Form 5500

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Annual Return/Report of Employee Benefit Plan

This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code).

▶ **Complete all entries in accordance with the instructions to the Form 5500.**

OMB Nos. 1210-0110
1210-0089

2022

This Form is Open to Public Inspection

Part I Annual Report Identification Information

For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022

A This return/report is for:
- [ ] a multiemployer plan
- [ ] a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
- [X] a single-employer plan
- [ ] a DFE (specify) ____

B This return/report is:
- [ ] the first return/report
- [ ] the final return/report
- [ ] an amended return/report
- [ ] a short plan year return/report (less than 12 months)

C If the plan is a collectively-bargained plan, check here. . . . . ▶ [ ]

D Check box if filing under:
- [X] Form 5558
- [ ] automatic extension
- [ ] the DFVC program
- [ ] special extension (enter description)

E If this is a retroactively adopted plan permitted by SECURE Act section 201, check here. . . . . ▶ [ ]

Part II Basic Plan Information—enter all requested information

1a Name of plan
CARNEGIE MELLON UNIVERSITY 401(K) PLAN

1b Three-digit plan number (PN) ▶ 009

1c Effective date of plan 08/01/2011

2a Plan sponsor's name (employer, if for a single-employer plan)
Mailing address (include room, apt., suite no. and street, or P.O. Box)
City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions)
CARNEGIE MELLON UNIVERSITY

5000 FORBES AVENUE
PITTSBURGH, PA 15213-3815

2b Employer Identification Number (EIN) 25-0969449

2c Plan Sponsor's telephone number 412-268-2047

2d Business code (see instructions) 611000

Caution: A penalty for the late or incomplete filing of this return/report will be assessed unless reasonable cause is established.

Under penalties of perjury and other penalties set forth in the instructions, I declare that I have examined this return/report, including accompanying schedules, statements and attachments, as well as the electronic version of this return/report, and to the best of my knowledge and belief, it is true, correct, and complete.

SIGN HERE	Filed with authorized/valid electronic signature.	10/13/2023	ANGELA BLANTON
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE	Filed with incorrect/unrecognized electronic signature.		
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

3a Plan administrator's name and address [X] Same as Plan Sponsor

3b Administrator's EIN

3c Administrator's telephone number

4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report:
a Sponsor's name
c Plan Name

4b EIN

4d PN

5 Total number of participants at the beginning of the plan year	**5**	1346
6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines **6a(1), 6a(2), 6b, 6c,** and **6d**).		
a(1) Total number of active participants at the beginning of the plan year	**6a(1)**	955
a(2) Total number of active participants at the end of the plan year	**6a(2)**	1072
b Retired or separated participants receiving benefits	**6b**	0
c Other retired or separated participants entitled to future benefits	**6c**	450
d Subtotal. Add lines **6a(2)**, **6b**, and **6c**	**6d**	1522
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	**6e**	0
f Total. Add lines **6d** and **6e**	**6f**	1522
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	**6g**	1466
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested	**6h**	67
7 Enter the total number of employers obligated to contribute to the plan (only multiemployer plans complete this item)	**7**	

8a If the plan provides pension benefits, enter the applicable pension feature codes from the List of Plan Characteristics Codes in the instructions:
2E 2F 2G 2J 3D

b If the plan provides welfare benefits, enter the applicable welfare feature codes from the List of Plan Characteristics Codes in the instructions:

9a Plan funding arrangement (check all that apply)

(1)	[ ]	Insurance
(2)	[ ]	Code section 412(e)(3) insurance contracts
(3)	[X]	Trust
(4)	[ ]	General assets of the sponsor

9b Plan benefit arrangement (check all that apply)

(1)	[ ]	Insurance
(2)	[ ]	Code section 412(e)(3) insurance contracts
(3)	[X]	Trust
(4)	[ ]	General assets of the sponsor

10 Check all applicable boxes in 10a and 10b to indicate which schedules are attached, and, where indicated, enter the number attached. (See instructions)

a Pension Schedules

(1)	[X]	**R** (Retirement Plan Information)
(2)	[ ]	**MB** (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary
(3)	[ ]	**SB** (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

b General Schedules

(1)	[X]	**H** (Financial Information)
(2)	[ ]	**I** (Financial Information – Small Plan)
(3)	[ ]	**A** (Insurance Information)
(4)	[X]	**C** (Service Provider Information)
(5)	[ ]	**D** (DFE/Participating Plan Information)
(6)	[ ]	**G** (Financial Transaction Schedules)

Part III Form M-1 Compliance Information (to be completed by welfare benefit plans)

11a If the plan provides welfare benefits, was the plan subject to the Form M-1 filing requirements during the plan year? (See instructions and 29 CFR 2520.101-2.) ..... ☐ Yes ☐ No

If "Yes" is checked, complete lines 11b and 11c.

