774	-
Fundamental Research On The Transistors And Interconnects For THZ Transistors SBIR (Phase 2)	12.RD	-	62,102	Carley Technologies Inc.	A021897	62,102	-
Assured Micropatching (AMP) Technical Area (TA) #2: Assured Recompile	12.RD	-	160,272	Charles Stark Draper Laboratory Inc.	SC0010000001354	160,272	-
NTTX Powered By Spiral: Bridging Palisade To Laws	12.RD	-	3,133	Duality Technology Inc.	1043212	3,133	-
Predicting Effective Performance In Teams	12.RD	-	153,532	Florida Institute For Human & Machine Cognition	HR001120C0037	153,532	-
Assured Autonomy: Le-CPS Modeling & Verification	12.RD	-	(1,018)	HRL Laboratories LLC	17090181689USPOLINE1	(1,018)	-
Assured Autonomy - Efficient Runtime Monitoring	12.RD	-	65,271	HRL Laboratories LLC	17090181689USPOLINE10	65,271	-
Assured Autonomy - Learning Safety Constraints	12.RD	-	36,185	HRL Laboratories LLC	17090181689USPOLINE11	36,185	-
Assured Autonomy - Dynamic Assurance	12.RD	-	11,636	HRL Laboratories LLC	17090181689USPOLINE12	11,636	-
Assured Autonomy - LE-CPS Modeling & Verification	12.RD	-	81,339	HRL Laboratories LLC	17090181689USPOLINE13	81,339	-
Assured Autonomy - Cps Behavior Modeling & Control	12.RD	-	59,917	HRL Laboratories LLC	17090181689USPOLINE14	59,917	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Assured Autonomy - Concurrency & LE-CPS	12.RD	-	84,895	HRL Laboratories LLC	17090181689USPOLINE15	84,895	-
Assured Autonomy - Efficient Runtime Monitoring	12.RD	-	41,828	HRL Laboratories LLC	17090181689USPOLINE16	41,828	-
Assured Autonomy - Learning Safety Constraints	12.RD	-	28,400	HRL Laboratories LLC	17090181689USPOLINE17	28,400	-
Assured Autonomy - Dynamic Assurance	12.RD	-	3,683	HRL Laboratories LLC	17090181689USPOLINE18	3,683	-
Assured Autonomy LE-CPS Modeling & Verification	12.RD	-	89,911	HRL Laboratories LLC	17090181689USPOLINE7	89,911	-
Assured Autonomy - CPS Behavior Modeling & Control	12.RD	-	107,002	HRL Laboratories LLC	17090181689USPOLINE8	107,002	-
Assured Autonomy - Concurrency & LE-CPS	12.RD	-	10,432	HRL Laboratories LLC	17090181689USPOLINE9	10,432	-
Cognitive Aid For Vulnerability Analysis	12.RD	-	140,127	HRL Laboratories LLC	190462X2165US	140,127	-
Common Ground Learning and Explanation	12.RD	-	175,787	Palo Alto Research Center	313533	175,787	-
Synergy of Learning Inputs and Decisions for Machine Learning	12.RD	-	344,138	Perspecta Labs	PO0019177	344,138	-
Obtaining Multipath & Non-Line-Of-Sight Information By Sensing Coherence & Intensity With Emerging Novel Techniques	12.RD	-	(35,276)	Southern Methodist University	G0015347520	(35,276)	-
D3M Program	12.RD	-	85,494	SRI International	21485	85,494	-
End-To-End Machinery For Proving Highly Sensitive Application-Oriented Statements In Zero-Knowledge (Emphasize)	12.RD	-	33,823	SRI International	53978	33,823	-
Multi-Media Analytics Leading To Intent And Semantic Evidence (Malise)	12.RD	-	149,565	SRI International	PO049199	149,565	-
ELICIT: A System For Extracting And Organizing Causal Information	12.RD	-	86,768	University Of Southern California	93146501	86,768	-
Active Illumination And Imaging Across Millisecond To icosend Time Scales							
For General LOS/NLOSScene Understanding	12.RD	-	10,163	University Of Wisconsin-Madison	832K112	10,163	-
Office of the Chief of Naval Research			-			-	-
Basic and Applied Scientific Research	12.300	-	138,996	AFRL- Rome, NY	FA87501520281	138,996	13,222
Basic and Applied Scientific Research	12.300	-	(14,900)	AFRL- Rome, NY	FA87501620042	(14,900)	-
Basic and Applied Scientific Research	12.300	-	411,526	AFRL- Rome, NY	FA87501720130	411,526	-
Basic and Applied Scientific Research	12.300	-	93,338	AFRL- Rome, NY	FA87501520277	93,338	-
Scientific Research - Combating Weapons of Mass Destruction	12.351	195,734	-			195,734	-
Advanced Research Projects Agency			-			-	-
Research and Technology Development	12.910	2,730,857	-			2,730,857	781,672
Research and Technology Development	12.910	-	30,404	Arizona State University	ASUB00000086	30,404	-
Research and Technology Development	12.910	-	266,967	Department of the Interior	D19AP00033	266,967	-
Research and Technology Development	12.910	-	5,423,877	Semiconductor Research Corp	2018JU2779	5,423,877	2,956,004
Research and Technology Development	12.910	-	2,009,890	SPAWAR Sys. Cen. San Diego	N660011724064	2,009,890	839,910
Research and Technology Development	12.910	-	31,168	The Regents Of The University Of California	00009973	31,168	-
Research and Technology Development	12.910	-	79,849	The Regents Of The University Of California	0145GYA173	79,849	-
Research and Technology Development	12.910	-	189,078	Toyota Technological Institute at Chicago	T00311601	189,078	-
Research and Technology Development	12.910	-	341,603	University Of California - San Francisco	11331SC	341,603	-
Research and Technology Development	12.910	-	522,531	University of Pittsburgh	AWD000015934160525	522,531	-
Research and Technology Development	12.910	-	127,363	University Of Pittsburgh	AWD000015934160525A	127,363	-
Total DARPA		\$ 5,642,544	\$ 11,724,658			\$ 17,367,202	\$ 4,849,943
US MARINE CORPS							
Defense Threat Reduction Agency							-
Office of the Secretary of Defense							-
Scientific Research - Combating Weapons of Mass Destruction	12.351	1,830,721	-			1,830,721	498,174
Total US Marine Corps		\$ 1,830,721	\$ -			\$ 1,830,721	\$ 498,174
DEPARTMENT OF DEFENSE - OTHER							
National Security Agency							
CMU Science of Security Lablet: Taking on the Hard Problems	12.H9823018D0008	968,640	-			968,640	81,923
Improved Nowcasting Via Adaptive Boosting Of Highly Variable Biosurveillance Data Sources	12.HDTRA118C0008	2,232	-			2,232	223,864
U.S. Special Operations Command's Sovereign Challenge Program Content Support Proposal From CMU	12.RD	-	55,852	Gemini Industries Inc	PQ2019030001	55,852	-
High Performance Exoskeleton	12.RD	-	36,421	Intelligent Automation Inc.	24331	36,421	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Development of Speech Processing Technologies with Improved Performance in Various Sponsor Specific Audio Domains, such as Far-Field Microphone Speech	12.RD	-	283,858	Johns Hopkins University Applied Physics Laboratory	158373	283,858	-
Community Investment	12.600	219,138	-			219,138	-
Community Investment	12.600	-	65,407	Catalyst Connection	PO00003510CATALYST21011	65,407	-
Office of the Secretary of Defense		-	-			-	-
National Security Agency		-	-			-	-
Information Security Grants	12.902	209,035	-			209,035	-
US Army Medical Command		-	-			-	-
Office of Economic Adjustment		-	-			-	-
Economic Adjustment Assistance for State Governments	12.617	-	109,959	University Of Utah	10052452CMU	109,959	-
Total Department of Defense - Other		\$ 1,399,045	\$ 551,497			\$ 1,950,542	\$ 305,787
TOTAL - DEPARTMENT OF DEFENSE		\$ 197,241,988	\$ 25,546,072			\$ 222,788,060	\$ 14,200,460
INTELLIGENCE ADVANCED RESEARCH PROJECTS ACTIVITY (IARPA)							
Deep Intermodal Video Analytics (DIVA)	12.RD	-	1,830,247	Department of the Interior	54548Z9108201	1,830,247	-
High-Fidelity Population-Level Forecasting Models Of Human Psychology And Behavior In Response To Non-Pharmaceutical Interventions And (Dis)Information Campaigns	12.RD	-	94,397	Florida Institute For Human & Machine Cognition	202020092500001	94,397	-
Deep Intermodal Video Analytics (DIVA)	12.RD	-	230,532	University of Maryland	72858Z9321201	230,532	-
Total IARPA		\$ -	\$ 2,155,176			\$ 2,155,176	\$ -
US DEPARTMENT OF EDUCATION							
Graduate Assistance in Areas of National Need	84.200	546,376	-			546,376	-
Institute of Education Sciences		-	-			-	-
Education Research, Development and Dissemination	84.305	890,250	-			890,250	108,665
Education Research, Development and Dissemination	84.305	-	180,834	Middle Tennessee State University	53720777773	180,834	-
Education Research, Development and Dissemination	84.305	-	43,283	Temple University	259746CMU	43,283	-
Education Research, Development and Dissemination	84.305	-	41,801	Wested	S00015106	41,801	-
Total US Department of Education		\$ 1,436,626	\$ 265,918			\$ 1,702,544	\$ 108,665
US DEPARTMENT OF ENERGY (DOE)							
ORISE IC Postdoctoral Research Fellowship-Nick Byrd	81.A025717	10,000	-			10,000	-
Novel Polymer Electrolyte For Solid State Lithium Metal Battery Technology - FP00002306	81.DEFOA0001478	(30,183)	-			(30,183)	-
Driving Powerful Connections In The Allegheny Region For American-Made Solar [Sponsor Title: Power Connectors Supporting The American-Made Challenges]	81.RD	-	31,990	Alliance For Sustainable Energy, Llc	AGJ8823020110306070300	31,990	-
Robust Extreme-Scale Multimodal Structural Learning From Spatio-Temporal Data	81.RD	-	138,191	Brookhaven National Laboratory	384608	138,191	-
High Luminosity (HL) LHC CMS Detector Upgrade Project Endcap Calorimeter.	81.RD	-	207,417	Fermi National Laboratory	654027	207,417	-
Microstructure Features of 304 Stainless Steel and Their Impacts on Corrosion	81.RD	-	3,337	Fluor Marine Propulsion LLC	PO132944	3,337	-
Distortion & Residual Stress Analyses For Metal Add	81.RD	-	69,975	Honeywell Federal Manufacturing & Technologies Llc	N000334546	69,975	-
Latch-Level Locking and Characterization	81.RD	-	11,846	Honeywell Federal Manufacturing & Technologies LLC	N000335747	11,846	-
