

**Carnegie Mellon University  
Uniform Guidance Reports  
Year Ended June 30, 2020  
(With Independent Auditors' Reports Thereon)**

**Carnegie Mellon University**  
**Index**  
**June 30, 2020 and 2019**

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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 statements of financial position as of June 30, 2020 and 2019, the related consolidated statements of activities and cash flows for the years 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 audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the 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 financial position of Carnegie Mellon University as of June 30, 2020 and 2019, and the changes in its net assets and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.



*Emphasis of Matter*

As discussed in note 1 to the consolidated financial statements, in 2020, the University adopted Accounting Standards Update No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*. Our opinion is not modified with respect to this matter.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated October 13, 2020 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 13, 2020

**Carnegie Mellon University**  
**Consolidated Statements of Financial Position**  
**June 30, 2020 and 2019**

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(dollars in thousands)

	<u>2020</u>	<u>2019</u>
<b>Assets</b>		
Cash and cash equivalents (Note 2)	\$ 622,309	\$ 514,765
Accrued interest and dividends	464	1,822
Accounts receivable, net (Note 4)	70,856	75,133
Pledges receivable, net (Note 5)	131,291	85,103
Student loans receivable, net (Note 4)	10,530	14,531
Investments (Note 6 and Note 8)	2,585,809	2,521,844
Assets held in trust by others (Note 8)	10,605	10,702
Unexpended bond proceeds (Note 11)	53,142	-
Prepaid expenses and other assets (Note 2)	50,443	47,717
Right-of-use assets (Note 9)	78,937	74,860
Land, buildings and equipment, net (Note 10)	<u>1,123,333</u>	<u>1,066,641</u>
Total assets	<u>\$ 4,737,719</u>	<u>\$ 4,413,118</u>
<b>Liabilities</b>		
Accounts payable and other liabilities (Note 2)	\$ 221,429	\$ 220,926
Deferred revenue (Note 4)	153,015	149,834
Federal student loan funds (Note 2)	11,021	15,115
Present value of split interest agreement obligations (Note 2)	15,870	14,983
Lease obligations (Note 9)	77,885	73,174
Debt obligations (Note 11)	<u>665,735</u>	<u>540,818</u>
Total liabilities	<u>\$ 1,144,955</u>	<u>\$ 1,014,850</u>
<b>Net assets</b>		
Without donor restrictions (Note 12)	\$ 1,624,117	\$ 1,564,490
With donor restrictions (Note 12)	<u>1,968,647</u>	<u>1,833,778</u>
Total net assets	<u>\$ 3,592,764</u>	<u>\$ 3,398,268</u>
Total liabilities and net assets	<u>\$ 4,737,719</u>	<u>\$ 4,413,118</u>

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

# Carnegie Mellon University

## Consolidated Statement of Activities

### Year Ended June 30, 2020

(dollars in thousands)

	<u>Without</u> <u>Donor Restrictions</u>	<u>With</u> <u>Donor Restrictions</u>	<u>Total</u>
<b>Revenue and other support</b>			
Tuition and other educational fees revenue, net of financial aid	\$ 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>
<b>Expenses</b>			
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
<b>Nonoperating activities</b>			
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	\$ 59,627	\$ 134,869	\$ 194,496
<b>Net assets</b>			
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 Statement of Activities**  
**Year Ended June 30, 2019**

(dollars in thousands)

	Without Donor Restrictions	With Donor Restrictions	Total
<b>Revenue and other support</b>			
Tuition and other educational fees revenue, net of financial aid	\$ 561,835	\$ -	\$ 561,835
Sponsored projects revenue (Note 4)			
Software Engineering Institute	141,750	-	141,750
Advanced Robotics for Manufacturing Institute	8,089	-	8,089
Other grants and contracts	274,954	-	274,954
Investment income	62,870	12,412	75,282
Contributions revenue (Note 5)	26,283	116,522	142,805
Auxiliary services revenue	68,205	-	68,205
Other revenue sources	89,811	408	90,219
Net assets released from donor restrictions	73,611	(73,611)	-
Total revenue and other support	<u>\$ 1,307,408</u>	<u>\$ 55,731</u>	<u>\$ 1,363,139</u>
<b>Expenses</b>			
Salaries	\$ 685,913	\$ -	\$ 685,913
Benefits	148,056	-	148,056
Other operating expenses	329,005	-	329,005
Depreciation and amortization	72,739	-	72,739
Interest expense	14,837	-	14,837
Total expenses	<u>\$ 1,250,550</u>	<u>\$ -</u>	<u>\$ 1,250,550</u>
Increase in net assets before nonoperating activities	\$ 56,858	\$ 55,731	\$ 112,589
<b>Nonoperating activities</b>			
Net realized/unrealized gains on investments (Note 6)	\$ 19,171	\$ 93,532	\$ 112,703
Other (Note 2)	(4,940)	(15,762)	(20,702)
Post-retirement plan changes other than net periodic benefit costs (Note 16)	2,908	-	2,908
Net assets released from restrictions for capital	25,960	(25,960)	-
Total nonoperating activities	<u>\$ 43,099</u>	<u>\$ 51,810</u>	<u>\$ 94,909</u>
Increase in net assets	<u>\$ 99,957</u>	<u>\$ 107,541</u>	<u>\$ 207,498</u>
<b>Net assets</b>			
Beginning of year	1,464,533	1,726,237	3,190,770
End of year	<u>\$ 1,564,490</u>	<u>\$ 1,833,778</u>	<u>\$ 3,398,268</u>

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

**Carnegie Mellon University**  
**Notes to Consolidated Financial Statements**  
**June 30, 2020 and 2019**

	<u>2020</u>	<u>2019</u>
<b>Cash flows from operating activities</b>		
Increase in net assets	\$ 194,496	\$ 207,498
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Realized and unrealized gains on investments, net	(108,977)	(147,426)
Depreciation and amortization	76,778	72,739
Amortization of right-of-use assets	22,745	20,268
Amortization of bond premium and bond issuance costs, net	(4,394)	(4,411)
Gifts in kind	(1,296)	(530)
Loss on asset dispositions	294	78
Contributions for land, building and equipment and endowment	(77,809)	(75,626)
Provision for bad debt and other allowances	3,657	14,131
Assets held in trust by others	(149)	(57)
(Increase) decrease in assets:		
Accrued interest and dividends	1,358	(301)
Accounts receivable, net	3,789	(12,230)
Pledges receivable, net	(49,357)	3,978
Prepaid expenses and other assets	(4,385)	(3,661)
Increase (decrease) in liabilities:		
Accounts payable and other liabilities	19,465	13,906
Operating lease obligations	(20,681)	(20,240)
Deferred revenue	3,181	45,055
Present value of split interest agreements payable	887	(2,045)
Net cash provided by operating activities	<u>\$ 59,602</u>	<u>\$ 111,126</u>
<b>Cash flows from investing activities</b>		
Proceeds from sale and maturity of investments	2,273,851	1,362,454
Purchases of investments	(2,228,593)	(1,351,466)
Purchases of land, buildings and equipment	(151,201)	(166,843)
Federal loan programs	(4,094)	287
Disbursements of loans to students	(166)	(656)
Repayments of loans from students	4,167	3,589
Net cash used for investing activities	<u>\$ (106,036)</u>	<u>\$ (152,635)</u>
<b>Cash flows from financing activities</b>		
Proceeds from issuance of indebtedness	130,806	120,000
Repayments of debt obligations	(1,207)	(120,633)
Payment of debt issuance costs	(288)	(428)
Contributions for land, building, and equipment and endowment	77,809	76,047
Net cash provided by financing activities	<u>207,120</u>	<u>74,986</u>
Net increase in cash and cash equivalents	<u>160,686</u>	<u>33,477</u>
Cash and cash equivalents at beginning of year	<u>514,765</u>	<u>481,288</u>
<b>Cash and cash equivalents at end of year</b>	<u>\$ 675,451</u>	<u>\$ 514,765</u>
Cash and cash equivalents	\$ 622,309	\$ 514,765
Unexpended bond proceeds	53,142	-
<b>Total cash, cash equivalents, and unexpended bond proceeds</b>	<u>\$ 675,451</u>	<u>\$ 514,765</u>
<b>Noncash transactions:</b>		
Non-cash gifts in kind	1,296	530
(Decrease)/Increase in accounts payable and accrued liabilities for land, buildings and equipment	(18,781)	5,813
Non-cash stock contributions	1,027	77
Loans assigned to Federal Government	558	-
Lease obligations arising from obtaining right-of-use assets	25,392	1,921

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



**Carnegie Mellon University**  
**Notes to Consolidated Financial Statements**  
**June 30, 2020 and 2019**

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**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 14,800 students and granted approximately 5,030 bachelor's, master's and doctoral degrees in the last academic year. Approximately 78% of undergraduate students are from the United States of America. International students comprise approximately 22% of undergraduate, 66% of master's, and 56% 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

**Carnegie Mellon University**  
**Notes to Consolidated Financial Statements**  
**June 30, 2020 and 2019**

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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.

**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 GAAP. 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

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**Notes to Consolidated Financial Statements**  
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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 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 \$53.1 million as of June 30, 2020, 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 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 estimated 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 year ended June 30, 2020, \$3.9 million was repaid to the federal government. 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 Agreements 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 1.0% to 6.0%. Distributions from the trusts are recorded in accordance with the donor's stipulations

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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.

**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. \$26.3 million and \$26.0 million of capital contributions were released from donor restrictions during fiscal years 2020 and 2019, 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"-Other 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, 2020 and 2019.

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.

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**Notes to Consolidated Financial Statements**  
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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.

**Adoption of New Accounting Pronouncements**

In November 2016 the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*. ASU 2016-18 addresses current guidance on the presentation of restricted cash within the Consolidated Statements of Cash Flows. The standard is effective for fiscal years beginning after December 15, 2018 and should be applied on a retrospective basis to each period presented. The university adopted this standard on July 1, 2019. The university did not have any restricted cash for the year ended June 30, 2019. Restricted cash is included within unexpended bond proceeds on the 2020 consolidated statement of financial position.

**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 (see Note 11). The university also anticipates converting certain receivables to cash within the next twelve months. As of June 30, 2020 and 2019, financial assets available within one year for general expenditure are as follows (*dollars in thousands*):

	<u>2020</u>	<u>2019</u>
Cash and cash equivalents	\$ 622,309	\$ 514,765
Accounts receivable, net	70,856	75,133
Pledge receivables donor restricted for operations	9,107	9,894
Short-term working capital investments	57,418	113,416
Subsequent year's approved endowment distributions	98,485	91,367
Subsequent year's approved long-term working capital distributions	<u>9,857</u>	<u>7,896</u>
Total financial assets available within one year	<u>\$ 868,032</u>	<u>\$ 812,471</u>

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 \$383.5 million and \$363.5 million for the years ended June 30, 2020 and 2019, respectively. Tuition, at published prices, from graduate students was \$339.1 million and \$327.9 million for the years ended June 30, 2020 and 2019, respectively. Other education related revenue was \$39.2 million and \$35.6 million for the years ended June 30, 2020 and 2019, 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 \$170.7 million and \$165.2 million for the years ended June 30, 2020 and 2019, 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 is 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 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.

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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, 2020 approximate historical annual sponsored program activity.

Accounts receivable at June 30, 2020 and 2019, consist of the following (*dollars in thousands*):

	<u>2020</u>	<u>2019</u>
Sponsored project accounts receivable		
Software Engineering Institute	\$ 282	\$ 389
Other grants and contracts	52,188	53,881
Total sponsored projects accounts receivable	<u>\$ 52,470</u>	<u>\$54,270</u>
Student accounts	5,546	4,317
Other	14,631	18,333
Total student accounts and other	<u>\$ 20,177</u>	<u>\$22,650</u>
Allowance for doubtful accounts	(1,791)	(1,787)
Net accounts receivable	<u>\$ 70,856</u>	<u>\$75,133</u>

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

Deferred revenue at June 30, 2020 and 2019 consists of the following (*dollars in thousands*):

	<u>2020</u>	<u>2019</u>
Sponsored projects deferred revenue		
Software Engineering Institute	\$ 7,730	\$ 10,153
ARM Institute	6,319	8,222
Other contracts and conditional grants	54,712	53,611
Total sponsored projects deferred revenue	<u>\$ 68,761</u>	<u>\$ 71,986</u>
Student accounts deferred revenue	15,399	18,474
Other	68,855	59,374
Total deferred revenue	<u>\$ 153,015</u>	<u>\$ 149,834</u>

**Student Loans Receivable**



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Net student loans receivable of approximately \$10.5 million and \$14.5 million, as of June 30, 2020 and 2019, 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, 2020 and 2019.