11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) ..... ☐ Yes ☐ No

11c Enter the Receipt Confirmation Code for the 2022 Form M-1 annual report. If the plan was not required to file the 2022 Form M-1 annual report, enter the Receipt Confirmation Code for the most recent Form M-1 that was required to be filed under the Form M-1 filing requirements. (Failure to enter a valid Receipt Confirmation Code will subject the Form 5500 filing to rejection as incomplete.)

Receipt Confirmation Code_____

SCHEDULE C (Form 5500)	Service Provider Information	OMB No. 1210-0110
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA). ▶ **File as an attachment to Form 5500.**	**2022** **This Form is Open to Public Inspection.**

For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022

A Name of plan	**B** Three-digit plan number (PN) ▶
CARNEGIE MELLON UNIVERSITY 401(K) PLAN	009

C Plan sponsor's name as shown on line 2a of Form 5500	**D** Employer Identification Number (EIN)
CARNEGIE MELLON UNIVERSITY	25-0969449

Part I Service Provider Information (see instructions)

You must complete this Part, in accordance with the instructions, to report the information required for **each person** who received, directly or indirectly, $5,000 or more in total compensation (i.e., money or anything else of monetary value) in connection with services rendered to the plan or the person's position with the plan during the plan year. If a person received **only** eligible indirect compensation for which the plan received the required disclosures, you are required to answer line 1 but are not required to include that person when completing the remainder of this Part.

1 Information on Persons Receiving Only Eligible Indirect Compensation

a Check "Yes" or "No" to indicate whether you are excluding a person from the remainder of this Part because they received only eligible indirect compensation for which the plan received the required disclosures (see instructions for definitions and conditions).. . . . . ☐ Yes ☒ No

b If you answered line 1a "Yes," enter the name and EIN or address of each person providing the required disclosures for the service providers who received only eligible indirect compensation. Complete as many entries as needed (see instructions).

(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

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2. Information on Other Service Providers Receiving Direct or Indirect Compensation. Except for those persons for whom you answered "Yes" to line 1a above, complete as many entries as needed to list each person receiving, directly or indirectly, $5,000 or more in total compensation (i.e., money or anything else of value) in connection with services rendered to the plan or their position with the plan during the plan year. (See instructions).

(a) Enter name and EIN or address (see instructions)

TEACHERS INS. AND ANNUITY ASSOC.

730 THIRD AVENUE
NEW YORK, NY 10017-3206

13-1624203

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
49 50	RECORDKEEPER	110512	Yes [X] No [ ]	Yes [X] No [ ]	0	Yes [ ] No [X]

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes [ ] No [ ]	Yes [ ] No [ ]		Yes [ ] No [ ]

(a) Enter name and EIN or address (see instructions)

(b) Service Code(s)	(c) Relationship to employer, employee organization, or person known to be a party-in-interest	(d) Enter direct compensation paid by the plan. If none, enter -0-.	(e) Did service provider receive indirect compensation? (sources other than plan or plan sponsor)	(f) Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures?	(g) Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element (f). If none, enter -0-.	(h) Did the service provider give you a formula instead of an amount or estimated amount?
			Yes [ ] No [ ]	Yes [ ] No [ ]		Yes [ ] No [ ]

Part I Service Provider Information (continued)

3. If you reported on line 2 receipt of indirect compensation, other than eligible indirect compensation, by a service provider, and the service provider is a fiduciary or provides contract administrator, consulting, custodial, investment advisory, investment management, broker, or recordkeeping services, answer the following questions for (a) each source from whom the service provider received $1,000 or more in indirect compensation and (b) each source for whom the service provider gave you a formula used to determine the indirect compensation instead of an amount or estimated amount of the indirect compensation. Complete as many entries as needed to report the required information for each source.

(a) Enter service provider name as it appears on line 2	**(b)** Service Codes (see instructions)	**(c)** Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	**(e)** Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

(a) Enter service provider name as it appears on line 2	**(b)** Service Codes (see instructions)	**(c)** Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	**(e)** Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

(a) Enter service provider name as it appears on line 2	**(b)** Service Codes (see instructions)	**(c)** Enter amount of indirect compensation
(d) Enter name and EIN (address) of source of indirect compensation	**(e)** Describe the indirect compensation, including any formula used to determine the service provider's eligibility for or the amount of the indirect compensation.	