Advanced Characterization of AM Metals	81.RD	-	39,922	Honeywell Federal Manufacturing & Technologies LLC	N000337848	39,922	-
Latch Based Logic Locking And Characterization	81.RD	-	62,985	Honeywell Federal Manufacturing & Technologies Llc	N000374968	62,985	-
IECM Maintenance	81.RD	-	82,992	Keylogic	PO5000016002	82,992	-
Coal-Fired Power Plants - Modeling a Role for Clean and Reliable Electric Power Generation	81.RD	-	5,385	Keylogic	PO5000016007	5,385	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Research On Reduced Complexity Modeling Of The Electricity System In The United States	81.RD	-	125,006	Keylogic	PO5000016009	125,006	-
Regional Analysis Of NGCC With Dry Cooling Using Iecm	81.RD	-	120,686	Keylogic	PO5000016010	120,686	-
Advanced Optimization Strategies for Bubbling Fluidized Bed Processes in Pyomo	81.RD	-	52,719	Lawrence Berkeley National Laboratory	7208191	52,719	-
Carbon Capture Simulation Initiative (CSSI)	81.RD	-	542,115	Lawrence Berkeley National Laboratory	7208191	542,115	-
Steady State Modeling & Optimization	81.RD	-	109,209	Lawrence Berkeley National Laboratory	7208191	109,209	-
Lighten Up	81.RD	-	(9)	Lawrence Berkeley National Laboratory	7284586	(9)	-
FFTX: A Co-Design Project For Fast Fourier Transforms	81.RD	-	379,998	Lawrence Berkeley National Laboratory	7421006	379,998	-
Expert Review Of Nexant National Interruption Cost Survey Roadmap	81.RD	-	82,927	Lawrence Berkeley National Laboratory	7436048	82,927	-
Machine Learning Platform For Catalyst Design	81.RD	-	47,656	Lawrence Berkeley National Laboratory	7542403	47,656	-
Machine Learning And Artificial Intelligence	81.RD	-	19,589	Lawrence Berkeley National Laboratory	7585823	19,589	-
Dynamics And Control Of Flexible Integrated Energy Systems	81.RD	-	2,260	Lawrence Berkeley National Laboratory	7591022	2,260	-
Study of the Machine Learning (ML) Component of the Enhanced Radiological Nuclear Inspection and Evaluation System (ERNIE)	81.RD	-	152,733	Lawrence Livermore National Laboratory	B622976	152,733	-
Study of Machine Learning (ML) Component of the Enhanced Radiological Nuclear Inspection and Evaluation System (ERNIE)	81.RD	-	41,266	Lawrence Livermore National Laboratory	B631980	41,266	-
Explainable And Small Data machine Learning For Accelerating Feedstock Optimization	81.RD	-	37,985	Lawrence Livermore National Laboratory	B632272	37,985	-
Crystal Structure Prediction of Energetic Materials	81.RD	-	68,376	Lawrence Livermore National Laboratory	B638426	68,376	-
Using High-Throughput Calculations of Solvation Effects to Guide Experimental CO2 Reduction Catalysis Efforts	81.RD	-	79,211	Lawrence Livermore National Laboratory	B640522	79,211	-
Explainable And Small Data Machine Learning For Accelerating Feedstock Optimization	81.RD	-	95,069	Lawrence Livermore National Laboratory	B643510	95,069	-
Molecular Crystal Shape Prediction With Solvent Effects	81.RD	-	72,100	Lawrence Livermore National Laboratory	B644504	72,100	-
Solid Oxide Fuel Cells	81.RD	-	36,892	Leidos Inc.	TASK11PO10220961	36,892	-
Computational Fluid Dynamics Modeling for MemCCSea Hollow Fiber Membranes Task 13	81.RD	-	33,117	Leidos Inc.	TASK13PO10220961	33,117	-
Advanced Reactor Manufacturing	81.RD	-	132,468	Leidos Inc.	TASK1PO10220961	132,468	-
Electrode Structural Evaluation	81.RD	-	89,455	Leidos Inc.	TASK3PO10220961	89,455	-
High Performance Computing Of Electrode Subvolume Performances	81.RD	-	85,138	Leidos Inc.	TASK4PO10220961	85,138	-
CO2 Geochemical Monitoring: Signal Modeling and Application	81.RD	-	93,613	Leidos Inc.	TASK6PO10220961	93,613	-
LANL Institute For Reliable High Performance Information Technology	81.RD	-	145,511	Los Alamos National Laboratory	394903	145,511	-
Versatile Data Management Services For Future DOE Science	81.RD	-	192,592	Los Alamos National Laboratory	520262	192,592	-
Recruitment Support For American Made Challenges Geothermal Manufacturing Prize	81.RD	-	10,000	National Renewable Energy Laboratory (NREL)	SUB202010324	10,000	-
Mechanism Of Photochemical N2 Reduction	81.RD	-	54,257	National Renewable Energy Laboratory (NREL)	XDJ88218501	54,257	-
Get It Moving: Rapid Development Of Hard-To-Control Robots With Optimality Tradeoffs	81.RD	-	4,041	Oak Ridge Institute For Science And Education	SAWDWD00850	4,041	-
NNSA: Usable And Explainable Models For Global-Scale Cross Lingual Proliferation Expertise Identification And Forecasting	81.RD	-	77,321	Pacific Northwest National Laboratory	545998	77,321	-
Sample Efficient Reinforcement Learning for Plasma Control	81.RD	-	65,586	Princeton University	S017741	65,586	-
Archer Working Title: Huttler Run Design	81.RD	-	768,692	Sandia National Laboratories	2068241	768,692	-
Study Of Seismic Gradiometry To Classify The Seismic Source	81.RD	-	34,037	Sandia National Laboratories	2218476	34,037	-
Machine Learning and the Scattering Transformation to Solve the 1D Burger's Equation and the 2D Navier-Stokes Equation	81.RD	-	178,397	Sandia National Laboratories	1501830PO2086574	178,397	-
Raven Test Articles in 16NM and 10NM CMOS	81.RD	-	696,110	Sandia National Laboratories	PO1903629	696,110	-
Learning To Classify Seismic Events	81.RD	-	25,484	Sandia National Laboratories	PO2122946	25,484	-
Tag-Based GPS-D Mobile Network Localization	81.RD	-	50,998	Sandia National Laboratories	PO2185080	50,998	-
Requirements Optimization For Intelligent Scientific Control Systems	81.RD	-	93,870	Sandia National Laboratories	PO2193666	93,870	-
DESC Analysis Coordinator	81.RD	-	68,055	SLAC National Accelerator Laboratory (Stanford)	178958	68,055	-
Dynamic Effects of Technology-Forcing Zev Policy Under Vehicle Fleet Standards	81.RD	-	(1,355)	UT-Battelle	4000173447	(1,355)	-
Study Of Visibility In Unified Model	81.RD	-	47,107	UT-Battelle	4000184221	47,107	-
Office of Science Financial Assistance Program	81.049	4,315,694	-	-	-	4,315,694	105,608
Office of Science Financial Assistance Program	81.049	-	97,520	Brown University	00001295	97,520	-
Office of Science Financial Assistance Program	81.049	-	129,994	Columbia University	2GG01449618	129,994	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Office of Science Financial Assistance Program	81.049	-	93,155	Cornell University	8598911163	93,155	-
Office of Science Financial Assistance Program	81.049	-	4,924	Krell Institute	A020794	4,924	-
Office of Science Financial Assistance Program	81.049	-	94,060	Pennsylvania State University	5923CMUDOE9200	94,060	-
Office of Science Financial Assistance Program	81.049	-	108,852	Pennsylvania State University	S000066USDOE	108,852	-
Office of Science Financial Assistance Program	81.049	-	16,464	Stony Brook University	8552621155763	16,464	-
Office of Science Financial Assistance Program	81.049	-	141,497	University Of Minnesota	A007230202	141,497	-
Office of Science Financial Assistance Program	81.049	-	255,425	University of Pittsburgh	00019794014243	255,425	-
Office of Science Financial Assistance Program	81.049	-	42,030	University of Washington	UWSC10119BPO27412	42,030	-
Office of Science Financial Assistance Program	81.049	-	83,970	University Of Washington	UWSC12398BPO52426	83,970	-
Conservation Research and Development	81.086	1,524,631	-			1,524,631	231,793
Conservation Research and Development	81.086	-	164,859	Eaton Corporation	DEEE0009135PO4135218745	164,859	-
Conservation Research and Development	81.086	-	29,528	University Of Minnesota	A006948101	29,528	-
Renewable Energy Research and Development	81.087	469,600	-			469,600	202,513
Renewable Energy Research and Development	81.087	-	136,106	Dow Chemical Company	62071	136,106	-
				Rapid Advancement In Process Intensification			
Renewable Energy Research and Development	81.087	-	3,147	Deployment (Rapid) Manufacturing Institute	DEEE000788879	3,147	-
Renewable Energy Research and Development	81.087	-	71,018	The Regents of the University of California	A192112S001	71,018	-
Renewable Energy Research and Development	81.087	-	21,421	University Of Kansas	FY2019077	21,421	-
Fossil Energy Research and Development	81.089	177,835	-			177,835	-
Fossil Energy Research and Development	81.089	-	25,398	Liquid Ion Solutions LLC	DEFE0031629SCMU01	25,398	-
Fossil Energy Research and Development	81.089	-	152,123	Pennsylvania State University	S000030USDOE	152,123	-
Fossil Energy Research and Development	81.089	-	72,435	University of Kentucky	PO7800005081	72,435	-
Environmental Remediation and Waste Processing and Disposal	81.104	438,144	-			438,144	-
Defense Nuclear Nonproliferation Research	81.113	169,269	-			169,269	-
Nuclear Energy Research, Development and Demonstration	81.121	-	64,101	Arizona State University	ASUB00000449	64,101	-
Electricity Delivery and Energy Reliability, Research, Development and Analysis	81.122	-	8,947	University of Arkansas	SA1611103	8,947	-
Advanced Research Projects Agency - Energy	81.135	2,789,670	-			2,789,670	660,554
Advanced Research Projects Agency - Energy	81.135	-	54,256	Clemson University	21352192023386	54,256	-
Advanced Research Projects Agency - Energy	81.135	-	149,322	Endeavor Inc.	A022514	149,322	-
Advanced Research Projects Agency - Energy	81.135	-	36,391	General Motors LLC	4300660784	36,391	-
Advanced Research Projects Agency - Energy	81.135	-	195,023	Ionic Materials Inc.	DEAR0000780	195,023	-
Total US DOE		\$ 9,864,660	\$ 7,916,288			\$ 17,780,948	\$ 1,200,468