**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 \$40.1 million and \$36.3 million as of June 30, 2020 and 2019 of conditional contributions outstanding related to capital projects. In addition, the university had approximately \$12.0 million and \$7.0 million, related to conditional contributions as of June 30, 2020 and 2019, 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, 2020 and 2019 are due as follows (*dollars in thousands*):

	<u>2020</u>	<u>2019</u>
In one year or less	\$ 24,715	\$ 37,461
Between one year and five years	60,469	56,385
More than five years	<u>74,004</u>	<u>17,529</u>
Pledges receivable, gross	\$ 159,188	\$ 111,375
Unamortized discount	(11,489)	(12,309)
Allowance for unfulfilled pledges	<u>(16,408)</u>	<u>(13,963)</u>
Pledges receivable, net of discount and allowance	<u>\$ 131,291</u>	<u>\$ 85,103</u>

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**6. Investments**

Investments by major category at June 30, 2020 and 2019 are as follows (*dollars in thousands*):

	<u>2020</u>	<u>2019</u>
Cash equivalents	\$ 75,682	\$ 56,225
Short-term fixed income securities	24,356	81,362
Fixed income securities	300,214	291,375
Equity securities	897,244	923,592
Alternative investment partnerships	1,288,313	1,169,290
	<u>\$ 2,585,809</u>	<u>\$ 2,521,844</u>

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

	<u>2020</u>	<u>2019</u>
Endowment	\$ 2,065,293	\$ 1,983,575
Reserves for working capital and plant - short-term	57,418	113,416
Reserves for working capital and plant - long-term	393,394	362,852
Other	69,704	62,001
Total investments	<u>\$ 2,585,809</u>	<u>\$ 2,521,844</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, 2020 included approximately 52.3% domestic equities and 47.7% international and emerging market equities. Equity securities at June 30, 2019 included approximately 49.5% domestic equities and 50.5% 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 category 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 \$40.2 million and \$34.7 million for the years ended June 30, 2020 and 2019, 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, 2020 and 2019, Carnegie Mellon had unfunded commitments of approximately \$677.5 million and \$646.2 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 measured at NAV are less liquid than Carnegie Mellon’s other investments. The following tables summarize these investments by strategy type at June 30, 2020 and 2019 (*dollars in thousands*):

	<b>Number of Funds</b>	<b>2020 Fair Value</b>	<b>Number of Funds</b>	<b>2019 Fair Value</b>
Commingled Funds	6	\$ 246,017	6	\$ 311,029
Hedge funds	15	159,230	18	209,358
Natural resources	21	119,227	22	131,340
Private equity (buyout) funds	60	180,573	57	156,682
Real estate	21	110,998	23	96,424
Venture capital	167	690,531	150	548,319
Other	15	27,754	15	27,168
Total	<u>305</u>	<u>\$ 1,534,330</u>	<u>291</u>	<u>\$ 1,480,320</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, 2020.

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, 2020 and 2019 (*dollars in thousands*):

	<b>2020</b>		
	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total</u>
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>

	<b>2019</b>		
	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total</u>
Donor-restricted endowment funds	\$ -	\$ 1,563,803	\$ 1,563,803
Board-designated funds	438,497	-	438,497
Total funds	<u>\$ 438,497</u>	<u>\$ 1,563,803</u>	<u>\$ 2,002,300</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, 2020 and 2019 (*dollars in thousands*):

	<b>2020</b>		
	<u>Without Donor Restrictions</u>	<u>With Donor Restrictions</u>	<u>Total</u>
<b>Endowment net assets, beginning of year</b>	\$ 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	<u>\$ 27,171</u>	<u>\$ 75,039</u>	<u>\$ 102,210</u>
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	<u>\$ (41,528)</u>	<u>\$ (50,088)</u>	<u>\$ (91,616)</u>
<b>Endowment net assets, end of year</b>	<u>\$ 424,161</u>	<u>\$ 1,644,699</u>	<u>\$ 2,068,860</u> <sup>(1)</sup>

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

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	<b>2019</b>		
	<u>Without</u> <u>Donor Restrictions</u>	<u>With</u> <u>Donor Restrictions</u>	<u>Total</u>
<b>Endowment net assets, beginning of year</b>	\$ 439,652	\$ 1,447,180	\$ 1,886,832
Gifts and other additions	\$ 112	\$ 58,506	\$ 58,618
Investment income			
Interest and dividends	\$ 9,558	\$ 11,084	\$ 20,642
Net realized gains on sale of securities	31,558	103,878	135,436
Net unrealized losses	<u>(2,584)</u>	<u>(10,693)</u>	<u>(13,277)</u>
Total investment income	<u>\$ 38,532</u>	<u>\$ 104,269</u>	<u>\$ 142,801</u>
Income distributed			
Cash and accrued interest and dividends	\$ (9,558)	\$ (11,084)	\$ (20,642)
Accumulated realized investment gains	<u>(30,241)</u>	<u>(35,068)</u>	<u>(65,309)</u>
Total income distributed	<u>\$ (39,799)</u>	<u>\$ (46,152)</u>	<u>\$ (85,951)</u>
<b>Endowment net assets, end of year</b>	<u>\$ 438,497</u>	<u>\$ 1,563,803</u>	<u>\$ 2,002,300</u> <sup>(1)</sup>

<sup>(1)</sup>Includes \$18.7 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 2020 and 2019, 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 2020 and 2019 divided by the June 30 endowment market values for the those fiscal years) was 4.4% for June 30, 2020 and 4.3% for June 30, 2019.

**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.

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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, 2020 and 2019 by caption in the consolidated statements of financial position by the valuation hierarchy defined above (*dollars in thousands*).

	2020			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
<b>Investments</b>				
Cash equivalents <sup>(a)</sup>	\$ 28,626	\$ 47,056	\$ -	\$ 75,682
Equity investments				
U.S. - equity funds and common stocks <sup>(a)</sup>	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 <sup>(a)</sup>	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 <sup>(b)</sup>				1,534,330
<b>Total investments</b>				<b>\$ 2,585,809</b>
<b>Assets held in trust by others</b>				
Beneficial interests held by third party	\$ -	\$ -	\$ 2,413	\$ 2,413
Perpetual trusts held by third party	-	-	8,192	8,192
<b>Total assets held in trust by others</b>	<u>-</u>	<u>-</u>	<u>10,605</u>	<u>10,605</u>
Unexpended bond proceeds	\$ 53,142	\$ -	\$ -	\$ 53,142
<b>Prepaid expenses and other assets</b>				
Deferred compensation plan assets	\$ 13,943	\$ 6,159	\$ 3,074	\$ 23,176
Interest rate swap receivable	-	2,382	-	2,382
<b>Total prepaid expenses and other assets</b>	<u>\$ 13,943</u>	<u>\$ 8,541</u>	<u>\$ 3,074</u>	<u>\$ 25,558</u>
<b>Total assets at fair value</b>	<u>\$ 1,040,220</u>	<u>\$ 79,953</u>	<u>\$ 20,611</u>	<u>\$ 2,675,114</u>
<b>Liabilities</b>				
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>

*There were no significant transfers between Level 1 and Level 2 for the fiscal year ended 2020.*

*(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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	2019			
	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
<b>Investments</b>				
Cash equivalents <sup>(a)</sup>	\$ 33,543	\$ 22,682	\$ -	\$ 56,225
Equity investments				
U.S. - equity funds and common stocks <sup>(a)</sup>	375,846	-	6,249	382,095
Mutual funds - international developed	49,650	-	-	49,650
Mutual funds - international emerging	180,817	-	-	180,817
Short-term fixed income	-	81,362	-	81,362
Fixed income funds & securities <sup>(a)</sup>	291,375	-	-	291,375
	<u>\$ 931,231</u>	<u>\$ 104,044</u>	<u>\$ 6,249</u>	<u>\$ 1,041,524</u>
Investments measured under the NAV practical expedient <sup>(b)</sup>				1,480,320
<b>Total investments</b>				<u>\$ 2,521,844</u>
<b>Assets held in trust by others</b>				
Beneficial interests held by third party	\$ -	\$ -	\$ 2,265	\$ 2,265
Perpetual trusts held by third party	-	-	8,437	8,437
<b>Total assets held in trust by others</b>	-	-	10,702	10,702
Unexpended bond proceeds	\$ -	\$ -	\$ -	\$ -
<b>Prepaid expenses and other assets</b>				
Deferred compensation plan assets	\$ 12,561	\$ 5,859	\$ 2,460	\$ 20,880
Interest rate swap receivable	-	1,293	-	1,293
<b>Total prepaid expenses and other assets</b>	<u>\$ 12,561</u>	<u>\$ 7,152</u>	<u>\$ 2,460</u>	<u>\$ 22,173</u>
<b>Total assets at fair value</b>	<u>\$ 943,792</u>	<u>\$ 111,196</u>	<u>\$ 19,411</u>	<u>\$ 2,554,719</u>
<b>Liabilities</b>				
Interest rate swaps payable	-	29,478	-	29,478
Total liabilities at fair value	<u>\$ -</u>	<u>\$ 29,478</u>	<u>\$ -</u>	<u>\$ 29,478</u>

*There were no significant transfers between Level 1 and Level 2 for the fiscal year ended 2019.*

- (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 \$311.0 million, and hedge and private equity funds of \$1,169.3 million as of June 30, 2019.*



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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*):

	<u>Deferred Compensation</u>	<u>Common Stock</u>	<u>Trusts Held by Others</u>	<u>Total</u>
Fair value, June 30, 2018	\$ 2,370	\$ 5,878	\$ 11,066	\$ 19,314
Unrealized gains	76	121	182	379
Purchases	239	250	-	489
Transfers in	-	-	-	-
Transfers out	(225)	-	(546)	(771)
Fair value, June 30, 2019	<u>\$ 2,460</u>	<u>\$ 6,249</u>	<u>\$ 10,702</u>	<u>\$ 19,411</u>
Unrealized gains/(losses)	81	683	(97)	667
Purchases	229	-	-	229
Transfers in	304	-	-	304
Transfers out	-	-	-	-
Fair value, June 30, 2020	<u>\$ 3,074</u>	<u>\$ 6,932</u>	<u>\$ 10,605</u>	<u>\$ 20,611</u>

**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 under Topic 842 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, 2020 and 2019, respectively, included operating lease costs of \$23.4 million and \$20.5 million and short-term lease costs of \$4.4 million and \$4.9 million. Cash payments for leases were \$22.8 million and \$20.6 million for the year ended June 30, 2020 and 2019, respectively.

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The following table displays the undiscounted cash flows due related to operating leases as of June 30, 2020 along with a reconciliation to the discounted amount recorded on the June 30, 2020 consolidated statements of financial position (*dollars in thousands*):

As of June 30, 2020	
2021	\$ 17,471
2022	13,563
2023	12,279
2024	9,071
2025	7,548
Thereafter	22,937
Total undiscounted cash flows (weighted average term 8.7 years)	<u>\$ 82,869</u>
Impact of present value discount (weighted average discount rate 1.6%)	(4,984)
Amount reported on consolidated statements of financial position	<u>\$ 77,885</u>

**10. Land, Buildings and Equipment**

Land, buildings and equipment at June 30, 2020 and 2019 consist of the following (*dollars in thousands*):

	<u>Useful Lives</u>	<u>2020</u>	<u>2019</u>
Buildings	35-50 years	\$ 1,514,198	\$ 1,429,412
Moveable equipment	5-20 years	266,735	256,931
Utilities and building-related assets	20 years	115,844	98,913
Land improvements	15 years	19,841	19,540
Software costs	2-10 years	54,277	53,864
Leasehold improvements	2-20 years	35,395	31,864
Subtotal		<u>\$ 2,006,290</u>	<u>\$ 1,890,524</u>
Accumulated depreciation		<u>(1,021,101)</u>	<u>(958,233)</u>
Subtotal		<u>\$ 985,189</u>	<u>\$ 932,291</u>
Land		55,456	54,637
Construction and equipment in progress		82,688	79,713
Land, buildings and equipment, net		<u>\$ 1,123,333</u>	<u>\$ 1,066,641</u>

Carnegie Mellon acquired \$7.1 million and \$5.9 million in equipment through grants for the years ended June 30, 2020 and 2019, respectively.

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**11. Debt Obligations**

Debt obligations consist of the following as of June 30, 2020 and 2019 (*dollars in thousands*):

	<u>Maturity</u>	<u>Interest %</u>	<u>2020</u>	<u>2019</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			2,050	2,610
Series 2013	03/01/43	4.0-5.0%	52,250	52,250
Premium, net of debt issuance costs			2,980	3,636
Series 2017	08/01/29	5.0%	62,165	62,165
Premium, net of debt issuance costs			11,209	12,590
Series 2019 A	08/01/27	5.0%	49,600	49,600
Premium, net of debt issuance costs			8,752	9,973
Series 2020 A	02/01/30	5.0%	45,565	-
Premium, net of debt issuance costs			14,346	-
Variable Rate				
Series 2008 A	12/01/37	0.09%	120,820	120,820
Debt issuance costs			(290)	(307)
Series 2012 B	02/01/33	0.66%	50,000	50,000
Debt issuance costs			(94)	(102)
Series 2019 B	02/01/42	0.5%	60,140	60,140
Debt issuance costs			(132)	(138)
Collaborative Innovation Center Tax				
Increment Financing	11/01/22	8.5%	1,050	1,380
Collaborative Innovation Center Mortgage Obligation	03/01/25	6.78%	12,519	13,396
Taxable Senior Notes	02/01/47	3.6%	70,000	70,000
Taxable Senior Notes	02/01/50	3.2%	70,000	-
Total debt obligations			<u>\$ 665,735</u>	<u>\$ 540,818</u>

The university borrows its tax-exempt debt through public conduit issuers. As of June 30, 2020, 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.

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

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the long-term ground lease for the land on which the CIC building was built. The CIC building was originally built and owned by the Regional Industrial Development Corporation (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 \$22.7 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 \$1.1 million and \$1.4 million at June 30, 2020 and 2019, respectively. The TIF note bears interest at a rate of 7.5% through April 30, 2016 and 8.5% from May 1, 2016 through maturity.