Part II Service Providers Who Fail or Refuse to Provide Information

4 Provide, to the extent possible, the following information for each service provider who failed or refused to provide the information necessary to complete this Schedule.

(a) Enter name and EIN or address of service provider (see instructions)	**(b)** Nature of Service Code(s)	**(c)** Describe the information that the service provider failed or refused to provide

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Part III Termination Information on Accountants and Enrolled Actuaries (see instructions)

(complete as many entries as needed)

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

a Name:	**b** EIN:
c Position:	
d Address:	**e** Telephone:

Explanation:

SCHEDULE H (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Financial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA), and section 6058(a) of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500.**

OMB No. 1210-0110

2022

This Form is Open to Public Inspection

For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022

A Name of plan
CARNEGIE MELLON UNIVERSITY 401(K) PLAN

B Three-digit plan number (PN) ▶ 009

C Plan sponsor's name as shown on line 2a of Form 5500
CARNEGIE MELLON UNIVERSITY

D Employer Identification Number (EIN)
25-0969449

Part I Asset and Liability Statement

1 Current value of plan assets and liabilities at the beginning and end of the plan year. Combine the value of plan assets held in more than one trust. Report the value of the plan's interest in a commingled fund containing the assets of more than one plan on a line-by-line basis unless the value is reportable on lines 1c(9) through 1c(14). Do not enter the value of that portion of an insurance contract which guarantees, during this plan year, to pay a specific dollar benefit at a future date. **Round off amounts to the nearest dollar.** MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 1b(1), 1b(2), 1c(8), 1g, 1h, and 1i. CCTs, PSAs, and 103-12 IEs also do not complete lines 1d and 1e. See instructions.

Assets		(a) Beginning of Year	(b) End of Year
a Total noninterest-bearing cash	1a		
b Receivables (less allowance for doubtful accounts):			
(1) Employer contributions	1b(1)		
(2) Participant contributions	1b(2)		
(3) Other	1b(3)		
c General investments:			
(1) Interest-bearing cash (include money market accounts & certificates of deposit)	1c(1)		
(2) U.S. Government securities	1c(2)		
(3) Corporate debt instruments (other than employer securities):			
(A) Preferred	1c(3)(A)		
(B) All other	1c(3)(B)		
(4) Corporate stocks (other than employer securities):			
(A) Preferred	1c(4)(A)		
(B) Common	1c(4)(B)		
(5) Partnership/joint venture interests	1c(5)		
(6) Real estate (other than employer real property)	1c(6)		
(7) Loans (other than to participants)	1c(7)		
(8) Participant loans	1c(8)		
(9) Value of interest in common/collective trusts	1c(9)		
(10) Value of interest in pooled separate accounts	1c(10)		
(11) Value of interest in master trust investment accounts	1c(11)		
(12) Value of interest in 103-12 investment entities	1c(12)		
(13) Value of interest in registered investment companies (e.g., mutual funds)	1c(13)	42651692	38598246
(14) Value of funds held in insurance company general account (unallocated contracts)	1c(14)		
(15) Other	1c(15)		

			(a) Beginning of Year	(b) End of Year
1d	Employer-related investments:			
	(1) Employer securities	1d(1)		
	(2) Employer real property	1d(2)		
e	Buildings and other property used in plan operation	1e		
f	Total assets (add all amounts in lines 1a through 1e)	1f	42651692	38598246
	Liabilities			
g	Benefit claims payable	1g	343165	477787
h	Operating payables	1h		
i	Acquisition indebtedness	1i		
j	Other liabilities	1j		
k	Total liabilities (add all amounts in lines 1g through1j)	1k	343165	477787
	Net Assets			
l	Net assets (subtract line 1k from line 1f)	1l	42308527	38120459

Part II Income and Expense Statement

2 Plan income, expenses, and changes in net assets for the year. Include all income and expenses of the plan, including any trust(s) or separately maintained fund(s) and any payments/receipts to/from insurance carriers. Round off amounts to the nearest dollar. MTIAs, CCTs, PSAs, and 103-12 IEs do not complete lines 2a, 2b(1)(E), 2e, 2f, and 2g.