ENVIRONMENTAL PROTECTION AGENCY (EPA)

Office of Research and Development (ORD)

Chesapeake Bay Program	66.466	-	32,655	Rand Corporation	SCON00000332	32,655	-
Science to Achieve Results (STAR) Research Program	66.509	1,691,119	-			1,691,119	1,035,164
P3 Award: National Student Design Competition for Sustainability	66.516	19,272	-			19,272	-
Total EPA		\$ 1,710,391	\$ 32,655			\$ 1,743,046	\$ 1,035,164

US DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Centers for Disease Control and Prevention

National Implementation Of Medicare Advantage And Prescription Drug Plan
CAHPS Survey Year 3

Characterization Of Submicron-/Nano-Scale Coal Dusts And Their Effects On Miners' Pneumoconiosis And Lung Cancer For Underground Coal Mines	93.RD	-	18,232	Rand Corporation	SCON00000094	18,232	-
Inhibition Of Telomere Maintenance By Oxidized DNA Precursor	93.RD	-	4,810	Pennsylvania State University	S000444NIOH	4,810	-
Illuminating Metabolic Pathways Enabled By Early T Cell Activation	93.RD	-	(4,222)	University of Pittsburgh	00592111302871	(4,222)	-
ACTIV-IV Coordinating Center	93.RD	-	(7)	University of Pittsburgh	CNVA000572411312881	(7)	-
	93.RD	-	23,256	University Of Pittsburgh	AWD0000027951	23,256	-