Series 2019 bonds were issued in January 2019 to redeem then outstanding Series 2009 bonds and are comprised of 1) \$49.6 million Series 2019A bonds, bearing interest at a fixed rate of 5.0% and maturing on August 1, 2027. The 2019A bonds include an original issue premium of \$10.7 million and; 2) \$60.1 million 2019 B bonds, bearing interest at a variable rate indexed to one-month LIBOR, subject to a mandatory put on February 1, 2024, and maturing on February 1, 2042. The 2019 B bonds may be converted to another mode bearing interest at variable or fixed rates at the direction of the university. Series 2020 A bonds were issued in February 2020 in the amount of \$45.6 million bearing interest at a fixed rate 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. There were no commercial paper notes outstanding at June 30, 2020 or 2019.

The university has a \$50.0 million unsecured line of credit agreement that expires October 19, 2020. The university did not draw on the line of credit during the years ended June 30, 2020 and 2019. No advances were outstanding at June 30, 2020. Advances accrue at a variable rate based on one-month LIBOR.

**Interest Expense**

Cash paid for interest on debt obligations for the fiscal years ended June 30, 2020 and 2019 totaled \$16.5 million and \$20.1 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, 2020 and 2019 was \$20.0 million and \$23.5 million, respectively. For the fiscal years ended June 30, 2020 and 2019, interest expense of \$0.9 million and \$1.1 million was capitalized related to construction in progress.

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**Aggregate Maturities**

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

2021	\$ 11,303
2022	1,404
2023	1,359
2024	33,954
2025	8,353
Thereafter	<u>570,541</u>
Total	<u>\$ 626,914</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 December 2017 for a three-year term ending January 12, 2021.

**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, 2020 (*dollars in thousands*):

	<u>Without</u> <u>Donor Restrictions</u>	<u>With</u> <u>Donor Restrictions</u>	<u>Total</u>
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	<u>2,471</u>	<u>1,980</u>	<u>4,451</u>
Total Net Assets	<u>\$ 1,624,117</u>	<u>\$ 1,968,647</u>	<u>\$3,592,764</u>

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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, 2019 (*dollars in thousands*):

	<u>Without</u> <u>Donor Restrictions</u>	<u>With</u> <u>Donor Restrictions</u>	<u>Total</u>
Board-designated endowment funds	\$ 438,497	\$ -	\$ 438,497
Reserves for working capital and plant- long-term	362,826	-	362,826
Donor-restricted endowment funds	-	874,519	874,519
Unexpended endowment gains	-	689,283	689,283
Capital and other designations	760,697	153,722	914,419
Pledges and assets held in trust by others	-	95,805	95,805
Split-interest agreements and other donor designations	-	11,469	11,469
Term endowments	-	7,213	7,213
Loan funds	2,470	1,767	4,237
Total Net Assets	<u>\$ 1,564,490</u>	<u>\$ 1,833,778</u>	<u>\$ 3,398,268</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*):

<u>Swap Agreement</u>	<u>Effective Date</u>	<u>Notional Amount</u>	<u>Rate paid by CMU</u>	<u>Interest Received</u>	<u>Term (in years)</u>	<u>Termination Date</u>	<u>Cancellation Option</u>
Sep 2004	Oct 2004	\$ 50,000	3.0%	67% of 1M LIBOR	15	Oct 2019	Oct 2014*
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

\* Counterparty cancellation option was monthly after October 1, 2014. The interest rate swap agreement matured and was not renewed.

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, 2020 and 2019 (*dollars in thousands*):

<u>Date of Swap Agreement</u>	<b>Derivatives Reported as</b> <b>Assets/(Liabilities)</b>	
	<u>2020</u>	<u>2019</u>
Sep 2004	\$ -	\$ (186)
Apr 2006	(25,260)	(18,713)
May 2007	(1,178)	(946)
May 2007	(12,647)	(9,634)
Feb 2012	2,382	1,293
Total	<u>\$ (36,703)</u>	<u>\$ (28,186)</u>

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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, 2020 and June 30, 2019.

The following interest expense and fair value gains/(losses) were recorded as other sources under nonoperating activities in the consolidated statements of activities for the years ended June 30, 2020 and 2019 (*dollars in thousands*):

Date of Swap Agreement	Interest (Expense)		Fair Value (Loss) Gain		Total (Loss) Gain	
	2020	2019	2020	2019	2020	2019
<b>Interest rate swaps:</b>						
Sep 2004	\$ (186)	\$ (715)	\$ 186	\$ 645	\$ -	\$ (70)
Apr 2006	(2,360)	(1,833)	(6,547)	(5,296)	(8,907)	(7,129)
May 2007	(139)	(113)	(232)	(207)	(371)	(320)
May 2007	(1,096)	(885)	(3,013)	(2,321)	(4,109)	(3,206)
Feb 2012	286	138	1,089	1,551	1,375	1,689
Total	<u>\$ (3,495)</u>	<u>\$ (3,408)</u>	<u>\$ (8,517)</u>	<u>\$ (5,628)</u>	<u>\$ (12,012)</u>	<u>\$ (9,036)</u>

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, 2020 are as follows (*dollars in thousands*):

	Instruction & Dpt Research	Sponsored Research	Admin & Instl Support	Academic Support	Student Services	Auxiliary	Total
Salaries	\$ 333,879	\$ 189,873	\$ 83,303	\$ 82,173	\$ 29,977	\$ 3,140	\$ 722,345
Benefits	72,816	30,090	18,676	23,344	8,551	815	154,292
Other Operating Expenses	5,399	162,600	41,451	65,045	17,015	36,182	327,692
Depreciation and Amorization	27,905	18,881	5,101	9,668	7,669	7,554	76,778
Interest	3,720	2,517	680	1,288	1,022	3,240	12,467
Total	<u>\$ 443,719</u>	<u>\$ 403,961</u>	<u>\$ 149,211</u>	<u>\$ 181,518</u>	<u>\$ 64,234</u>	<u>\$ 50,931</u>	<u>\$ 1,293,574</u>

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Operating expenses by functional category for the year ended June 30, 2019 are as follows (*dollars in thousands*):

	Instruction & Dpt Research	Sponsored Research	Admin & Instl Support	Academic Support	Student Services	Auxiliary	Total
Salaries	\$ 318,405	\$ 180,773	\$ 75,750	\$ 79,070	\$ 28,709	\$ 3,206	\$ 685,913
Benefits	65,910	27,017	25,576	21,042	7,754	757	148,056
Other Operating Expenses	17,236	149,680	45,540	55,277	20,227	41,045	329,005
Depreciation and Amorization	26,380	17,718	4,994	8,963	7,663	7,021	72,739
Interest	4,812	3,232	911	1,635	1,398	2,849	14,837
Total	<u>\$ 432,743</u>	<u>\$ 378,420</u>	<u>\$ 152,771</u>	<u>\$ 165,987</u>	<u>\$ 65,751</u>	<u>\$ 54,878</u>	<u>\$ 1,250,550</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 \$33.4 million and \$34.0 million (\$30.6 million and \$31.4 million in administration and institutional support) is included above for the years ended June 30, 2020 and 2019, 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 \$677.5 million at June 30, 2020. 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, 2020 and 2019 Carnegie Mellon had contractual obligations of approximately \$29.5 million and \$39.6 million, respectively, in connection with major construction projects.

**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.



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Retirement plan expense for the years ended June 30, 2020 and 2019 totaled \$37.7 million and \$40.1 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 2020 and 2019, 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 \$1.1 million and \$1.6 million for the years ended June 30, 2020 and 2019, respectively. Other (losses)/gains in benefit obligations recognized in non-operating activities totaled \$(3.4 million) and \$2.9 million for the years ended June 30, 2020 and 2019, respectively. Cumulative net actuarial gains of \$10.6 million and \$14.0 million have been recognized as of June 30, 2020 and 2019, respectively.

During fiscal year 2021, amortization of \$0.9 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 3.7% and 4.2% for the years ended June 30, 2020 and 2019, respectively.

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

	<u>2020</u>	<u>2019</u>
<b>Benefit obligation, beginning of year</b>	\$ 20,594	\$ 22,190
Service cost	1,159	1,211
Interest cost	799	976
Assumption changes and actuarial loss/(gain)	2,530	(3,533)
Benefit payments	<u>(348)</u>	<u>(250)</u>
<b>Benefit obligation, end of year</b>	<u>\$ 24,734</u>	<u>\$ 20,594</u>
Fair value of plans' assets	<u>-</u>	<u>-</u>
Funded status	<u>\$ 24,734</u>	<u>\$ 20,594</u>

The assumed discount rate used for calculating the benefit obligation for the fiscal years ended June 30, 2020 and 2019 was 3.1% and 3.7%, respectively. An annual rate of increase in the per capita cost of covered health care benefits for the fiscal years ended June 30, 2020 and 2019 of 6.5% and 6.8%, respectively, was assumed. For the fiscal years ended June 30, 2020 and 2019, the rate was assumed to decrease gradually to 5.0% by 2026 and remain at 5.0% thereafter.

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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
2021	\$ 646	\$ 386	\$ 1,032
2022	979	573	1,552
2023	1,302	739	2,041
2024	1,600	881	2,481
2025	1,857	993	2,850
2026-2030	12,484	5,841	18,325

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 and \$22.3 million as of June 30, 2020 and 2019, respectively. These assets are reflected as investments in the accompanying consolidated statements of financial position.

**17. Related Party Transactions**

Sponsored projects revenue for fiscal years 2020 and 2019 includes \$3.4 million 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, 2020 and 2019, Carnegie Mellon's percentage obligation was 15.2%. Included in other assets at June 30, 2020 and 2019 are \$0.6 million of advances resulting primarily from operating surpluses. Included in occupancy and related expenses is \$3.7 million and \$3.5 million for steam costs paid to Bellefield for the years ended June 30, 2020 and 2019, 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, 2020, Carnegie Mellon's distribution share remained at 53.5%.

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

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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 \$15.2 million and \$14.3 million were received in fiscal years 2020 and 2019, 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, beginning 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. The university provided emergency financial aid to students under the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) totaling \$1.1 million during the year ended June 30, 2020. The full extent of the impact of COVID-19 on the university's finances is uncertain and will depend on the duration and depth of the pandemic.