	Income		(a) Amount	(b) Total
a	**Contributions:**			
	(1) Received or receivable in cash from: **(A)** Employers	2a(1)(A)	3288606	
	(B) Participants	2a(1)(B)	1097874	
	(C) Others (including rollovers)	2a(1)(C)	38511	
	(2) Noncash contributions	2a(2)		
	(3) Total contributions. Add lines **2a(1)(A), (B), (C),** and line **2a(2)**	2a(3)		4424991
b	**Earnings on investments:**			
	(1) Interest:			
	(A) Interest-bearing cash (including money market accounts and certificates of deposit)	2b(1)(A)		
	(B) U.S. Government securities	2b(1)(B)		
	(C) Corporate debt instruments	2b(1)(C)		
	(D) Loans (other than to participants)	2b(1)(D)		
	(E) Participant loans	2b(1)(E)		
	(F) Other	2b(1)(F)		
	(G) Total interest. Add lines **2b(1)(A)** through **(F)**	2b(1)(G)		
	(2) Dividends: **(A)** Preferred stock	2b(2)(A)		
	(B) Common stock	2b(2)(B)		
	(C) Registered investment company shares (e.g. mutual funds)	2b(2)(C)	1158003	
	(D) Total dividends. Add lines **2b(2)(A)**, **(B)**, and **(C)**	2b(2)(D)		1158003
	(3) Rents	2b(3)		
	(4) Net gain (loss) on sale of assets: **(A)** Aggregate proceeds	2b(4)(A)		
	(B) Aggregate carrying amount (see instructions)	2b(4)(B)		
	(C) Subtract line **2b(4)(B)** from line **2b(4)(A)** and enter result	2b(4)(C)		
	(5) Unrealized appreciation (depreciation) of assets: **(A)** Real estate	2b(5)(A)		
	(B) Other	2b(5)(B)		
	(C) Total unrealized appreciation of assets. Add lines **2b(5)(A)** and **(B)**	2b(5)(C)		

		(a) Amount	(b) Total
(6) Net investment gain (loss) from common/collective trusts	2b(6)		
(7) Net investment gain (loss) from pooled separate accounts	2b(7)		
(8) Net investment gain (loss) from master trust investment accounts	2b(8)		
(9) Net investment gain (loss) from 103-12 investment entities	2b(9)		
(10) Net investment gain (loss) from registered investment companies (e.g., mutual funds)	2b(10)		-8669232
c Other income	2c		
d Total income. Add all **income** amounts in column (b) and enter total	2d		-3086238
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	991318	
(2) To insurance carriers for the provision of benefits	2e(2)		
(3) Other	2e(3)		
(4) Total benefit payments. Add lines **2e(1)** through **(3)**	2e(4)		991318
f Corrective distributions (see instructions)	2f		
g Certain deemed distributions of participant loans (see instructions)	2g		
h Interest expense	2h		
i Administrative expenses: (1) Professional fees	2i(1)		
(2) Contract administrator fees	2i(2)	110512	
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)		
(5) Total administrative expenses. Add lines **2i(1)** through **(4)**	2i(5)		110512
j Total expenses. Add all **expense** amounts in column (b) and enter total	2j		1101830
Net Income and Reconciliation			
k Net income (loss). Subtract line **2j** from line **2d**	2k		-4188068
l Transfers of assets:			
(1) To this plan	2l(1)		
(2) From this plan	2l(2)		

Part III Accountant's Opinion

3 Complete lines 3a through 3c if the opinion of an independent qualified public accountant is attached to this Form 5500. Complete line 3d if an opinion is not attached.

a The attached opinion of an independent qualified public accountant for this plan is (see instructions):

(1) [X] Unmodified **(2)** [ ] Qualified **(3)** [ ] Disclaimer **(4)** [ ] Adverse

b Check the appropriate box(es) to indicate whether the IQPA performed an ERISA section 103(a)(3)(C) audit. Check both boxes (1) and (2) if the audit was performed pursuant to both 29 CFR 2520.103-8 and 29 CFR 2520.103-12(d). Check box (3) if pursuant to neither.

(1) [X] DOL Regulation 2520.103-8 **(2)** [ ] DOL Regulation 2520.103-12(d) **(3)** [ ] neither DOL Regulation 2520.103-8 nor DOL Regulation 2520.103-12(d).

c Enter the name and EIN of the accountant (or accounting firm) below:

(1) Name: SCHNEIDER DOWNS & CO., INC. **(2)** EIN: 25-1408703

d The opinion of an independent qualified public accountant is **not attached** because:

(1) [ ] This form is filed for a CCT, PSA, or MTIA. **(2)** [ ] It will be attached to the next Form 5500 pursuant to 29 CFR 2520.104-50.