National Institutes of Health

Food and Drug Administration Research	93.103	535,307	-			535,307	181,090
Environmental Health	93.113	-	(190)	University of Pittsburgh	0058991129881	(190)	-
Environmental Health	93.113	-	103,707	University of Pittsburgh	AWD000005221328161	103,707	-
Environmental Health	93.113	-	35,607	University Of Pittsburgh	AWD0000023711345151	35,607	-
Environmental Health	93.113	-	14,763	University Of Pittsburgh	AWD0000023711355681	14,763	-
Oral Diseases and Disorder Research	93.121	68,354	-			68,354	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
NIEHS Superfund Research Program	93.143	-	21,558	Texas A&M University System	M2101248	21,558	-
Human Genome Research	93.172	1,013,319	-			1,013,319	50,337
Human Genome Research	93.172	-	137,826	Indiana University	PO0173652	137,826	-
Research Related to Deafness and Communication Disorders	93.173	1,117,969	-			1,117,969	303,345
Research Related to Deafness and Communication Disorders	93.173	-	(6,555)	University Of Pittsburgh	CNVA000494841329401	(6,555)	-
Research Related to Deafness and Communication Disorders	93.173	-	88,935	Vanderbilt University Medical Center	VUMC70291	88,935	-
Immunization Research, Demonstration, Public Information and Education							
Training and Clinical Skills Improvement Projects	93.185	607,982	-			607,982	156,706
COVID-19 - Immunization Research, Demonstration, Public Information and Education							
Education Training and Clinical Skills Improvement Projects	93.186	245,446	-			245,446	-
Immunization Research, Demonstration, Public Information and Education							
Training and Clinical Skills Improvement Projects	93.185	-	6,042	University Of Pittsburgh	AWD000026471350651	6,042	-
Immunization Research, Demonstration, Public Information and Education							
Training and Clinical Skills Improvement Projects	93.185	-	6,042	University Of Pittsburgh	AWD000029081352581	6,042	-
Research and Training in Complementary and Integrative Health	93.213	321,491	-			321,491	72,386
Research and Training in Complementary and Integrative Health	93.213	-	17,488	Emory University	A430855	17,488	-
Research and Training in Complementary and Integrative Health	93.213	-	32,038	University Of Delaware	55084	32,038	-
Research on Healthcare Costs, Quality & Outcomes	93.226	-	(24,916)	University of Pittsburgh	00427711253641	(24,916)	-
Mental Health Research Grants	93.242	3,402,810	-			3,402,810	122,972
Mental Health Research Grants	93.242	-	10,220	Icahn School Of Medicine At Mount Sinai	025553244609	10,220	-
Mental Health Research Grants	93.242	-	100,800	McLean Hospital	401454	100,800	-
Mental Health Research Grants	93.242	-	132,524	University Of Oregon	281450C	132,524	-
Mental Health Research Grants	93.242	-	122,963	University of Pittsburgh	CNVA000526871294091	122,963	-
Mental Health Research Grants	93.242	-	189,819	University of Pittsburgh	CNVA000593501306731	189,819	-
Mental Health Research Grants	93.242	-	289,094	University of Pittsburgh	CNVA000594601312001	289,094	-
Mental Health Research Grants	93.242	-	24,292	University of Pittsburgh	CNVA000467061264652	24,292	-
Mental Health Research Grants	93.242	-	24,670	University of Pittsburgh	00564871300521	24,670	-
Mental Health Research Grants	93.242	-	304,138	University of Pittsburgh	CNVA000562681301381	304,138	-
Mental Health Research Grants	93.242	-	164,217	University Of Pittsburgh	AWD000010561345991	164,217	-
Mental Health Research Grants	93.242	-	23,066	University Of Pittsburgh	AWD000019511341561	23,066	-
Mental Health Research Grants	93.242	-	16,181	University Of Pittsburgh	CNV000584561343311	16,181	-
Mental Health Research Grants	93.242	-	9,752	University Of Pittsburgh	CNVA000584561343312	9,752	-
Alcohol Research Programs	93.273	286,218	-			286,218	10,688
Alcohol Research Programs	93.273	-	53,684	University Of Pittsburgh	AWD000022011344623	53,684	-
Drug Abuse and Addiction Research Programs	93.279	1,301,139	-			1,301,139	74,858
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	2,283,297	-			2,283,297	229,237
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	72,719	Allegheny Singer Research Institute	49425109	72,719	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	48,690	Raydiant Oximetry Inc.	1047330	48,690	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	53,503	The Regents Of The University Of California	1520GYA165	53,503	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	159,082	University Of Chicago	AWD101558SUB00000355	159,082	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	3,383	University of Pittsburgh	AWD000008131331541	3,383	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	86,722	University Of Pittsburgh	AWD000008131348161	86,722	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	4,468	University Of Pittsburgh	CNVA000495171336241	4,468	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	86,642	University Of Pittsburgh	CNVA000495171352301	86,642	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	101,266	University Of Wisconsin-Madison	0000001090	101,266	-
Teenage Pregnancy Prevention Program	93.297	376,105	-			376,105	126,224
Minority Health and Health Disparities Research	93.307	31,060	-			31,060	-
Trans-NIH Research Support	93.310	4,847,484	-			4,847,484	1,930,650