**20. Subsequent Events**

The university has performed an evaluation of subsequent events through October 13, 2020, 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
<b>US DEPARTMENT OF EDUCATION</b>							
COVID-19 - Higher Education Emergency Relief Fund- Student Portion	84.425E	\$ 1,134,956	\$ -			\$ 1,134,956	\$ -
<b>STUDENT FINANCIAL ASSISTANCE CLUSTER</b>							
<b>US DEPARTMENT OF EDUCATION</b>							
<b>Office Of Federal Student Aid</b>							
Federal Supplemental Educational Opportunity Grants (FSEOG)	84.007	2,077,676	-			2,077,676	-
Federal Work-Study Program (FWS)	84.033	1,106,981	-			1,106,981	-
Federal Perkins Loan Program	84.038	12,897,822	-			12,897,822	-
Federal Pell Grant Program (Pell)	84.063	4,903,628	-			4,903,628	-
Federal Direct Student Loans (Direct Loan)	84.268	45,098,676	-			45,098,676	-
<b>Total Student Financial Assistance Cluster</b>		<b>\$ 66,084,783</b>	<b>-</b>			<b>\$ 66,084,783</b>	<b>-</b>
<b>Total US Department Of Education</b>		<b>\$ 67,219,739</b>	<b>-</b>			<b>\$ 67,219,739</b>	<b>-</b>
<b>RESEARCH AND DEVELOPMENT CLUSTER</b>							
<b>US DEPARTMENT OF AGRICULTURE</b>							
<b>National Institute Of Food and Agriculture</b>							
Specialty Crop Research Initiative	10.309	-	219,902	Cornell University	7640110607	219,902	-
Agriculture and Food Research Initiative (AFRI)	10.310	319,762	-			319,762	-
				Regents Of the Univ Of			
Agriculture and Food Research Initiative (AFRI)	10.310	-	(1,810)	California	A160316S0001	(1,810)	-
<b>Total US Department Of Agriculture</b>		<b>\$ 319,762</b>	<b>218,092</b>			<b>\$ 537,854</b>	<b>-</b>
<b>US DEPARTMENT OF COMMERCE</b>							
<b>National Oceanic and Atmospheric Administration (NOAA)</b>							
Weather and Air Quality Research	11.459	16,746	-			16,746	-
<b>National Institute Of Standards and Technology (NIST)</b>							
NIST - IPA:FY18	11.IP1707	20,086	-			20,086	-
Measurement and Engineering Research Standards	11.609	1,290,828	-			1,290,828	-
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	703,283	Iowa State University	4261702A	703,283	55,399
Arrangements for Interdisciplinary Research Infrastructure	11.619	-	387,672	University Of Delaware	49409	387,672	-
<b>Total US Department Of Commerce</b>		<b>\$ 1,327,660</b>	<b>1,090,955</b>			<b>\$ 2,418,615</b>	<b>55,399</b>
<b>DEPARTMENT OF DEFENSE</b>							
<b>DEPARTMENT OF THE NAVY</b>							
Intergovernmental Personnel Act (IPA) Agreement	12.1141325	197,021	-			197,021	-
US Navy Fellow	12.AO24370	24,995	-			24,995	-
Unconstrained Resolution, Occlusion, Pose, and Aging-Tracking, Surveillance and Identification	12.N6833516C0177	(3,306)	-			(3,306)	-
Sharpfocus: Attaining Sub-Millimeter And Millisecond Resolution For Noninvasive Stimulation And Sensing	12.N6523619C8017	1,974,070	-			1,974,070	55,849
Innovative Collaborative For Unmanned Aerial and Dissimilar Systems	12.RD	-	137,300	Near Earth Autonomy	A022646	137,300	-
				Azure Summit			
A18008 DARPA Ascot	12.RD	-	100,818	Technology Inc.	10109001CMU	100,818	-
Autonomous Aerial Cargo utility System (AACUS) Innovative Naval Prototype (INP)	12.RD	-	(23,083)	Aurora Flight Sciences Corporation	AFS121642	(23,083)	-
CUES: Cyber-Mediated Usable Emotional Sensors	12.RD	-	44,466	Carley Technologies Inc.	A023881	44,466	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
<b>Office Of the Chief Of Naval Research</b>							
Basic and Applied Scientific Research	12.300	11,366,339	-			11,366,339	1,679,440
				The Regents Of The			
Basic and Applied Scientific Research	12.300	-	269,510	University Of California	1015GTA244	269,510	-
Basic and Applied Scientific Research	12.300	-	144,955	Boston University	4500002946	144,955	-
Basic and Applied Scientific Research	12.300	-	144,223	University Of Maryland	43350Z8665001	144,223	-
				Johns Hopkins			
				University Applied			
Basic and Applied Scientific Research	12.300	-	96,501	Physics Laboratory	146615	96,501	-
				South Dakota School Of			
Basic and Applied Scientific Research	12.300	-	52,768	Mines & Technology	SDSMTCMU1905	52,768	-
				Georgia Institute of			
Basic and Applied Scientific Research	12.300	-	95,511	Technology	AWD102969G1	95,511	-
Basic and Applied Scientific Research	12.300	-	29,977	Purdue University	41047706813000417003	29,977	-
				University Of Arkansas			
Basic and Applied Scientific Research	12.300	-	42,133	at Little Rock	25323818CMU	42,133	-
Basic and Applied Scientific Research	12.300	-	27,371	Northwestern University	60053155CMU	27,371	-
<b>Advanced Research Projects Agency</b>							
Research and Technology Development	12.910	1,188,011	-			1,188,011	-
				The Regents Of The			
Research and Technology Development	12.910	-	183,864	University Of California	00010216	183,864	-
<b>Total Department Of the Navy</b>		<b>\$ 14,747,130</b>	<b>1,346,314</b>			<b>\$ 16,093,444</b>	<b>1,735,289</b>
<b>DEPARTMENT OF THE ARMY</b>							
U.S. Army War College Fellows W/Institute for Politics and Strategy	12.FP000000184	18,767	-			18,767	-
Army War College Fellowships FY2018-2021	12.FP000000085	37,532	-			37,532	-
Developing an A41 Innovation Framework	12.W911NF20D0002	236,125	-			236,125	-
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	2,013,481	-			2,013,481	592,108
User Behavior Models For Cyber Simulation	12.ACI00208152017	(7,723)	-			(7,723)	-
Autonomous Delivery Of Trauma Care In The Field	12.W81XWH19C0083	811,775	-			811,775	133,221
Hybrid Visual and Inertial Based Training Kit for Hand-Held Detector Training	12.W911QX17C0017	(37,035)	-			(37,035)	-
Addendum To Extended Reach, Cbrn And Isr Operations With Autonomous Air And Ground Vehicles	12.RD	-	349,438	Robotics Technology Consortium, Inc.	69201002T09	349,438	-
Project Maven: Synthetic Data Generation for Augmenting the Training Of Computer Vision Algorithms	12.RD	-	349,711	General Dynamics	PO4022806440277130	349,711	-
					14463PETTTMUCCKMY0900		
Complex Atomistic Potentials Through Machine Learning	12.RD	-	45,246	Engility Corporation	2	45,246	-
					201711CARNEGIE051SBIRII		
Insanity Program Phase II Base Period	12.RD	-	(50,697)	Parabon Nanolabs Inc.	001	(50,697)	-
				Perceptronics Solutions			
Visualization Interface for Senior Team Aggregation	12.RD	-	(13,891)	Inc.	1990514	(13,891)	-
Trauma Care In a Ruckshack (TRACIR)	12.RD	-	371,095	University Of Pittsburgh	AWD000003811	371,095	-
NREC SUPPORT FOR THE AGVRA EFFORT	12.RD	-	106,619	DCS Corporation	DCSS19020PO211001	106,619	-
NREC Support of the DARPA Assured Autonomy Program	12.RD	-	194,847	DCS Corporation	DCSS19020PO211021	194,847	-
NREC Support of the GVSC GVR Robotics Technology Toolkit	12.RD	-	208,339	DCS Corporation	DCSS19020PO210994	208,339	-
NREC Support of the GVSC GVR Robotics Technology Toolkit	12.RD	-	84,258	DCS Corporation	DCSS19020PO211008	84,258	-
<b>US Army Medical Command</b>							

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Military Medical Research and Development	12.420	373,164	-			373,164	133,882
Military Medical Research and Development	12.420	-	29,941	Boston University	4500002827	29,941	-
<b>US Army Materiel Command</b>							
Basic Scientific Research - RECOVERY	12.431	14,470,156	-			14,470,156	2,674,904
Basic Scientific Research - RECOVERY	12.431	-	758,984	General Dynamics	PO4022806440229096	758,984	69,627
Basic Scientific Research - RECOVERY	12.431	-	99,919	General Dynamics	PO4022806440277130	99,919	-
Basic Scientific Research - RECOVERY	12.431	-	276,888	Duke University	3130860	276,888	-
Basic Scientific Research - RECOVERY	12.431	-	82,282	Princeton University	SUB0000251	82,282	-
Basic Scientific Research - RECOVERY	12.431	-	14,315	Regents Of Univ Of California	KK1652	14,315	-
Basic Scientific Research - RECOVERY	12.431	-	368,070	University Of Southern California	92688877	368,070	-
Basic Scientific Research - RECOVERY	12.431	-	15,752	Washington State University	131087G003806	15,752	-
Basic Scientific Research - RECOVERY	12.431	-	72,019	University Of Illinois At Urbana-Champaign	09243017089	72,019	-
Basic Scientific Research - RECOVERY	12.431	-	39,286	National Center for Manufacturing Sciences	201909130715	39,286	-
Basic Scientific Research - RECOVERY	12.431	-	34,006	University of Central Florida	64016420	34,006	-
Basic Scientific Research - RECOVERY	12.431	-	170,714	California Institute of Technology	S429044	170,714	-
<b>Office Of the Secretary Of Defense</b>							
Basic, Applied, and Advanced Research in Science and Engineering	12.630	176,800	-			176,800	44,776
Basic, Applied, and Advanced Research in Science and Engineering	12.630	-	65,002	Penn State University	S000283ARMY	65,002	-
Basic, Applied, and Advanced Research in Science and Engineering	12.630	-	878,474	Penn State University	4938CMUARMY0045	878,474	-
Basic, Applied, and Advanced Research in Science and Engineering (Advanced Robotics for Manufacturing Institute - ARM)	12.630	16,717,727	-			16,717,727	-
Research and Technology Development	12.910	259,844	-			259,844	5,729
Research and Technology Development	12.910	-	44,146	University of Maryland	86179Z9448202	44,146	-
Research and Technology Development	12.910	-	176,717	University Of Pittsburgh	00584714139331	176,717	-
<b>Total Department Of the Army</b>		<b>\$ 35,070,613</b>	<b>4,771,480</b>			<b>\$ 39,842,093</b>	<b>3,654,247</b>

**DEPARTMENT OF THE AIR FORCE**

SEI 2015 Contract	12.FA870115D0002	140,489,851	-			140,489,851	9,063,539
IPA-018 Rhoades	12.IPA-018	276,309	-			276,309	-
IPA-019 Boleng	12.IPA-019	288,242	-			288,242	-
IPA-020 Cunningham	12.IPA-020	236,810	-			236,810	-
Air Force STTR Service Design Accelerator	12.RD	-	20,033	Skylight Digital	A025312	20,033	-
Cognito Veritas: Scaling the Cognitive Foundations of Online Social Behavior	12.RD	-	217,255	University of Virginia	GG12204PO2169967	217,255	-
Expressive TTS for Machine Translation	12.RD	-	169,300	University Of Southern California	88509027	169,300	-
Cognitive Decentralized Classification Onboard	12.RD	-	66,498	BAE Systems	1018286	66,498	-
The Causal Modeling for Knowledge Transfer, Exploration, and Temporal Simulation	12.RD	-	178,239	BAE Systems	975028	178,239	-
Multi-Domain Adaptive Request Service (MARS)	12.RD	-	546,218	BAE Systems	1038072	546,218	-
<b>Office of the Chief of Naval Research</b>							
Basic and Applied Scientific Research	12.300	2,233,877	-			2,233,877	266,662
<b>US Army Materiel Command</b>							
Basic, Applied, and Advanced Research in Science and Engineering	12.630	121,014	-			121,014	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
<b>Material Command</b>							
Air Force Defense Research Science Program	12.800	4,943,469	-			4,943,469	476,585
Air Force Defense Research Science Program	12.800	-	184,960	National Center for Defense Manufacturing	PO20170089PROJ4058000	184,960	
Air Force Defense Research Science Program	12.800	-	61,809	Syracuse University	2871704936S01	61,809	-
Air Force Defense Research Science Program	12.800	-	163,217	University of Michigan	SUBK00009636PO3005325604	163,217	-
Air Force Defense Research Science Program	12.800	-	64,672	University of Washington	UWSC108118PO35507	64,672	-
Air Force Defense Research Science Program	12.800	-	144,432	University of Washington	UWSC11418BP043188	144,432	-
Air Force Defense Research Science Program	12.800	-	142,958	University of Washington	UWSC11380	142,958	
Air Force Defense Research Science Program	12.800	-	140,493	California Institute of Technology	681098507	140,493	-
Air Force Defense Research Science Program	12.800	-	143,529	California Institute of Technology	S421546	143,529	-
Air Force Defense Research Science Program	12.800	-	98,053	University Of Pittsburgh	00617584144221	98,053	-
Air Force Defense Research Science Program	12.800	-	100,869	University Of Texas At El Paso	226030260A	100,869	-
<b>Advanced Research Project Agency</b>							
Research and Technology Development	12.910	2,541,906	-			2,541,906	74,183
Research and Technology Development	12.910	-	125,798	University of Michigan	SUBK00009959PO3005523666	125,798	
Research and Technology Development	12.910	-	82,375	University Of Southern California	124133807	82,375	
Research and Technology Development	12.910	-	107,275	University of Tulsa	142120354894802	107,275	
<b>Total Department of the Air Force</b>		<b>\$151,131,478</b>	<b>2,757,983</b>			<b>\$ 153,889,461</b>	<b>9,880,969</b>

**DEFENSE ADVANCED RESEARCH PROJECT AGENCY (DARPA)**

Intergovernmental Personnel Act (IPA) Agreement	12.AO23514	253,627	-			253,627	
A Robust And Adaptive Agent That Supports High Performance Teams	12.HR001120C0036	536,763	-			536,763	
ARIEL: Analysis Of Rare Incident-Event Languages	12.HR001115C0114	628,514	-			628,514	205,894
Resonant Micromechanical Receiver	12.HR001115C0137	4,289	-			4,289	-
Methodology For Correct-By-Construction Cells For Logic, Sram And Analog Design	12.HR001116C0038	237,043	-			237,043	-
Agile Dimorphic Execution	12.HR001117C0051	1,330,321	-			1,330,321	-
Robots Servicing Robots: Study and Technology Demonstrating	12.HR001119C0094	478,850	-			478,850	-
Phase-Change Ratcheting Actuators For High Work Density (PRAWN)	12HR001119C0037	826,013	-			826,013	-
Snowwhite: High Level Reasoning In Compilers	12.HR00112090018	346,455	-			346,455	100,000
Assured Autonomy: Le-CPS Modeling & Verification	12.RD	-	38,495	HRL Laboratories LLC	17090181689USPOLINE1	38,495	-
Assured Autonomy:CPS Behavior Modeling & Control	12.RD	-	55,682	HRL Laboratories LLC	17090181689USPOLINE2	55,682	-
Assured Autonomy: Hybrid Systems Toolkit	12.RD	-	14,544	HRL Laboratories LLC	17090181689USPOLINE3	14,544	-
Assured Autonomy: Efficient Runtime Monitoring	12.RD	-	14,544	HRL Laboratories LLC	17090181689USPOLINE4	14,544	-
Assured Autonomy: Learning Safety Constraints	12.RD	-	57,457	HRL Laboratories LLC	17090181689USPOLINE5	57,457	-
Assured Autonomy: Dynamic Assurance	12.RD	-	68,222	HRL Laboratories LLC	17090181689USPOLINE6	68,222	-
Assured Autonomy LE-CPS Modeling & Verification	12.RD	-	139,894	HRL Laboratories LLC	17090181689USPOLINE7	139,894	
Assured Autonomy - CPS Behavior Modeling & Control	12.RD	-	107,767	HRL Laboratories LLC	17090181689USPOLINE8	107,767	
Assured Autonomy - Concurrence & LE-CPS	12.RD	-	48,425	HRL Laboratories LLC	17090181689USPOLINE9	48,425	
Assured Autonomy - Efficient Runtime Monitoring	12.RD	-	115,690	HRL Laboratories LLC	17090181689USPOLINE10	115,690	
Assured Autonomy - Learning Safety Constraints	12.RD	-	74,766	HRL Laboratories LLC	17090181689USPOLINE11	74,766	



Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Assured Autonomy - Dynamic Assurance	12.RD	-	55,985	HRL Laboratories LLC	17090181689USPOLINE12	55,985	
Chess Architecture for Active Social Engineering Defense (ASED)	12.RD	-	270,145	HRL Laboratories LLC Palo Alto Research Center	17093183592US	270,145	
Common Ground Learning and Explanation	12.RD	-	261,831	Center	313533	261,831	-
D3M Program	12.RD	-	97,613	SRI International	21485	97,613	-
ELICIT: A System For Extracting And Organizing Causal Information	12.RD	-	100,299	University Of Southern California	93146501	100,299	-
Active Illumination And Imaging Across Millisecond To icosend Time Scales For General LOS/NLOScene Understanding	12.RD	-	536,470	University Of Wisconsin-Madison	832K112	536,470	-
Fundamental Research On The Transistors And Interconnects For THZ Transistors SBIR (Phase 2)	12.RD	-	109,104	Carley Technologies Inc.	A021897	109,104	-
Nework Back-Haul Layers Architecture	12.RD	-	65,264	BAE Systems	970997	65,264	-
Obtaining Multipath & Non-Line-Of-Sight Information By Sensing Coherence & Intensity With Emerging Novel Techniques	12.RD	-	240,799	Southern Methodist University	G0015347520	240,799	-
Radio Frequency Machine Learning Systems	12.RD	-	141,667	BAE Systems	1006839	141,667	-
SAGAMORE: Stochastic Adaptive Game Analytic Multi-Player Optimal Resilient Executive	12.RD	-	81,658	BAE Systems	1025530	81,658	
Resilient Synchronized Planning And Assessment For The Contested Environment (Rspace) - Phase 3	12.RD	-	205,195	Systems & Technology Research LLC	20180054	205,195	-
Resonance Enhanced Authenticating Communications And Charging (REACH)	12.RD	-	(138)	University Of Illinois At Urbana-Champaign	2014069160207618715412	(138)	-
The Physics of Artificial Intelligence	12.RD	-	74,242	Aimdyn Inc.	1042845	74,242	-
Synergy of Learning Inputs and Decisions for Machine Learning	12.RD	-	67,752	Perspecta Labs	PO0019177	67,752	-
<b>Office of the Chief of Naval Research</b>							
Basic and Applied Scientific Research	12.300	-	261,749	AFRL- Rome, NY	FA87501520281	261,749	121,951
Basic and Applied Scientific Research	12.300	-	1,259,544	AFRL- Rome, NY	FA87501620042	1,259,544	285,839
Basic and Applied Scientific Research	12.300	-	114,914	AFRL- Rome, NY	FA87501620033	114,914	77,045
Basic and Applied Scientific Research	12.300	-	543,792	AFRL- Rome, NY	FA87501720130	543,792	-
Basic and Applied Scientific Research	12.300	-	1,462,264	AFRL- Rome, NY National Rural Electric Cooperative Association	FA87501520277	1,462,264	82,500
Basic and Applied Scientific Research	12.300	-	133,742	Cooperative Association	CMU001SUB2016	133,742	-
Scientific Research - Combating Weapons of Mass Destruction	12.351	186,195	-			186,195	
<b>Advanced Research Projects Agency</b>							
Research and Technology Development	12.910	2,247,154	-			2,247,154	194,711
Research and Technology Development	12.910	-	196,136	Arizona State University	ASUB00000086	196,136	-
Research and Technology Development	12.910	-	53,443	Toyota Technological Institute at Chicago	T00311601	53,443	-
Research and Technology Development	12.910	-	7,995	The Regents Of The University Of California	00009973	7,995	-
Research and Technology Development	12.910	-	446,656	San Francisco	11331SC	446,656	-
Research and Technology Development	12.910	-	190,054	University of Pittsburgh	AWD000015934160525	190,054	-
Research and Technology Development	12.910	-	17,999	Vanderbilt University	UNIV58700	17,999	-
Research and Technology Development	12.910	-	6,818,176	Semiconductor Research Corp	2018JU2779	6,818,176	3,966,966
Research and Technology Development	12.910	-	25,428	Department of the Interior	D16AP00143	25,428	-
Research and Technology Development	12.910	-	240,167	Department of the Interior	D19AP00033	240,167	
Research and Technology Development	12.910	-	1,763,718	SPAWAR Sys. Cen. San Diego	N660011724064	1,763,718	909,966

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
<b>Total DARPA</b>		<b>\$ 7,075,224</b>	<b>16,579,149</b>			<b>\$ 23,654,373</b>	<b>5,944,872</b>
<b>US MARINE CORPS</b>							
<b>Defense Threat Reduction Agency</b>							
<b>Office of the Secretary of Defense</b>							
Scientific Research - Combating Weapons of Mass Destruction	12.351	1,309,646	-			1,309,646	287,508
<b>Total US Marine Corps</b>		<b>\$ 1,309,646</b>	<b>-</b>			<b>\$ 1,309,646</b>	<b>287,508</b>
<b>DEPARTMENT OF DEFENSE - OTHER</b>							
<b>National Security Agency</b>							
CMU Science of Security Lablet: Taking on the Hard Problems	12.H9823018D0008	689,449	-			689,449	79,106
Improved Nowcasting Via Adaptive Boosting Of Highly Variable	12.HDTRA118C0008	385,180	-			385,180	
Biosurveillance Data Sources	12.RD	-	(19,131)	University of Maryland	70937Q1778101	(19,131)	-
3Dmems For Small-Scale Robotics And Mechatronics	12.RD	-	93,632	Intelligent Automation Inc.	24331	93,632	-
High Performance Exoskeleton	12.RD	-	110,499	Johns Hopkins University Applied			
Development of Speech Processing Technologies with Improved	12.RD	-	110,499	Physics Laboratory	158373	110,499	
Performance in Various Sponsor Specific Audio Domains, such as Far-Field Microphone Speech	12.RD	-	30,000	Johns Hopkins University Applied			
Notes on Speech Processing in Selected Extreme Conditions	12.RD	-	30,000	Physics Laboratory	153605	30,000	
<b>Washington Headquarters Services</b>							
Basic and Applied Scientific Research	12.300	42,716	-			42,716	-
<b>Office of the Secretary of Defense</b>							
Basic, Applied, and Advanced Research in Science and Engineering	12.630	144,964	-			144,964	-
<b>National Security Agency</b>							
Information Security Grants	12.902	258,550	-			258,550	-
<b>US Army Medical Command</b>							
Military Medical Research and Development	12.420	-	59,309	University of Pittsburgh	00427534097731	59,309	-
<b>Office of Economic Adjustment</b>							
Economic Adjustment Assistance for State Governments	12.617	-	142,767	University of Utah	10044742CMU000095690	142,767	-
<b>Total Department of Defense - Other</b>		<b>\$ 1,520,859</b>	<b>417,076</b>			<b>\$ 1,937,935</b>	<b>79,106</b>
<b>TOTAL - DEPARTMENT OF DEFENSE</b>		<b>\$210,854,950</b>	<b>25,872,002</b>			<b>\$ 236,726,952</b>	<b>21,581,991</b>
<b>INTELLIGENCE ADVANCED RESEARCH PROJECTS ACTIVITY (IARPA)</b>							
Deep Intermodal Video Analytics (DIVA)	12.RD	-	1,944,612	Department of the Interior	D17PC00340	1,944,612	
Deep Intermodal Video Analytics (DIVA)	12.RD	-	(777)	University of Maryland	54548Z9108201	(777)	-
Deep Intermodal Video Analytics (DIVA)	12.RD	-	709,710	University of Maryland	72858Z9321201	709,710	-
<b>Total IARPA</b>		<b>\$ -</b>	<b>2,653,545</b>			<b>\$ 2,653,545</b>	<b>-</b>
<b>US DEPARTMENT OF EDUCATION</b>							
Graduate Assistance in Areas of National Need	84.200	359,875	-			359,875	
<b>Institute of Education Sciences</b>							
Education Research, Development and Dissemination	84.305	1,687,624	-			1,687,624	191,554
Education Research, Development and Dissemination	84.305	-	3,665	University of Pittsburgh	00424531269201	3,665	-
Education Research, Development and Dissemination	84.305	-	272,463	Middle Tennessee State University	53720777773	272,463	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Education Research, Development and Dissemination	84.305	-	111,868	Wested	S00015106	111,868	-
Education Research, Development and Dissemination	84.305	-	133	Temple University	259746CMU	133	-
<b>Total US Department of Education</b>		<b>\$ 2,047,499</b>	<b>388,129</b>			<b>\$ 2,435,628</b>	<b>191,554</b>

**US DEPARTMENT OF ENERGY (DOE)**

The Center For electron Microscopy And Materials Characterization Facility	81.DEFE0029464	2,460	-			2,460	-
High Luminosity (HL) LHC CMS Detector Upgrade Project Endcap Calorimeter.	81.RD	-	126,108	Fermi National Laboratory	654027	126,108	-
Scoping a Water for Energy Decision Support Framework	81.RD	-	74,811	Sandia National Laboratories	PO1988472	74,811	-
Raven Test Articles in 16NM and 10NM CMOS	81.RD	-	288,698	Sandia National Laboratories	PO1903629	288,698	-
Archer Working Title: Huttle Run Design	81.RD	-	329,349	Sandia National Laboratories	2068241	329,349	-
Learning To Classify Seismic Events	81.RD	-	45,516	Sandia National Laboratories	PO2122946	45,516	-
Machine Learning and the Scattering Transformation to Solve the 1D Burger's Equation and the 2D Navier-Stokes Equation	81.RD	-	40,259	Laboratories	1501830PO2086574	40,259	-
Modeling And Optimization Of Existing Plants	81.RD	-	34,856	Keylogic	PO5000016006	34,856	-
Power Plant Water Use Modeling	81.RD	-	146,707	Keylogic	PO5000016003	146,707	-
Coal-Fired Power Plants - Modeling a Role for Clean and Reliable Electric Power Generation	81.RD	-	119,615	Keylogic	PO5000016007	119,615	-
IECM Maintenance	81.RD	-	102,503	Keylogic	PO5000016002	102,503	-
Learning Curve Qguess	81.RD	-	83,387	Keylogic	PO5000016008	83,387	-
Advanced Reactor Manufacturing	81.RD	-	143,923	Leidos Inc.	TASK1PO10220961	143,923	-
Electrode Structural Evaluation	81.RD	-	117,446	Leidos Inc.	TASK3PO10220961	117,446	-
High Performance Computing Of Electrode Subvolume Performances	81.RD	-	99,635	Leidos Inc.	TASK4PO10220961	99,635	-
CO2 Geochemical Monitoring: Signal Modeling and Application	81.RD	-	92,842	Leidos Inc.	TASK6PO10220961	92,842	-
Risk-Based Monitoring Network Design and Integrative Assessment	81.RD	-	63,072	Leidos Inc.	TASK7PO10220961	63,072	-
Technical Review and Input of NETL Research	81.RD	-	7,419	Leidos Inc.	TASK8PO10220961	7,419	-
Technical Review and Input of NETL Research	81.RD	-	8,909	Leidos Inc.	TASK9PO10220961	8,909	-
Technical Review and Input of NETL Research	81.RD	-	7,826	Leidos Inc.	TASK10PO10220961	7,826	-
Solid Oxide Fuel Cells	81.RD	-	117,562	Leidos Inc.	TASK11PO10220961	117,562	-
Participation in Data Analytics/Machine Learning Workshop at NETL	81.RD	-	4,785	Leidos Inc.	TASK12PO10220961	4,785	-
Computational Fluid Dynamics Modeling for MemCCSea Hollow Fiber Membranes Task 13	81.RD	-	7,844	Leidos Inc.	TASK13PO10220961	7,844	-
Robust Extreme-Scale Multimodal Structured Learning from Spatio-Temporal Data	81.RD	-	58,520	Brookhaven National Laboratory	322174	58,520	-
Distortion Analyses For Additive Manufacturing	81.RD	-	82,845	Honeywell Federal Manufacturing & Technologies LLC	N000296944	82,845	-
Advanced Characterization of AM Metals	81.RD	-	78	Honeywell Federal Manufacturing & Technologies LLC	N000337848	78	-
Latch-Level Locking and Characterization	81.RD	-	75,000	Honeywell Federal Manufacturing & Technologies LLC	N000314690	75,000	-
Latch-Level Locking and Characterization	81.RD	-	198,154	Honeywell Federal Manufacturing & Technologies LLC	N000335747	198,154	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Mechanism Of Photochemical N2 Reduction	81.RD	-	142,702	National Renewable Energy Laboratory (NREL)	XDJ88218501	142,702	-
Versatile Data Management Services For Future DOE Science	81.RD	-	201,116	Los Alamos National Laboratory	520262	201,116	-
LANL Institute For Reliable High Performance Information Technology	81.RD	-	393,866	Los Alamos National Laboratory	394903	393,866	-
Advanced Optimization Strategies for Bubbling Fluidized Bed Processes in Pyomo	81.RD	-	82,540	Lawrence Berkeley National Laboratory	7208191	82,540	-
Carbon Capture Simulation Initiative (CSSI)	81.RD	-	975,174	Lawrence Berkeley National Laboratory	7208191	975,174	-
Steady State Modeling & Optimization	81.RD	-	91,482	Lawrence Berkeley National Laboratory	7208191	91,482	-
Expert Review Of Nexant National Interruption Cost Survey Roadmap	81.RD	-	58,360	Lawrence Berkeley National Laboratory	7436048	58,360	-
Lighten Up	81.RD	-	35,990	Lawrence Berkeley National Laboratory	7284586	35,990	-
FFTX: A Co-Design Project For Fast Fourier Transforms	81.RD	-	181,308	Lawrence Berkeley National Laboratory	7421006	181,308	-
Study of Machine Learning (ML) Component of the Enhanced Radiological Nuclear Inspection and Evaluation System (ERNIE)	81.RD	-	8,868	Lawrence Livermore National Laboratory	B631980	8,868	-
Study of the Machine Learning (ML) Component of the Enhanced Radiological Nuclear Inspection and Evaluation System (ERNIE)	81.RD	-	26,976	Lawrence Livermore National Laboratory	B622469	26,976	-
Study of the Machine Learning (ML) Component of the Enhanced Radiological Nuclear Inspection and Evaluation System (ERNIE)	81.RD	-	274,603	Lawrence Livermore National Laboratory	B622976	274,603	-
Crystal Structure Prediction of Energetic Materials	81.RD	-	64,184	Lawrence Livermore National Laboratory	B638426	64,184	-
Explainable And Small Data machine Learning For Accelerating Feedstock Optimization	81.RD	-	146,903	Lawrence Livermore National Laboratory	B632272	146,903	-
Integration of Solvation Effects with High-Throughput Catalyst Screening Methods to Guide Experimental CO2 Reduction of Catalysis Efforts	81.RD	-	75,615	Lawrence Livermore National Laboratory	B634972	75,615	-
Using High-Throughput Calculations of Solvation Effects to Guide Experimental CO2 Reduction Catalysis Efforts	81.RD	-	13,869	Lawrence Livermore National Laboratory	B640522	13,869	-
DESC Analysis Coordinator	81.RD	-	69,910	SLAC National Accelerator Laboratory (Stanford)	178958	69,910	-
Dynamic Effects of Technology-Forcing Zev Policy Under Vehicle Fleet Standards	81.RD	-	62,539	UT-Battelle	4000173447	62,539	-
Microstructure Features of 304 Stainless Steel and Their Impacts on Corrosion	81.RD	-	35,500	Fluor Marine Propulsion LLC	PO132944	35,500	-
Sample Efficient Reinforcement Learning for Plasma Control	81.RD	-	79,414	Princeton University	S017741	79,414	-
Smart Mobility Data Collection and Analysis	81.RD	-	48,782	Argonne National Laboratory	7F30155	48,782	-
Student - Danielle Rager	81.RD	-	3,482	Krell Institute	CHECK000018775	3,482	-
Office of Science Financial Assistance Program	81.049	3,465,860	-			3,465,860	30,517
Office of Science Financial Assistance Program	81.049	-	1,623	Krell Institute	A020794	1,623	-
Office of Science Financial Assistance Program	81.049	-	106,861	Brown University	00001295	106,861	-
Office of Science Financial Assistance Program	81.049	-	20,500	American Physical Society	CWC041	20,500	-
Office of Science Financial Assistance Program	81.049	-	165,508	University of Pittsburgh	00019794014243	165,508	-