Part IV Compliance Questions

4 CCTs and PSAs do not complete Part IV. MTIAs, 103-12 IEs, and GIAs do not complete lines 4a, 4e, 4f, 4g, 4h, 4k, 4m, 4n, or 5. 103-12 IEs also do not complete lines 4j and 4l. MTIAs also do not complete line 4l.

During the plan year:

		Yes	No	Amount
a Was there a failure to transmit to the plan any participant contributions within the time period described in 29 CFR 2510.3-102? Continue to answer "Yes" for any prior year failures until fully corrected. (See instructions and DOL's Voluntary Fiduciary Correction Program.)	4a		X	

		Yes	No	Amount
b Were any loans by the plan or fixed income obligations due the plan in default as of the close of the plan year or classified during the year as uncollectible? Disregard participant loans secured by participant's account balance. (Attach Schedule G (Form 5500) Part I if "Yes" is checked.)	4b		X	
c Were any leases to which the plan was a party in default or classified during the year as uncollectible? (Attach Schedule G (Form 5500) Part II if "Yes" is checked.)	4c		X	
d Were there any nonexempt transactions with any party-in-interest? (Do not include transactions reported on line 4a. Attach Schedule G (Form 5500) Part III if "Yes" is checked.)	4d		X	
e Was this plan covered by a fidelity bond?	4e	X		500000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	4f		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?	4g		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?	4h		X	
i Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)	4i	X		
j Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked and see instructions for format requirements.)	4j		X	
k Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?	4k		X	
l Has the plan failed to provide any benefit when due under the plan?	4l		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	4m		X	
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3.	4n			

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year? ☐ Yes ☒ No

If "Yes," enter the amount of any plan assets that reverted to the employer this year _____.

5b If, during this plan year, any assets or liabilities were transferred from this plan to another plan(s), identify the plan(s) to which assets or liabilities were transferred. (See instructions.)

5b(1) Name of plan(s)	**5b(2)** EIN(s)	**5b(3)** PN(s)

5c Was the plan a defined benefit plan covered under the PBGC insurance program at any time during this plan year? (See ERISA section 4021 and instructions.) ☐ Yes ☐ No ☐ Not determined

If "Yes" is checked, enter the My PAA confirmation number from the PBGC premium filing for this plan year _____.

SCHEDULE R (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Retirement Plan Information

This schedule is required to be filed under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6058(a) of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500.**

OMB No. 1210-0110

2022

This Form is Open to Public Inspection.

For calendar plan year 2022 or fiscal plan year beginning 01/01/2022 and ending 12/31/2022

A Name of plan
CARNEGIE MELLON UNIVERSITY 401(K) PLAN

B Three-digit plan number (PN) ▶ 009

C Plan sponsor's name as shown on line 2a of Form 5500
CARNEGIE MELLON UNIVERSITY

D Employer Identification Number (EIN)
25-0969449

Part I Distributions

All references to distributions relate only to payments of benefits during the plan year.

1 Total value of distributions paid in property other than in cash or the forms of property specified in the instructions ..... | **1** |

2 Enter the EIN(s) of payor(s) who paid benefits on behalf of the plan to participants or beneficiaries during the year (if more than two, enter EINs of the two payors who paid the greatest dollar amounts of benefits):

EIN(s): 23-2186884

Profit-sharing plans, ESOPs, and stock bonus plans, skip line 3.

3 Number of participants (living or deceased) whose benefits were distributed in a single sum, during the plan year ..... | **3** | 0

Part II Funding Information (If the plan is not subject to the minimum funding requirements of section 412 of the Internal Revenue Code or ERISA section 302, skip this Part.)

4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)? ..... ☐ **Yes** ☐ **No** ☐ **N/A**

If the plan is a defined benefit plan, go to line 8.

5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. **Date:** Month _____ Day _____ Year _____

If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.

6 **a** Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived) ..... | **6a** |

b Enter the amount contributed by the employer to the plan for this plan year ..... | **6b** |

c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount) ..... | **6c** |

If you completed line 6c, skip lines 8 and 9.