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Trans-NIH Research Support	93.310	-	70,756	St Jude Children's Research Hospital Inc.	1125010307942769	70,756	-
Trans-NIH Research Support	93.310	-	96,411	University of Illinois at Urbana-Champaign	07774315598	96,411	-
Trans-NIH Research Support	93.310	-	46,594	University of Illinois at Urbana-Champaign	07774317752	46,594	-
Trans-NIH Research Support	93.310	-	(3,133)	University Of Pittsburgh	CNVA000465321268641	(3,133)	-
Trans-NIH Research Support	93.310	-	10,239	University Of Pittsburgh	CNVA000620811335562	10,239	-
National Center for Advancing Translational Sciences	93.350	-	77,638	University Of Pittsburgh	AWD000013241336921	77,638	-
Research Infrastructure Programs	93.351	338,152	-			338,152	69,173
Nursing Research	93.361	188,848	-			188,848	-
Nursing Research	93.361	-	201,425	University Of Pittsburgh	00500741288681	201,425	-
Cancer Cause and Prevention Research	93.393	464,064	-			464,064	112,014
Cancer Cause and Prevention Research	93.393	-	35,497	University Of Arkansas	UA2021209	35,497	-
Cancer Detection and Diagnosis Research	93.394	609,527	-			609,527	31,443
Cancer Biology Research	93.396	-	49,027	Sylvatica Biotech Inc.	1047289	49,027	-
Cancer Research Manpower	93.398	159,059	-			159,059	-
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	1,330,239	-			1,330,239	338,390
Cardiovascular Diseases Research	93.837	107,608	-			107,608	11,591
Cardiovascular Diseases Research	93.837	-	16,368	Advanced Respiratory Technologies Llc	1R43HL15097701SA001	16,368	-
Cardiovascular Diseases Research	93.837	-	25,000	Cornell University	8454520713	25,000	-
Cardiovascular Diseases Research	93.837	-	291,316	The Regents Of The University Of California	1520GWC325441315MC31010	291,316	-
Cardiovascular Diseases Research	93.837	-	147,079	University Of Minnesota	A005584701	147,079	-
Cardiovascular Diseases Research	93.837	-	161,441	University Of Pittsburgh	AWD000002321328521	161,441	-
Cardiovascular Diseases Research	93.837	-	24,664	University Of Pittsburgh	AWD000028381352131	24,664	-
Cardiovascular Diseases Research	93.837	-	5,220	University of Pittsburgh	CNVA000555531332831	5,220	-
Cardiovascular Diseases Research	93.837	-	236,087	University Of Pittsburgh	CNVA000599241319771	236,087	-
Lung Diseases Research	93.838	47,180	-			47,180	-
Lung Diseases Research	93.838	-	31,143	Oregon Health and Science Institute	1011201CARNEGIE	31,143	-
Lung Diseases Research	93.838	-	48,564	The Brigham and Women's Hospital, Inc.	122869	48,564	-
Lung Diseases Research	93.838	-	(1,139)	Vanderbilt University	VUMC67476	(1,139)	-
Lung Diseases Research	93.838	-	18,187	Yale University	GR108734CON80002247	18,187	-
Blood Diseases and Resources Research	93.839	166,295	-			166,295	46,586
Blood Diseases and Resources Research	93.839	-	(2,207)	Cornell University	8452811105	(2,207)	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	82,658	-			82,658	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	-	27,833	Allegheny Singer Research Institute	41088609	27,833	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	819,714	-			819,714	164,892
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	3,161,672	-			3,161,672	762,859
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	233,443	Columbia University	1GG01355401	233,443	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	17,343	Massachusetts General Hospital	235424	17,343	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	67,252	Massachusetts General Hospital	236710	67,252	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	65,606	Massachusetts General Hospital	237602	65,606	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	73,658	University Of Pittsburgh	AWD000012171334952	73,658	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	29,456	University of Pittsburgh	AWD000016761339041	29,456	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	13,479	University Of Pittsburgh	AWD000029381351691	13,479	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	16,131	University Of Pittsburgh	CNVA000552384166871	16,131	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	8,153	University Of Pittsburgh	CNVA000567631325512	8,153	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	116,175	University Of Pittsburgh	CNVA000567631355352	116,175	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	39,984	University Of Pittsburgh	CNVA000568254151801	39,984	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	11,760	University Of Pittsburgh	CNVA000568254167221	11,760	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	314	University Of Pittsburgh	CNVA000603684154711	314	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	30,732	University of Pittsburgh	CNVA000620761330761	30,732	-
Allergy and Infectious Diseases Research	93.855	678,794	-	Board Of Regents Of The University System Of Georgia	SUB00002375	678,794	145,503
Allergy and Infectious Diseases Research	93.855	-	21,901			21,901	-
Allergy and Infectious Diseases Research	93.855	-	139,812	Magee Women's Research Institute & Foundation	4692CMU	139,812	-
Allergy and Infectious Diseases Research	93.855	-	37,972	Sylvatica Biotech Inc.	1047324	37,972	-
Allergy and Infectious Diseases Research	93.855	-	182,341	University Of Pittsburgh	CNVA000527491286821	182,341	-
Allergy and Infectious Diseases Research	93.855	-	33,709	University Of Pittsburgh	CNVA000559511299041	33,709	-
Allergy and Infectious Diseases Research	93.855	-	169,987	Yale University	GR109766CON80002397	169,987	-
Biomedical Research and Research Training	93.859	4,332,791	-			4,332,791	390,976
Biomedical Research and Research Training	93.859	-	135,593	North Carolina State University	2017314201	135,593	-
Biomedical Research and Research Training	93.859	-	52,054	University of Delaware	53831	52,054	-
Biomedical Research and Research Training	93.859	-	91,970	University Of Pittsburgh	AWD000024651349981	91,970	-
Biomedical Research and Research Training	93.859	-	64,086	University Of Pittsburgh	CNVA000485891273942	64,086	-
Biomedical Research and Research Training	93.859	-	(5,555)	University Of Pittsburgh	CNVA000509461329091	(5,555)	-
Biomedical Research and Research Training	93.859	-	177,865	University Of Pittsburgh	CNVA000509461348171	177,865	-
Biomedical Research and Research Training	93.859	-	16,181	University Of Pittsburgh	CNVA000540571326941	16,181	-
Biomedical Research and Research Training	93.859	-	9,840	University Of Pittsburgh	CNVA000540571326951	9,840	-
Biomedical Research and Research Training	93.859	-	14,703	University Of Pittsburgh	CNVA000540571326961	14,703	-
Biomedical Research and Research Training	93.859	-	46,839	University Of Pittsburgh	CNVA000540571326981	46,839	-
Biomedical Research and Research Training	93.859	-	9,429	University Of Pittsburgh	CNVA000540571326991	9,429	-
Biomedical Research and Research Training	93.859	-	1,136	University Of Pittsburgh	CNVA000540571327001	1,136	-
Biomedical Research and Research Training	93.859	-	53,106	University Of Pittsburgh	CNVA000540571347551	53,106	-
Biomedical Research and Research Training	93.859	-	44,674	University Of Pittsburgh	CNVA000540571347561	44,674	-
Biomedical Research and Research Training	93.859	-	197,649	University Of Pittsburgh	CNVA000540571347581	197,649	-
Biomedical Research and Research Training	93.859	-	33,950	University Of Pittsburgh	CNVA000540571347591	33,950	-
Biomedical Research and Research Training	93.859	-	100,741	University Of Pittsburgh	CNVA000540571347601	100,741	-
Biomedical Research and Research Training	93.859	-	25,343	University Of Pittsburgh	CNVA000595151315531	25,343	-
Biomedical Research and Research Training	93.859	-	67,704	University Of Pittsburgh	CNVA000624511324201	67,704	-
Child Health and Human Development Extramural Research	93.865	2,255,838	-			2,255,838	444,149
Child Health and Human Development Extramural Research	93.865	-	72,298	Cornell University	13721220911	72,298	-
Child Health and Human Development Extramural Research	93.865	-	9,141	Duke University	2037453	9,141	-
Child Health and Human Development Extramural Research	93.865	-	62,003	Icahn School of Medicine at Mount Sinai	0255C4314609	62,003	-
Child Health and Human Development Extramural Research	93.865	-	44,855	University of Pittsburgh	AWD000010881334101	44,855	-
Child Health and Human Development Extramural Research	93.865	-	30,429	University Of Pittsburgh	AWD000027841353291	30,429	-
Child Health and Human Development Extramural Research	93.865	-	132,330	University Of Pittsburgh	CNVA00054631129508113	132,330	-
Aging Research	93.866	-	48,050	Brown University	13711	48,050	-
Aging Research	93.866	-	7,975	National Bureau Of Economic Research	00001360	7,975	-
Aging Research	93.866	-	(8,194)	University Of Pennsylvania	4121CCMU	(8,194)	-
Aging Research	93.866	-	4,033	University Of Pennsylvania	574701PO4292066	4,033	-
Aging Research	93.866	-	32,080	University Of Pennsylvania	578170PO4450399	32,080	-
Aging Research	93.866	-	17,335	University Of Pennsylvania	579660PO4590473	17,335	-
Aging Research	93.866	-	76,924	University Of Pittsburgh	579660PO4644000	76,924	-
Aging Research	93.866	-	79,067	University Of Pittsburgh	00521861286171	79,067	-
Aging Research	93.866	-	24,248	University Of Pittsburgh	AWD000008891333351	24,248	-
Aging Research	93.866	-	43,644	Yale University	AWD000029761351481	43,644	-
Vision Research	93.867	1,554,753	-		GR105474CON8000168C	1,554,753	132,899
Vision Research	93.867	-	14,494	Johns Hopkins University Applied Physics Laboratory	161089	14,494	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Vision Research	93.867	-	41,589	University Of Nevada Reno	UNR1671PO117GC000002	41,589	-
Vision Research	93.867	-	62,845	University Of Pittsburgh	AWD000028511351661	62,845	-
Medical Library Assistance	93.879	-	175,372	University Of North Texas	RF0019620210253	175,372	-
Medical Library Assistance	93.879	-	(2,919)	University Of Pittsburgh	CNVA000442281261211	(2,919)	-
Medical Library Assistance	93.879	-	73,245	University Of Pittsburgh	CNVA000502561343281	73,245	-
Total US Department of Health and Human Services		\$ 32,735,173	\$ 7,657,679			\$ 40,392,852	\$ 5,908,968