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		108,667	Stony Brook University	8552621155763	108,667	-
Office of Science Financial Assistance Program	81.049	-	115,135	Columbia University	2GG014496	115,135	-
Office of Science Financial Assistance Program	81.049	-	139,005	University of Washington	UWSC10119BPO27412	139,005	-
Office of Science Financial Assistance Program	81.049	-	129,947	Cornell University	8598911163	129,947	-
Office of Science Financial Assistance Program	81.049	-	53,294	Pennsylvania State University	S000066USDOE	53,294	-
Office of Science Financial Assistance Program	81.049	-	53,087	Pennsylvania State University	5923CMUJDOE9200	53,087	-
Office of Science Financial Assistance Program	81.049	-	146,071	University Of Minnesota	A007230202	146,071	-
University Coal Research	81.057	42,349	-			42,349	42,766
Conservation Research and Development	81.086	1,204,971	-			1,204,971	257,740
Conservation Research and Development	81.086	-	113,961	Massachusetts Institute of Technology	5710004217	113,961	-
Conservation Research and Development	81.086	-	110,277	University Of Minnesota	A006948101	110,277	-
Renewable Energy Research and Development	81.087	944,329	-			944,329	485,380
Renewable Energy Research and Development	81.087	-	157,965	The Regents of the University of California	A192112S001	157,965	-
Renewable Energy Research and Development	81.087	-	148,754	Dow Chemical Company	62071	148,754	-
Renewable Energy Research and Development	81.087	-	96,687	University Of Kansas	FY2019077	96,687	-
Renewable Energy Research and Development	81.087	-	22,339	Rapid Advancement in Process Intensification Deployment (RAPID) Manufacturing Institute	1042986	22,339	-
Fossil Energy Research and Development	81.089	99,973	-			99,973	55,598
Fossil Energy Research and Development	81.089	-	135,929	Liquid Ion Solutions LLC	DEFE0031629SCMU01	135,929	-
Fossil Energy Research and Development	81.089	-	65,923	Penn State University	S000030USDOE	65,923	-
Fossil Energy Research and Development	81.089	-	46,364	University of Kentucky	PO7800005081	46,364	-
Environmental Remediation and Waste Processing and Disposal	81.104	838,645	-			838,645	16,367
Defense Nuclear Nonproliferation Research	81.113	220,218	-			220,218	-
Nuclear Energy Research, Development and Demonstration	81.121	(576)	-			(576)	-
Nuclear Energy Research, Development and Demonstration	81.121	-	53,313	Arizona State University	ASUB00000449	53,313	-
Electricity Delivery and Energy Reliability, Research, Development and Analysis	81.122	-	168,845	University of Arkansas	SA1611103	168,845	-
Advanced Research Projects Agency - Energy	81.135	366,471	-			366,471	1,106
Advanced Research Projects Agency - Energy	81.135	-	7,069	National Rural Electric Cooperative Association	DEAR0000705	7,069	-
Advanced Research Projects Agency - Energy	81.135	-	254,903	24M Technologies Inc.	AR3550714	254,903	-
Advanced Research Projects Agency - Energy	81.135	-	126,351	Clemson University	21352192023386	126,351	-
Advanced Research Projects Agency - Energy	81.135	-	577,392	General Motors LLC	4300660784	577,392	-
Advanced Research Projects Agency - Energy	81.135	-	41,162	University Of Colorado	15547071001135449	41,162	-
Advanced Research Projects Agency - Energy	81.135	-	48,706	Ionic Materials Inc.	DEAR0000780	48,706	-
<b>Total US DOE</b>		<b>\$ 7,184,700</b>	<b>8,766,490</b>			<b>\$ 15,951,190</b>	<b>889,474</b>
<b>ENVIRONMENTAL PROTECTION AGENCY (EPA)</b>							
<b>Office of Research and Development (ORD)</b>							
Science to Achieve Results (STAR) Research Program	66.509	1,672,191	-			1,672,191	994,556
P3 Award: National Student Design Competition for Sustainability	66.516	10,776	-			10,776	-
<b>Total EPA</b>		<b>\$ 1,682,967</b>	<b>-</b>			<b>\$ 1,682,967</b>	<b>994,556</b>

**US DEPARTMENT OF HEALTH AND HUMAN SERVICES**

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
<b>National Institutes of Health</b>							
National Institute for Occupational Safety & Health	93.16IPA1616820	9,899	-			9,899	-
<b>Centers for Disease Control and Prevention</b>							
National Implementation of Medicare Advantage And Prescription Drug Plan	93.RD	-	34,343	Rand Corporation	9920180038	34,343	-
	93.RD	-	89,211	Rand Corporation	SCON000000094	89,211	-
Inhibition Of Telomere Maintenance By Oxidized DNA Precursor	93.RD	-	(7,692)	University of Pittsburgh	00592111302871	(7,692)	-
Illuminating Metabolic Pathways Enabled By Early T Cell Activation	93.RD	-	22,244	University of Pittsburgh	CNVA000572411312881	22,244	-
Cardiovascular Bioengineering Training Program	93.RD	-	5,645	University of Pittsburgh	00555531315981	5,645	-
<b>National Institutes of Health</b>							
Food and Drug Administration Research	93.103	315,610	-			315,610	86,847
Environmental Health	93.113	-	50,720	University of Pittsburgh	0058991129881	50,720	-
Environmental Health	93.113	-	114,659	University of Pittsburgh	AWD000005221328161	114,659	-
Oral Diseases and Disorder Research	93.121	850	-			850	-
Oral Diseases and Disorder Research	93.121	-	59,927	University of Michigan	3003557307	59,927	-
				Los Angeles Biomedical			
Oral Diseases and Disorder Research	93.121	-	102,599	Research Institute	30842CMU	102,599	-
Oral Diseases and Disorder Research	93.121	-	41,623	University of Pittsburgh	00564261299961	41,623	-
Human Genome Research	93.172	427,188	-			427,188	28,254
Human Genome Research	93.172	-	51,147	University of Pittsburgh	00409761306991	51,147	-
Human Genome Research	93.172	-	12,648	University of Pittsburgh	90111251307111	12,648	-
Human Genome Research	93.172	-	4,704	Indiana University	PO0173652	4,704	-
Research Related to Deafness and Communication Disorders	93.173	965,130	-			965,130	241,944
Research Related to Deafness and Communication Disorders	93.173	-	24,491	University of Pittsburgh	00494841313131	24,491	-
				Vanderbilt University			
Research Related to Deafness and Communication Disorders	93.173	-	42,858	Medical Center	VUMC70291	42,858	-
Immunization Research, Demonstration, Public Information and Education Training and Clinical Skills Improvement Projects	93.185	414,484	-			414,484	24,785
Research and Training in Complementary and Integrative Health	93.213	567,948	-			567,948	182,313
				Johns Hopkins			
Research on Healthcare Costs, Quality & Outcomes	93.226	-	20,692	University	2002369253	20,692	-
Research on Healthcare Costs, Quality & Outcomes	93.226	-	32,963	University of Pittsburgh	00427711253641	32,963	-
Mental Health Research Grants	93.242	3,694,905	-			3,694,905	284,411
				Icahn School Of			
Mental Health Research Grants	93.242	-	131,487	Medicine At Mount Sinai	025553244609	131,487	-
Mental Health Research Grants	93.242	-	94,687	McLean Hospital	401454	94,687	-
Mental Health Research Grants	93.242	-	177,005	University of Pittsburgh	CNVA000526871294091	177,005	-
Mental Health Research Grants	93.242	-	77,505	University of Pittsburgh	AWD000010561333401	77,505	-
Mental Health Research Grants	93.242	-	18,026	University of Pittsburgh	CNVA00608961310251	18,026	-
Mental Health Research Grants	93.242	-	13,109	University of Pittsburgh	CNVA000603811318951	13,109	-
Mental Health Research Grants	93.242	-	425,180	University of Pittsburgh	CNVA000593501306731	425,180	-
Mental Health Research Grants	93.242	-	129,145	University of Pittsburgh	CNVA000593501332011	129,145	-
Mental Health Research Grants	93.242	-	405,101	University of Pittsburgh	CNVA000594601312001	405,101	-
Mental Health Research Grants	93.242	-	111,897	University of Pittsburgh	CNVA000467061264652	111,897	-
Mental Health Research Grants	93.242	-	24,670	University of Pittsburgh	00564871300521	24,670	-
Mental Health Research Grants	93.242	-	303,888	University of Pittsburgh	CNVA000562681301381	303,888	-
Mental Health Research Grants	93.242	-	52,172	Nurelm Inc.	20181031CMU	52,172	-
Mental Health Research Grants	93.242	-	85,090	University Of Oregon	281450C	85,090	-
Alcohol Research Programs	93.273	511,578	-			511,578	58,851
Drug Abuse and Addiction Research Programs	93.279	851,143	-			851,143	71,398
Drug Abuse and Addiction Research Programs	93.279	-	34,018	University of Pittsburgh	90108321316611	34,018	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	1,637,278	-			1,637,278	244,949
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	(5,233)	Rutgers University	0398PO786818	(5,233)	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	125,368	University of Pittsburgh	AWD000008131331541	125,368	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	228,935	University of Pittsburgh	281450C	228,935	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	81,730	University of Pittsburgh	025553244609	81,730	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	-	12,485	University of Pittsburgh	CNVA000495171320011	12,485	-
Teenage Pregnancy Prevention Program	93.297	760,804	-			760,804	359,124
Trans-NIH Research Support	93.310	2,996,490	-			2,996,490	1,250,614
Trans-NIH Research Support	93.310	-	1,291	St. Jude Children's Research Hospital Inc.	112510107842878	1,291	-
Trans-NIH Research Support	93.310	-	63,451	St. Jude Children's Research Hospital Inc.	1125010207904155	63,451	-
Trans-NIH Research Support	93.310	-	(150)	University of Pittsburgh	00465321268641	(150)	-
Trans-NIH Research Support	93.310	-	34,510	University Of Pittsburgh	00620811319662	34,510	-
Trans-NIH Research Support	93.310	-	9,155	University Of Pittsburgh	CNVA000465321268641	9,155	-
Trans-NIH Research Support	93.310	-	51,761	University Of Pittsburgh	CNVA000620811335562	51,761	-
Trans-NIH Research Support	93.310	-	300,916	University of Illinois at Urbana-Champaign	07774315598	300,916	-
Trans-NIH Research Support	93.310	-	177,593	University of Illinois at Urbana-Champaign	07774317752	177,593	-
Research Infrastructure Programs	93.351	655,277	-			655,277	173,339
Nursing Research	93.361	140,265	-			140,265	-
Nursing Research	93.361	-	239,835	University Of Pittsburgh	00500741288681	239,835	-
Cancer Cause and Prevention Research	93.393	100,791	-			100,791	15,311
Cancer Cause and Prevention Research	93.393	-	8,727	University Of Pittsburgh	00586451308081	8,727	-
Cancer Detection and Diagnosis Research	93.394	406,012	-			406,012	-
Cancer Biology Research	93.396	68,428	-			68,428	-
Cancer Research Manpower	93.398	174,079	-			174,079	-
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	1,540,867	-			1,540,867	627,955
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433	-	(1,005)	University Of Pittsburgh	00424531305641	(1,005)	-
Social Services Research and Demonstration	93.647	11,529	-			11,529	-
Cardiovascular Diseases Research	93.837	461,176	-			461,176	10,538
Cardiovascular Diseases Research	93.837	-	8,987	Boston University	4500001943	8,987	-
Cardiovascular Diseases Research	93.837	-	107,979	University Of Minnesota	A005584701	107,979	-
Cardiovascular Diseases Research	93.837	-	18,537	Yale University	GK000128CON80000443	18,537	-
Cardiovascular Diseases Research	93.837	-	151,226	University of Pittsburgh	90154671319771	151,226	-
Cardiovascular Diseases Research	93.837	-	43,100	University of Pittsburgh	CNVA000555531332831	43,100	-
Lung Diseases Research	93.838	(14,207)	-			(14,207)	19,529
Lung Diseases Research	93.838	-	56,911	Yale University	GR108734CON80002247	56,911	-
Lung Diseases Research	93.838	-	67,106	Yale University	GR105399CON80001673	67,106	-
Lung Diseases Research	93.838	-	29,478	University Of Alabama	000503442001	29,478	-
Lung Diseases Research	93.838	-	35,021	University Of Pittsburgh	CNVA000605791332891	35,021	-
Lung Diseases Research	93.838	-	40,449	Vanderbilt University	VUMC67476	40,449	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Lung Diseases Research	93.838	-	33,700	The Brigham and Women's Hospital, Inc.	122869	33,700	-
Lung Diseases Research	93.838	-	21,634	Oregon Health and Science Institute	1011201CARNEGIE	21,634	-
Lung Diseases Research	93.838	-	23,011	Allegheny Health Network	49708209	23,011	-
Lung Diseases Research	93.838	-	12,773	Allegheny Singer Research Institute	49708209	12,773	-
Blood Diseases and Resources Research	93.839	187,098	-			187,098	64,728
Blood Diseases and Resources Research	93.839	-	87,654	Cornell University	8452811105	87,654	-
Blood Diseases and Resources Research	93.839	-	(4,676)	University Of Minnesota	N005714802	(4,676)	-
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	105,124	-			105,124	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	1,148,238	-			1,148,238	292,576
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	2,037,820	-			2,037,820	256,732
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	5,106	University Of Pittsburgh	AWD000012171334952	5,106	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	23	University Of Pittsburgh	00620031318711	23	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	67,612	University Of Pittsburgh	CNVA000603684154711	67,612	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	31,813	University Of Pittsburgh	CNVA000434271250191	31,813	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	37,181	University of Pittsburgh	CNVA000620761330761	37,181	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	43,029	University of Pittsburgh	AWD000016761339041	43,029	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	175,420	Columbia University	1GG01355401	175,420	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	-	19,596	Massachusetts General Hospital	235424	19,596	-
Allergy and Infectious Diseases Research	93.855	1,219,402	-			1,219,402	195,115
Allergy and Infectious Diseases Research	93.855	-	96,463	Yale University	GR106934CON80001868	96,463	-
Allergy and Infectious Diseases Research	93.855	-	218,538	Magee Women's Research Institute & Foundation	4692CMU	218,538	-
Allergy and Infectious Diseases Research	93.855	-	(22,323)	Magee Women's Research Institute & Foundation	4685CMU	(22,323)	-
Allergy and Infectious Diseases Research	93.855	-	120,770	University Of Pittsburgh	CNVA000527491286821	120,770	-
Allergy and Infectious Diseases Research	93.855	-	38,154	University Of Pittsburgh	CNVA000559511299041	38,154	-
Allergy and Infectious Diseases Research	93.855	-	40,690	University Of Pittsburgh	CNVA000439821261111	40,690	-
Allergy and Infectious Diseases Research	93.855	-	20,265	University Of Pittsburgh	CNVA000439821261071	20,265	-
Allergy and Infectious Diseases Research	93.855	-	34,262	University of Pittsburgh	AWD000002011325141	34,262	-
Biomedical Research and Research Training	93.859	3,733,086	-			3,733,086	573,349
Biomedical Research and Research Training	93.859	-	130,715	North Carolina State University	2017314201	130,715	-
Biomedical Research and Research Training	93.859	-	10,758	University Of Texas at Austin	UTA16001042	10,758	-
Biomedical Research and Research Training	93.859	-	83,841	University of Delaware	53831	83,841	-
Biomedical Research and Research Training	93.859	-	(2)	University Of Pittsburgh	00396681249661	(2)	-



Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Biomedical Research and Research Training	93.859	-	22	University Of Pittsburgh	00402421310181	22	-
Biomedical Research and Research Training	93.859	-	(6,546)	University Of Pittsburgh	00462101312901	(6,546)	-
Biomedical Research and Research Training	93.859	-	8,592	University Of Pittsburgh	00509461313811	8,592	-
Biomedical Research and Research Training	93.859	-	54,227	University Of Pittsburgh	90140901311641	54,227	-
Biomedical Research and Research Training	93.859	-	17,210	University Of Pittsburgh	90140911311651	17,210	-
Biomedical Research and Research Training	93.859	-	9,896	University Of Pittsburgh	90140921311661	9,896	-
Biomedical Research and Research Training	93.859	-	14,499	University Of Pittsburgh	90140941311681	14,499	-
Biomedical Research and Research Training	93.859	-	4,157	University Of Pittsburgh	90140951311691	4,157	-
Biomedical Research and Research Training	93.859	-	6,148	University Of Pittsburgh	CNVA000540571311631	6,148	-
Biomedical Research and Research Training	93.859	-	93,192	University Of Pittsburgh	CNVA000448711261901	93,192	-
Biomedical Research and Research Training	93.859	-	4,378	University Of Pittsburgh	CNVA000462101331421	4,378	-
Biomedical Research and Research Training	93.859	-	168,238	University Of Pittsburgh	CNVA000485891273942	168,238	-
Biomedical Research and Research Training	93.859	-	147,518	University Of Pittsburgh	CNVA000509461329091	147,518	-
Biomedical Research and Research Training	93.859	-	61,163	University Of Pittsburgh	CNVA000540571326941	61,163	-
Biomedical Research and Research Training	93.859	-	33,055	University Of Pittsburgh	CNVA000540571326951	33,055	-
Biomedical Research and Research Training	93.859	-	25,449	University Of Pittsburgh	CNVA000540571326961	25,449	-
Biomedical Research and Research Training	93.859	-	211,772	University Of Pittsburgh	CNVA000540571326981	211,772	-
Biomedical Research and Research Training	93.859	-	98,901	University Of Pittsburgh	CNVA000540571326991	98,901	-
Biomedical Research and Research Training	93.859	-	4,489	University Of Pittsburgh	CNVA000540571327001	4,489	-
Biomedical Research and Research Training	93.859	-	34,413	University Of Pittsburgh	CNVA000595151315531	34,413	-
Biomedical Research and Research Training	93.859	-	95,715	University Of Pittsburgh	CNVA000624511324201	95,715	-
Child Health and Human Development Extramural Research	93.865	2,535,160	-	Icahn School of Medicine at Mount Sinai Johns Hopkins	0255C4314609	2,535,160	349,950
Child Health and Human Development Extramural Research	93.865	-	29,045	University	2002772820	29,045	-
Child Health and Human Development Extramural Research	93.865	-	7,803	University Of Pittsburgh	CNVA00546311295081	7,803	-
Child Health and Human Development Extramural Research	93.865	-	167,402	Duke University	2036730	167,402	-
Child Health and Human Development Extramural Research	93.865	-	(57,497)	Duke University	2037453	(57,497)	-
Child Health and Human Development Extramural Research	93.865	-	139,963	Duke University	2037453	139,963	-
Child Health and Human Development Extramural Research	93.865	-	114,261	University of Pittsburgh Magee Women's Research Institute & Foundation	AWD000010881334101 3503	114,261	-
Child Health and Human Development Extramural Research	93.865	-	(5,190)	Yale University	GR105474CON80001680	(5,190)	-
Aging Research	93.866	-	30,308	University Of Pittsburgh	00521861286171	30,308	-
Aging Research	93.866	-	72,416	Brown University	00001360	72,416	-
Aging Research	93.866	-	20,002	University Of Pennsylvania	578170PO4470059	20,002	-
Aging Research	93.866	-	15,805	University Of Pennsylvania	578170PO4450399	15,805	-
Aging Research	93.866	-	26,909	University Of Pennsylvania	574701PO4292066	26,909	-
Aging Research	93.866	-	10,734	University Of Pittsburgh	CNVA000502371276741	10,734	-
Vision Research	93.867	1,376,504	-	University Of Nevada Reno	UNR1671PO117GC000002	1,376,504	39,234
Vision Research	93.867	-	135,464	University Of Pittsburgh	590781317971	135,464	-
Vision Research	93.867	-	47,004	University Of Pittsburgh	590781317971	47,004	-
Vision Research	93.867	-	1,889	University Of Pittsburgh	590781317971	1,889	-
<b>Total US Department of Health and Human Services</b>		<b>\$ 29,039,956</b>	<b>7,842,738</b>			<b>\$ 36,882,694</b>	<b>5,451,846</b>

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)**

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Wheel Terrain-Traverse Energy Usage Investigation Via Laboratory Experimentation Using Single Wheel Soil Dynamometer And Prototype Wheels	43.RD	-	(10,758)	Jet Propulsion Lab Stinger Ghaffarian Technologies	1612701	(10,758)	-
Response Intelligent Systems Research and Development Support Automated Mapping And Planning To Improve For Assessment Of Coral Reef Health	43.RD	-	244,492	Jet Propulsion Lab	1617044	31,354	-
Objective Uncertainty Quantification For Satellite-Based Atmospheric Sounding	43.RD	-	81,854	Jet Propulsion Lab	1629749	81,854	-
Autonomous Contingency Detection and Reaction for Unmanned Aircraft Phase II	43.RD	-	58,966	Near Earth Autonomy	NNX17CS56C01	58,966	-
Enabling Aerial Close-Proximity and Contact Sensing for Inspection of Industrial Infrastructure - Phase 2	43.RD	-	116,213	Near Earth Autonomy	80NSSC19C010401	116,213	-
Visualization of Flight Software Components and Connections	43.RD	-	20,000	Jet Propulsion Lab	1624919	20,000	-
NASA STTR Phase 1: Paired Rover	43.RD	-	(8,378)	Astrobic Technology Inc.	A022009	(8,378)	-
Wfirst Infrared Nearby Galaxy Survey	43.RD	-	37,433	University of Washington	UWSC10592	37,433	-
Science	43.001	1,080,940	-			1,080,940	345,171
Science	43.001	-	89,876	SETI Institute Planetary Science	SC3130	89,876	-
Science	43.001	-	89,553	Institute	1523CARNEGIEMELLON	89,553	-
Aeronautics	43.002	63,565	-			63,565	-
Aeronautics	43.002	-	111,166	San Jose State University Research Foundation	2116145736CMU2019	111,166	-
Office of Stem Engagement (OSTEM)	43.008	-	61,931	National Institute Of Aerospace	C162B00CMU201020CMU	61,931	-
Office of Stem Engagement (OSTEM)	43.008	-	13,698	Penn State University National Institute Of	5246CMUNASAK06H	13,698	-
Office of Stem Engagement (OSTEM)	43.008	-	4,915	Aerospace	CHECK27877CHECK28336	4,915	-
Cross Agency Support	43.009	27,240	-			27,240	-
Space Technology	43.012	523,845	-			523,845	-
Space Technology	43.012	-	401,746	The Regents of the University of California	A192477S003	401,746	-
<b>Total NASA</b>		<b>\$ 1,695,590</b>	<b>1,344,061</b>			<b>\$ 3,039,651</b>	<b>345,171</b>