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Robust Visual Perception Techniques For Intelligent And Adaptive Space							
Robotics	43.RD	-	24,856	Edge Case Research Inc.	1043067	24,856	-
Cosmolory With The Wfirst High Latitude Survey	43.RD	-	(2,206)	Jet Propulsion Lab	1628016	(2,206)	-
Automated Mapping And Planning To Improve For Assessment Of Coral Reef Health	43.RD	-	6,119	Jet Propulsion Lab	1639923	6,119	-
Adaptive Optics For Enhanced Laser Control In Powder Bed Additive Manufacturing	43.RD	-	50,000	Jet Propulsion Lab	1644363	50,000	-
Cosmology With The Wfirst High Latitude Survey	43.RD	-	65,000	Jet Propulsion Lab	1651906	65,000	-
Enabling Aerial Close-Proximity and Contact Sensing for Inspection of Industrial Infrastructure - Phase 2	43.RD	-	52,666	Near Earth Autonomy	80NSSC19C010401	52,666	-
Wfirst Infrared Nearby Galaxy Survey	43.RD	-	(3,695)	University of Washington	UWSC10592	(3,695)	-
Science	43.001	2,523,519	-			2,523,519	946,626
Science	43.001	-	8,499	Arizona State University	ASUB00000478	8,499	-
Science	43.001	-	165,563	Planetary Science Institute	1523CARNEGIEEMELLON	165,563	-
Science	43.001	-	22,016	University Of South Carolina	214248	22,016	-
Aeronautics	43.002	-	136,716	Arizona State University	ASUB00000537	136,716	-
Aeronautics	43.002	-	46,949	San Jose State University Research Foundation	2116145736CMU2020	46,949	-
Office of Stem Engagement (OSTEM)	43.008	-	2,816	National Institute Of Aerospace	C162B00CMU201020CMU	2,816	-
Office of Stem Engagement (OSTEM)	43.008	-	10,063	Pennsylvania State University	5246CMUNASAK06H	10,063	-
Office of Stem Engagement (OSTEM)	43.008	-	10,201	Pennsylvania State University	S000754NASA	10,201	-
Cross Agency Support	43.009	42,491	-			42,491	-
Space Technology	43.012	465,711	-			465,711	-
Space Technology	43.012	-	495,162	The Regents of the University of California	A192477S003	495,162	-
Total NASA		\$ 3,031,721	\$ 1,090,725			\$ 4,122,446	\$ 946,626

NATIONAL SCIENCE FOUNDATION (NSF)

Engineering	47.041	6,585,334	-	The Research Foundation For The State		6,585,334	541,086
Engineering	47.041	-	15,650	University Of New York	8239421149047	15,650	-
Engineering	47.041	-	42,746	Raydiant Oximetry Inc.	1047361	42,746	-
Engineering	47.041	-	104,814	Stevens Institute Of Technology	210308501	104,814	-
Engineering	47.041	-	65,000	University Of Maryland	91868Z3601201	65,000	-
Engineering	47.041	-	75,420	University Of Minnesota	A008985702	75,420	-
Mathematical and Physical Sciences	47.049	6,444,732	-			6,444,732	131,883
Mathematical and Physical Sciences	47.049	-	36,657	Montana State University	G25320W7952	36,657	-
Mathematical and Physical Sciences	47.049	-	17,597	Regents Of The University Of New Mexico	271699872X	17,597	-
Mathematical and Physical Sciences	47.049	-	49,999	Stevens Institute Of Technology	210311501PO73870	49,999	-
Mathematical and Physical Sciences	47.049	-	111,268	The Ohio State University	60077667	111,268	-
Mathematical and Physical Sciences	47.049	-	6,355	University of Pittsburgh	CNVA000503340117731	6,355	-
Geosciences	47.050	805,234	-			805,234	32,479
Computer and Information Science and Engineering	47.070	38,021,220	-			38,021,220	641,978
COVID-19 - Computer and Information Science and Engineering	47.070	108,861	-			108,861	-
Computer and Information Science and Engineering	47.070	-	105,456	Computing Research Association	CIF2020CMU02	105,456	-
Computer and Information Science and Engineering	47.070	-	105,047	Computing Research Association	CIF2020CMU62	105,047	-
Computer and Information Science and Engineering	47.070	-	84,819	Cornell University	7295410594	84,819	-
Computer and Information Science and Engineering	47.070	-	32,287	Florida Institute For Human & Machine Cognition	202001101012033390	32,287	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Computer and Information Science and Engineering	47.070	-	140,966	Indiana University	BL4812537CMUPO0085770	140,966	-
Computer and Information Science and Engineering	47.070	-	324,600	Indiana University	PO0093723	324,600	-
Computer and Information Science and Engineering	47.070	-	18,551	Louisiana State University	PO0000024529	18,551	-
Computer and Information Science and Engineering	47.070	-	39,438	Massachusetts Institute Of Technology	S5087PO493924	39,438	-
Computer and Information Science and Engineering	47.070	-	2,979,320	MPC Corporation	17011	2,979,320	-
Computer and Information Science and Engineering	47.070	-	41,818	Northeastern University	50265378050	41,818	-
Computer and Information Science and Engineering	47.070	-	(407)	State University Of New York at Buffalo	R1045972	(407)	-
Computer and Information Science and Engineering	47.070	-	337,131	The Regents Of the University Of California	PO145GVA403	337,131	-
Computer and Information Science and Engineering	47.070	-	70,158	University of California - San Diego	118620157MPINVS9002365	70,158	-
Computer and Information Science and Engineering	47.070	-	199	University Of Illinois at Urbana-Champaign	08662216839	199	-
Computer and Information Science and Engineering	47.070	-	10,405	University Of Illinois at Urbana-Champaign	08822516863	10,405	-
Computer and Information Science and Engineering	47.070	-	28,147	University Of Pennsylvania	578035PO4670368	28,147	-
Computer and Information Science and Engineering	47.070	-	136,053	University Of Southern California	115070153	136,053	-
Computer and Information Science and Engineering	47.070	-	42,614	Virginia Polytechnic Institute & State University	47959019374	42,614	-
Computer and Information Science and Engineering	47.070	-	31,124	Virginia Polytechnic Institute & State University	SSF2101KURCHIN	31,124	-
Computer and Information Science and Engineering	47.070	-	7,262	Washington University	WU18422PO2933937G	7,262	-
Biological Sciences	47.074	1,244,787	-			1,244,787	25,968
Biological Sciences	47.074	-	106,279	Case Western Reserve University	RES515695	106,279	-
Biological Sciences	47.074	-	(1,191)	Duke University	14NSF1051	(1,191)	-
Biological Sciences	47.074	-	79,099	University Of Texas At Austin	UTA19001225	79,099	-
Biological Sciences	47.074	-	30,019	University Of Texas At Austin	UTA20000951	30,019	-
Biological Sciences	47.074	-	57,574	Wake Forest University	19001	57,574	-
Social, Behavioral, and Economic Sciences	47.075	3,413,036	-			3,413,036	181,659
Social, Behavioral, and Economic Sciences	47.075	-	6,288	Arizona State University	ASUB00000609	6,288	-
Social, Behavioral, and Economic Sciences	47.075	-	1,400	New York University	F039202	1,400	-
Social, Behavioral, and Economic Sciences	47.075	-	72,880	University Of Virginia	GA11456PO2238873	72,880	-
Education and Human Resources	47.076	7,379,826	-			7,379,826	68,648
Education and Human Resources	47.076	-	29,456	Pennsylvania State University	S000327NSF	29,456	-
Education and Human Resources	47.076	-	129,336	The Concord Consortium	3392002	129,336	-
Office Of International Science and Engineering	47.079	-	254,380	University Of Pittsburgh	00554450120582	254,380	-
Integrative Activities	47.083	1,030,652	-			1,030,652	219,111
Integrative Activities	47.083	-	98,800	University Of Illinois At Urbana-Champaign	09743417932	98,800	-
Total NSF		\$ 65,033,682	\$ 5,924,814			\$ 70,958,496	\$ 1,842,812
US DEPARTMENT OF TRANSPORTATION							
Federal Highway Administration (FHWA)							
Connecting Pedestrians With Disabilities to Adaptive Signal Control for Safe Intersection Crossing and Enhanced Mobility	20.DTFH6117C00014	6,349	-			6,349	8,760
Deep Intermodal Video Analytics (DIVA) - Phase 3	20.RD	-	442,934	University of Maryland	92483Z9618201	442,934	-
Highway Training and Education	20.215	14,484	-			14,484	-
Office Of the Secretary (OST) Administration Secretariate		-	-			-	-
University Transportation Centers Program	20.701	3,527,788	-			3,527,788	912,667
COVID-19 - University Transportation Centers Program	20.701	18,389	-			18,389	-
Total US Department Of Transportation		\$ 3,567,010	\$ 442,934			\$ 4,009,944	\$ 921,427
DEPARTMENT OF HOMELAND SECURITY							
Centers for Homeland Security	97.061	-	(47,408)	George Mason University	E2042934	(47,408)	-
Centers for Homeland Security	97.061	-	58,900	George Mason University	E2051857	58,900	-
Homeland Security Research, Development, Testing, Evaluation and Demonstration Of Technologies Related to Nuclear Threat Detection	97.077	953,562	-			953,562	-
Total Department Of Homeland Security		\$ 953,562	\$ 11,492			\$ 965,054	\$ -

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient		
OTHER FEDERAL AGENCIES									
US DEPARTMENT OF DEFENSE									
Defense Advanced Research Projects Agency (DARPA)									
Research and Technology Development	12.910	394,035	-	University Of Pittsburgh	AWD000015934160525B	394,035	124,490		
Research and Technology Development	12.910	-	174,483			174,483	-		
US DEPARTMENT OF THE INTERIOR									
US Geological Survey									
US Geological Survey Research and Data Collection	15.808	117,327	-			117,327	-		
US DEPARTMENT OF LABOR									
Employment and Training Administration									
WIOA National Dislocated Worker Grants/WIA National Emergency Grants	17.277	-	39,940	Phase 4 Learning Center Inc.	PY20P4WVC2387	39,940	-		
US DEPARTMENT OF JUSTICE									
National Endowment for the Arts									
Promotion of the Arts Grants to Organizations and Individuals	45.024	80,392	-			80,392	-		
Promotion Of the Humanities Office Of Digital Humanities	45.169	91,891	-			91,891	55,508		
Promotion Of the Humanities Office Of Digital Humanities	45.169	-	22,327	Santa Fe Institute	SFI20200827	22,327	-		
CYLAB Membership Agreement, Industrial Affiliate Level	99.1070236	16,877	-			16,877	-		
Subrahmanian Assignment To National Institute Of Standards And Technology	99.IP2004	157,542	-			157,542	-		
Contract For Hardware/Software Support At Carnegie Mellon University	99.36C25019P0934	2	-			2	-		
Ensuring Safety In An AI-Enhanced PTC System	99.693JJ620C000025	128,475	-			128,475	-		
GSA Energy Savings Research, Phase Three	99.RD	-	129,404	LMI Consulting LLC	SB2000034	129,404	-		
Total Other Federal Agencies		\$ 986,541	\$ 366,154			\$ 1,352,695	\$ 179,998		
Total Research and Development Cluster		\$ 318,360,191	\$ 52,252,830			\$ 370,613,021	\$ 26,344,588		
Total Federal Award Expenditures		\$ 399,622,670	\$ 53,087,335			\$ 452,710,005	\$ 26,344,588		

Carnegie Mellon University

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year Ended June 30, 2021

1. Basis of Presentation

The accompanying Supplementary Schedule of Expenditures of Federal Awards (the Schedule) includes the federal contracts and grants expenditures of Carnegie Mellon University (Carnegie Mellon or the university) for the year ended June 30, 2021 and is presented on the accrual basis of accounting. The information in the Schedule is presented in accordance with the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*. Therefore, some amounts presented in the Schedule may differ from amounts presented in, or used in the preparation of the consolidated financial statements. Negative amounts represent adjustment in the normal course of business to amounts reported in a prior year.

For purposes of the Schedule, federal awards include all grants, contracts, and similar agreements entered into directly between the University and agencies and departments of the federal government and all subawards to the University by nonfederal organizations.

2. Summary of Significant Accounting Policies for Federal Award Expenditures

Expenditures for federal student financial aid programs are recognized as incurred. For purposes of major program determination, these costs include Federal Pell Grant program grants to students, Federal Perkins loans, the federal share of students' Federal Supplemental Educational Opportunity Grants (FSEOG) program grants and the federal share of Federal work Study (FWS) program earnings, Federal direct Student Loan disbursements, and administrative cost allowances, where applicable. Expenditures for federal awards are determined using the cost principles set forth in the Uniform Guidance (2 CFR, Part 220). Under these costs principles, certain types of expenditures are not allowable or are limited to reimbursement. Direct costs are recognized as incurred using the accrual method of accounting.

3. Catalog of Federal Domestic Assistance Numbers

Catalog of Federal Domestic Assistance (CFDA) Numbers and pass-through numbers are presented for those programs for which such numbers are available. In instances where no CFDA Number is available, the federal agency and the federal award number is included, as well as the grantor or pass-through agency.

4. SEI Contracts

Amounts included in the Research and Development cluster, Air Force section of the Schedule, reflect one contract award to the university, including funding received from other federal agencies related to and included with the Software Engineering Institute (SEI) Department of the Air Force contract (CFDA 12.FA870115D0002) through project work plans (PWP) as required by their Air Force sponsoring agreement.

The SEI is a federally funded research and development center (FFRDC) sponsored by the U.S. Department of Defense (DoD) and operated by the university. When federal agencies other than the primary sponsor contribute funds directly to the SEI's basic effort, the work is administered using a PWP.

Carnegie Mellon University

Notes to Supplementary Schedule of Expenditures of Federal Awards

Year Ended June 30, 2021

5. Federal Student Loan Programs

The Federal Perkins Loan Program (CFDA No. 84.038) is administered directly by the university and the balances and transactions are included in the university's basic consolidated financial statements. The amount of Federal Perkins loans outstanding at June 30, 2021 totaled \$7,150,109. Loans outstanding at the beginning of the year are included in the federal expenditures presented in the Schedule. Under federal law, the authority for schools to make new Perkins Loans ended in September 30, 2017, and final disbursements were permitted through June 30, 2018. As a result, students can no longer receive Perkins Loans.