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
<b>NATIONAL SCIENCE FOUNDATION (NSF)</b>							
Intergovernmental Personnel Act (IPA) Agreement - Keisler Engineering	47.SES1650803 47.041	25,057 6,384,804	- -			25,057 6,384,804	- 436,043
Engineering	47.041	-	8,120	NOVA Southeastern University	331236	8,120	-
Engineering	47.041	-	(110)	University Of California	00009171POBB00746962	(110)	-
Engineering	47.041	-	67,635	The Research Foundation For The State University Of New York	8239421149047	67,635	-
Mathematical and Physical Sciences	47.049	7,330,492	-			7,330,492	307,119
Mathematical and Physical Sciences	47.049	-	59,772	University of Pittsburgh Montana State University	CNVA000503340117731	59,772	-
Mathematical and Physical Sciences	47.049	-	15,075	University	G25320W7952	15,075	-
Geosciences	47.050	813,098	-			813,098	55,354
Computer and Information Science and Engineering	47.070	28,648,524	-			28,648,524	775,464
Computer and Information Science and Engineering	47.070	-	116,068	The Regents Of the University Of California	PO145GVA403	116,068	-
Computer and Information Science and Engineering	47.070	-	3,686	SRI International	141000039	3,686	-
Computer and Information Science and Engineering	47.070	-	134,451	Rochester Institute of Technology	3146101	134,451	-
Computer and Information Science and Engineering	47.070	-	44,622	State University Of New York at Buffalo	R1045972	44,622	-
Computer and Information Science and Engineering	47.070	-	122,877	Indiana University	PO0093723	122,877	-
Computer and Information Science and Engineering	47.070	-	211,907	Indiana University	BL4812511CMUPO0086105	211,907	-
Computer and Information Science and Engineering	47.070	-	211,051	Indiana University	BL4812537CMUPO0085770	211,051	-
Computer and Information Science and Engineering	47.070	-	45,589	Cornell University	7295410594	45,589	-
Computer and Information Science and Engineering	47.070	-	93,362	Northeastern University	50265378050	93,362	-
Computer and Information Science and Engineering	47.070	-	30,134	University Of Illinois at Urbana-Champaign	2015071870115733	30,134	-
Computer and Information Science and Engineering	47.070	-	3,392,559	MPC	17011	3,392,559	-
Computer and Information Science and Engineering	47.070	-	94,258	University of California - San Diego	118620157MPINVS9002365	94,258	-
Computer and Information Science and Engineering	47.070	-	3,942	University Of Southern California	115070153	3,942	-
Computer and Information Science and Engineering	47.070	-	36,002	Louisiana State University	PO0000024529	36,002	-
Computer and Information Science and Engineering	47.070	-	122,936	University Of Illinois at Urbana-Champaign	08662216839	122,936	-
Computer and Information Science and Engineering	47.070	-	4,186	University Of Illinois at Urbana-Champaign	08822516863	4,186	-
Computer and Information Science and Engineering	47.070	-	50,876	Washington University	WU18422PO2933937G	50,876	-
Biological Sciences	47.074	1,096,282	-			1,096,282	23,654
Biological Sciences	47.074	-	132,261	Duke University	14NSF1051	132,261	-
Biological Sciences	47.074	-	14,392	Wake Forest University	19001	14,392	-
Biological Sciences	47.074	-	80,899	University Of Texas At Austin	UTA19001225	80,899	-
Social, Behavioral, and Economic Sciences	47.075	3,782,112	-			3,782,112	332,551
Social, Behavioral, and Economic Sciences	47.075	-	1,000	George Mason University	E2047131	1,000	-
Social, Behavioral, and Economic Sciences	47.075	-	(3,561)	Vanderbilt University	UNIV58535	(3,561)	-

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
Social, Behavioral, and Economic Sciences	47.075	-	34,434	New York University	F039202	34,434	-
Social, Behavioral, and Economic Sciences	47.075	-	9,869	University Of Texas At Austin	UTA18000475	9,869	-
Education and Human Resources	47.076	5,094,278	-	Pennsylvania State University	S000327NSF	5,094,278	104,771
Education and Human Resources	47.076	-	68,126	University Of Pittsburgh	00554450120582	68,126	-
Office Of International Science and Engineering	47.079	-	234,810			234,810	-
Integrative Activities	47.083	672,018	-			672,018	208,116
<b>Total NSF</b>		<b>\$ 53,846,665</b>	<b>5,441,228</b>			<b>\$ 59,287,893</b>	<b>2,243,072</b>

**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	350,326	-	Novateur Research Solutions LLC	CMUSUBKDOT16FT1PII	350,326	193,649
Pedestrian And Cyclists Detection For Transit Buses Phase II	20.RD	-	19,961			19,961	-
Highway Training and Education	20.215	3,728	-			3,728	-
<b>Office of the Secretary (OST) Administration Secretariate</b>							
University Transportation Centers Program	20.701	2,030,780	-			2,030,780	222,899
<b>Total US Department Of Transportation</b>		<b>\$ 2,384,834</b>	<b>19,961</b>			<b>\$ 2,404,795</b>	<b>416,548</b>

**DEPARTMENT OF HOMELAND SECURITY**

Algorithms for Automatic Detection Of Weapons and Other Objects in 3D CT Images and Videos	97.RD	-	111,111	IDSS Holdings Inc. George Mason University	CMUB0020	111,111	-
Centers for Homeland Security	97.061	-	37,130		E2042931	37,130	-
Homeland Security Research, Development, Testing, Evaluation and Demonstration Of Technologies Related to Nuclear Threat Detection	97.077	894,577	-			894,577	-
<b>Total Department Of Homeland Security</b>		<b>\$ 894,577</b>	<b>148,241</b>			<b>\$ 1,042,818</b>	<b>-</b>

**OTHER FEDERAL AGENCIES**

**US Department Of the Interior**

Research and Technology Development	12.910	603,418	-			603,418	160,822
<b>US Geological Survey</b>							
Intergovernmental Personnel Act (IPA) Agreement	15.A021447	15,495	-			15,495	-
Earthquake Hazards program Assistance	15.807	20,572	-			20,572	-
US Geological Survey Research and Data Collection	15.808	75,542	-			75,542	-
<b>US Department Of State</b>							
Intergovernmental Personnel Act (IPA) Agreement	19.1080417	45,975	-	Institute Of International Education Inc.	SIIE1SUBR2017	45,975	-
Professional and Cultural Exchange Programs - Citizens Exchanges	19.415	-	5,238			5,238	-
<b>National Endowment for the Arts</b>							
Promotion of the Arts Grants to Organizations and Individuals	45.024	61,930	-			61,930	-
Promotion Of the Humanities Office Of Digital Humanities	45.169	51,331	-			51,331	5,742
Promotion Of the Humanities Office Of Digital Humanities	45.169	-	(15,902)	Duke University	3430722	(15,902)	-
USAID Foreign Assistance for Programs Overseas	98.001	-	9,637	Johns Hopkins University	PO2002848848	9,637	-
<b>Total Other Federal Agencies</b>		<b>\$ 874,263</b>	<b>(1,027)</b>			<b>\$ 873,236</b>	<b>166,564</b>

Federal Program	CFDA No.	Direct	Pass-Through	Pass-Through Entity	Pass-Through Entity Sponsor Number	Federal Expenditures	Passed to Subrecipient
<b>Total Research and Development Cluster</b>		\$312,153,423	53,784,415			\$ 365,937,838	32,336,175
<b>Total Federal Award Expenditures</b>		\$379,373,162	53,784,415			\$ 433,157,577	32,336,175

# Carnegie Mellon University

## Notes to Schedule of Expenditures of Federal Awards

### Year Ended June 30, 2020

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#### **1. Basis of Presentation**

The accompanying 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, 2020 and is presented on the accrual basis of accounting. The information in the Schedule, is presented in accordance with the 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, 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 Schedule of Expenditures of Federal Awards**  
**Year Ended June 30, 2020**

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**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 consolidated financial statements. The amount of Federal Perkins loans outstanding at June 30, 2020 totaled \$9,146,494. 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, 2020 totaled \$45,098,676. These loans are not made by the University but are received by its students.

**6. Facilities and Administrative Costs**

For research and development awards, 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 expenses for the year ended June 30, 2020 are as follows:

	<b>Capped</b>	<b>Uncapped</b>
On-campus	56.80%	59.00%
Off-campus	26.00%	26.90%
Silicon Valley	60.20%	N/A
SEI	10.70%	N/A
National Robotics Engineering Consortium	26.90%	25.10%

The capped rate applies to all 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, 2020, 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 13, 2020. Our report contains an emphasis of matter paragraph referring to the University's adoption, in 2020, of Accounting Standards Update No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*.

### **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 opinion 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 consolidated 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 consolidated 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 13, 2020



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**Independent Auditors' Report on Compliance for Each Major Federal Program; Report on Internal Control Over Compliance; and Report on 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, 2020. 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 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, 2020.

*Other Matters*

The results of our auditing procedures disclosed instances of noncompliance which are required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as items 2020-001 and 2020-002. Our opinion on each major federal program is not modified with respect to these matters.



The University's response to the noncompliance findings identified in our audit is described in the accompanying schedule of findings and questioned costs. The University is also responsible for preparing a corrective action plan to address each audit finding included in our auditors' report. The University's response and corrective action plan were not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response or the corrective action plan.

### **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 and therefore, material weaknesses or significant deficiencies may exist that have not been identified. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, we did identify certain deficiencies in internal control over compliance, described in the accompanying schedule of findings and questioned costs as items 2020-001 and 2020-002, that we consider to be significant deficiencies.

The University's response to the internal control over compliance findings identified in our audit is described in the accompanying schedule of findings and questioned costs. The University is also responsible for preparing a corrective action plan to address each audit finding included in our auditors' report. The University's response and corrective action plan were not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response or the corrective action plan.

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 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, 2020, and have issued our report thereon dated October 13, 2020, 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 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 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  
November 12, 2020

**Carnegie Mellon University  
Schedule of Findings and Questioned Costs  
Year Ended June 30, 2020**

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**1. Summary of Auditors' Results**

- a. Type of report issued on whether the consolidated financial statements were prepared in accordance with generally accepted accounting principles: **Unmodified**
- b. Internal control deficiencies over financial reporting disclosed by the audit of the financial statements:
  - Material weaknesses: **No**
  - Significant deficiencies: **None reported**
- c. Noncompliance material to the financial statements: **No**
- d. Internal control deficiencies over major programs disclosed by the audit:
  - Material weaknesses: **No**
  - Significant deficiencies: **Yes, Findings 2020-001 and 2020-002**
- 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): **Yes, Findings 2020-001 and 2020-002**
- g. Major program:
  - Research and Development Cluster – various CFDA numbers
  - Student Financial Assistance Cluster – 84.007, 84.033, 84.038, 84.063, 84.268
- 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**

**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

***Criteria or Requirement***

Per Section 34 CFR Section 685.309 and 34 CFR Section 690.83, a school shall complete and return the student status confirmation report to the Secretary within 60 days of receipt. Institutions are responsible for timely reporting, whether they report directly or via a third-party servicer.

**Carnegie Mellon University  
Schedule of Findings and Questioned Costs  
Year Ended June 30, 2020**

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Per Section 34 CFR Section 685.309 and 34 CFR Section 690.83, institutions must review, update, and verify student enrollment statuses, program information, and effective dates that appear on the Enrollment Reporting Roster file or on the Enrollment Maintenance page of the NSLDS Professional Access (NSLDSFAP) website for both Campus Level and Program Level enrollment information.

Per 2 CFR 200.303, the nonfederal entity must establish and maintain effective internal control over the Federal award that provides reasonable assurance that the nonfederal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award.

***Condition Found, Including Perspective***

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 4 out of 40 students, the student status change was not reported at the campus level or program level, and for an additional 5 out of 40 students, the student status change 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.

***Possible Cause and Effect***

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.

***Questioned Costs***

None identified.

***Statistical Validity***

The sample was not intended to be, and was not, a statistically valid sample.

***Repeat Finding in the Prior Year***

No.

***Recommendation***

We recommend Carnegie Mellon University enhance the precision of the control around the review of the accuracy of the program level and campus level enrollment information and timeliness of the enrollment reporting submissions.

***Views of Responsible Officials***

The University currently leverages automated functionality within our student information system (S3) to report all enrollment updates to the National Student Loan Data System (NSLDS) through the National Student Clearinghouse (NSC) on a regular, predetermined schedule. All errors resulting from this integration are reviewed and corrected by the University Registrar's Office in a timely fashion.

In order to improve the accuracy, control, and timeliness of our reporting submissions, we plan to:

- Review the National Student Clearinghouse (NSC) enrollment reporting logic within our student information system (S3) to identify and address the logic issues that led to the exceptions identified. This review will be completed by February 2021 and any resulting changes will be implemented by June 2021.

**Carnegie Mellon University  
Schedule of Findings and Questioned Costs  
Year Ended June 30, 2020**

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- Perform a monthly comprehensive review of student enrollment data using program- and college-level enrollment reports from National Student Loan Data System (NSLDS) to ensure all data reported to the NSC is appropriately reflected in the NSLDS. We plan to begin this review by March 2021.

**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

***Criteria or Requirement***

Per OMB No. 1845-0039, the institution is required to submit Pell origination records and disbursement records to the Common Origination and Disbursement (COD). The disbursement record reports the actual disbursement date and the amount of the disbursement. Institutions must report student payment data within 15 calendar days after the school makes a payment; or becomes aware of the need to make an adjustment to previously reported student payment data or expected student payment data. The disbursement record reports the actual disbursement date and the amount of the disbursement. The origination record reports the student's social security number, award amount, enrollment date, verification status code, transaction number, cost of attendance and academic calendar.

Per 2 CFR 200.303, the non-Federal entity must establish and maintain effective internal control over the Federal award that provides reasonable assurance that the non-Federal entity is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award.

***Condition Found, Including Perspective***

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 result in any impact to student Pell Grant eligibility.

***Possible Cause and Effect***

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.

***Questioned Costs***

None identified.

***Statistical Validity***

The sample was not intended to be, and was not, a statistically valid sample.

**Carnegie Mellon University  
Schedule of Findings and Questioned Costs  
Year Ended June 30, 2020**

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***Repeat Finding in the Prior Year***

No.

***Recommendation***

We recommend Carnegie Mellon University update its procedures around the Pell Reporting process for both disbursement and origination records to ensure all reported information agrees between Carnegie Mellon University's records and the COD records and is submitted timely, and enhance the precision of the control around the review of this information.

***Views of Responsible Officials***

It should be noted that the Cost of Attendance (COA) discrepancies were self-identified and corrected in the 2020-21 award year prior to being noted in the Uniform Guidance Audit of 2019-20. Moving forward, Pell COA components will be formally reviewed and signed off as part of our annual update to all Cost of Attendance components each January.

In order to ensure all Pell information is reported timely and accurately, we plan to:

- Accelerate the reporting timeline of Pell disbursements to Common Origination and Disbursement (COD) to mirror our Direct Loan reporting process. Disbursements will be reported each week throughout the award year. This change was implemented as soon as we became aware of the timing issue.
- Perform a monthly review of Pell Grant data using the Pell Grant Year-to-Date Record (message class PGYR) from COD to identify any origination or disbursement information that has not been properly recorded. This review is expected to begin by February 2021.