Carnegie Mellon participates in the Federal Direct Loan Program (CFDA No. 84.268) which includes subsidized and unsubsidized student loans, Direct Parent Loan for Undergraduate Student (PLUS) Loans, and direct GRAD PLUS Loans. Loan disbursements under the Federal Direct Loan Program for the year ended June 30, 2021 totaled \$44,303,258. These loans are not made by the University but are received by its students.

6. Facilities and Administrative Costs

For awards in the Research and Development cluster, the University applies its fixed approved facilities and administrative rate when charging indirect costs to federal awards rather than the 10% de minimis cost rate as described in Section 200.414 of the Uniform Guidance. The fixed rates for capped and uncapped awards for the year ended June 30, 2021 are as follows:

	Capped	Uncapped
On-campus	55.40%	53.80%
Off-campus	26.00%	N/A
National Robotics Engineering Center	25.90%	21.50%
Silicon Valley	50.10%	N/A
Software Engineering Institute	11.20%	N/A

The capped rate applies to all Department of Defense (DoD) contracts and subcontracts awarded or issued before November 30, 1993, all Non-DoD instruments, and all DoD grants.

The uncapped rate applies to all DoD contracts awarded or issued on or after November 30, 1993 in accordance with and under the authority of DFARS 231.303(I).



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Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

The Board of Trustees
Carnegie Mellon University:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the consolidated financial statements of Carnegie Mellon University (the University), which comprise the consolidated statement of financial position as of June 30, 2021, and the related consolidated statements of activities, and cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated October 27, 2021.

Internal Control Over Financial Reporting

In planning and performing our audit of the consolidated financial statements, we considered the University's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion³ on the consolidated financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's consolidated financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

**Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

Pittsburgh, Pennsylvania
October 27, 2021



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Independent Auditors' Report on Compliance for Each Major Federal Program; Report on Internal Control Over Compliance; and Report on Supplementary Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

The Board of Trustees
Carnegie Mellon University:

Report on Compliance for Each Major Federal Program

We have audited Carnegie Mellon University and its subsidiaries' (the University's) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2021. The University's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the University's compliance.

Opinion on Each Major Federal Program

In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2021.

Report on Internal Control over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance



for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Report on Supplementary Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the consolidated financial statements of the University as of and for the year ended June 30, 2021, and have issued our report thereon dated October 27, 2021, which contained an unmodified opinion on those consolidated financial statements. Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying supplementary schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

KPMG LLP

Pittsburgh, Pennsylvania
October 27, 2021

Carnegie Mellon University
Schedule of Findings and Questioned Costs
Year Ended June 30, 2021

1. Summary of Auditors' Results

- a. Type of report issued on whether the consolidated financial statements were prepared in accordance with U.S. generally accepted accounting principles: **Unmodified**
- b. Internal control deficiencies over financial reporting disclosed by the audit of the consolidated financial statements:
 - Material weaknesses: **No**
Significant deficiencies: **None reported**
- c. Noncompliance material to the consolidated financial statements: **No**
- d. Internal control deficiencies over major programs disclosed by the audit:
 - Material weaknesses: **No**
Significant deficiencies: **None reported**
- e. Type of report issued on compliance for major programs: **Unmodified**
- f. Audit findings that are required to be reported in accordance with 2 CFR 200.516(a): **None**
- g. Major programs:
 - Research and Development Cluster – various CFDA numbers
 - COVID-19 Education Stabilization Fund Fund- 84.425
- h. Dollar threshold used to distinguish between Type A and Type B programs: **\$3,000,000**
- i. Auditee qualified as a low-risk auditee: **Yes**

2. Findings Relating to the Consolidated Financial Statements Reported in Accordance with Government Auditing Standards

None

3. Findings and Questioned Costs Relating to Federal Awards

None

Summary Schedule of Prior Audit Findings

Carnegie Mellon University

Student Financial Services

Student Financial Services
5000 Forbes Avenue
Warner Hall A-19
Pittsburgh, PA 15213-3890
thehub@andrew.cmu.edu

October 15, 2021

RE: Summary Schedule of Prior Audit Findings (UG section 200.511, AG ¶13.50-13.55)

To Whom It May Concern,

The following details the status of all audit findings included in the prior audit's schedule of findings reported under Uniform Guidance:

Finding 2020 001: Enrollment Reporting

Federal Program

Student Financial Assistance Cluster (CFDA # 84.268, 84.063)

Federal Agency

U.S. Department of Education

Federal Award Year

July 1, 2019 through June 30, 2020

Summary of Finding

Management's process for reviewing the accuracy and timeliness of the information submitted for the enrollment reporting was not sufficient to identify any errors and to ensure timely reporting.

For 2 out of 40 students, the student status was not reported within the required 60 days but rather reported between 62 and 228 days. For an additional 9 out of 40 students, the student status change was either not reported or was not reported accurately at the campus level or program level.

Additionally, at the program level enrollment data, there was 1 out of 40 students for which the program start date did not agree to the institution's records, and there was 1 out of 40 students for which the program level enrollment status was incorrect and did not agree to the campus level enrollment status.

Status

Management considers our remediation work for this finding to be in progress. We convened a cross-functional working group with representation from the University Registrar's Office, Student Financial Aid Office, and Enrollment Systems Office. This group performed a gap analysis of existing automated reporting functionality within our student information system (S3), identified the root cause of the noted

reporting discrepancies, and suggested changes to the existing system. Development for these changes commenced in March 2021 and initial changes were deployed in May 2021. Subsequent changes were identified and released in July, August, and October 2021.

The updated code was used to generate reporting files to the National Student Clearinghouse (NSC) on July 30, August 19, September 1, and September 22, but each of these files required manual edits to address known issues with the reporting functionality. Our October 13 enrollment file to the NSC was the first to incorporate all new development.

Due to the time needed to iterate and release updated reporting functionality within S3, development and testing of a reporting dashboard to compare data sent to the NSC with the corresponding data received from the National Student Load Data System (NSLDS) was also delayed. At present, this dashboard compares populations of students across both data sets, but does yet not evaluate individual data elements for accuracy.

Separately, the University Registrar established and communicated updated guidance to the academic community in spring and fall 2021 regarding the acceptable timing of degree certifications, with specific emphasis on retroactive certifications.

Finding 2020 002: Pell Reporting

Federal Program

Student Financial Assistance Cluster (CFDA # 84.063)

Federal Agency

U.S. Department of Education

Federal Award Year

July 1, 2019 through June 30, 2020

Carnegie Mellon University

Student Financial Services

Student Financial Services
5000 Forbes Avenue
Warner Hall A-19
Pittsburgh, PA 15213-3890
thehub@andrew.cmu.edu

Summary of Finding

Management's process for reviewing the accuracy and timeliness of the information submitted for the origination and disbursement records did not operate effectively to identify all errors.

For the disbursement records, for 8 out of 40 students, the COD disbursement record was not updated within the required 15 calendar days after the disbursement.

For the origination records, for 40 out of 40 students, the Cost of Attendance (COA) attribute per the COD did not reflect the actual COA per Carnegie Mellon University's records. These differences in COA did not result in any impact to student Pell Grant eligibility.

Status

Management executed the strategies outlined in our Corrective Action Plan for this finding and it was remediated in full during fiscal year 2021. Federal Pell Grant cost of attendance components were updated in PowerFAIDS and formally reviewed along with our other cost of attendance components. Disbursement reporting of Federal Grants to the Common Origination and Disbursement (COD) system was accelerated and is now being performed at least weekly. Finally, a reporting dashboard was implemented to ensure that all required reporting to the COD is performed accurately and timely.

Regards,



Brian Hill

Director of Student Financial Services