7 Will the minimum funding amount reported on line 6c be met by the funding deadline? ..... ☐ **Yes** ☐ **No** ☐ **N/A**

8 If a change in actuarial cost method was made for this plan year pursuant to a revenue procedure or other authority providing automatic approval for the change or a class ruling letter, does the plan sponsor or plan administrator agree with the change? ..... ☐ **Yes** ☐ **No** ☐ **N/A**

Part III Amendments

9 If this is a defined benefit pension plan, were any amendments adopted during this plan year that increased or decreased the value of benefits? If yes, check the appropriate box. If no, check the "No" box. ..... ☐ **Increase** ☐ **Decrease** ☐ **Both** ☐ **No**

Part IV ESOPs (see instructions). If this is not a plan described under section 409(a) or 4975(e)(7) of the Internal Revenue Code, skip this Part.

10 Were unallocated employer securities or proceeds from the sale of unallocated securities used to repay any exempt loan? ..... ☐ **Yes** ☐ **No**

11 **a** Does the ESOP hold any preferred stock? ..... ☐ **Yes** ☐ **No**

b If the ESOP has an outstanding exempt loan with the employer as lender, is such loan part of a "back-to-back" loan? (See instructions for definition of "back-to-back" loan.) ..... ☐ **Yes** ☐ **No**

12 Does the ESOP hold any stock that is not readily tradable on an established securities market? ..... ☐ **Yes** ☐ **No**

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that (1) contributed more than 5% of total contributions to the plan during the plan year or (2) was one of the top-ten highest contributors (measured in dollars). See instructions. *Complete as many entries as needed to report all applicable employers.*

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify):

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

---

a Name of contributing employer

b EIN **c** Dollar amount contributed by employer

d Date collective bargaining agreement expires *(If employer contributes under more than one collective bargaining agreement, check box* ☐ *and see instructions regarding required attachment. Otherwise, enter the applicable date.)* Month _____ Day _____ Year _____

e Contribution rate information *(If more than one rate applies, check this box* ☐ *and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)*
(1) Contribution rate (in dollars and cents) _____
(2) Base unit measure: ☐ Hourly ☐ Weekly ☐ Unit of production ☐ Other (specify): _____

14 Enter the number of deferred vested and retired participants (inactive participants), as of the beginning of the plan year, whose contributing employer is no longer making contributions to the plan for:

a The current plan year. Check the box to indicate the counting method used to determine the number of inactive participants: ☐ last contributing employer ☐ alternative ☐ reasonable approximation (see instructions for required attachment)	**14a**	
b The plan year immediately preceding the current plan year. ☐ Check the box if the number reported is a change from what was previously reported (see instructions for required attachment)	**14b**	
c The second preceding plan year. ☐ Check the box if the number reported is a change from what was previously reported (see instructions for required attachment)	**14c**	

15 Enter the ratio of the number of participants under the plan on whose behalf no employer had an obligation to make an employer contribution during the current plan year to:

a The corresponding number for the plan year immediately preceding the current plan year	**15a**	
b The corresponding number for the second preceding plan year	**15b**	

16 Information with respect to any employers who withdrew from the plan during the preceding plan year:

a Enter the number of employers who withdrew during the preceding plan year	**16a**	
b If line 16a is greater than 0, enter the aggregate amount of withdrawal liability assessed or estimated to be assessed against such withdrawn employers	**16b**	

17 If assets and liabilities from another plan have been transferred to or merged with this plan during the plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐

Part VI Additional Information for Single-Employer and Multiemployer Defined Benefit Pension Plans

18 If any liabilities to participants or their beneficiaries under the plan as of the end of the plan year consist (in whole or in part) of liabilities to such participants and beneficiaries under two or more pension plans as of immediately before such plan year, check box and see instructions regarding supplemental information to be included as an attachment ☐

19 If the total number of participants is 1,000 or more, complete lines (a) through (c)

a Enter the percentage of plan assets held as:
Stock: _____% Investment-Grade Debt: _____% High-Yield Debt: _____% Real Estate: _____% Other: _____%

b Provide the average duration of the combined investment-grade and high-yield debt:
☐ 0-3 years ☐ 3-6 years ☐ 6-9 years ☐ 9-12 years ☐ 12-15 years ☐ 15-18 years ☐ 18-21 years ☐ 21 years or more

c What duration measure was used to calculate line 19(b)?
☐ Effective duration ☐ Macaulay duration ☐ Modified duration ☐ Other (specify):

20 **PBGC missed contribution reporting requirements.** If this is a multiemployer plan or a single-employer plan that is not covered by PBGC, skip line 20.

a Is the amount of unpaid minimum required contributions for all years from Schedule SB (Form 5500) line 40 greater than zero? ☐ Yes ☐ No

b If line 20a is "Yes," has PBGC been notified as required by ERISA sections 4043(c)(5) and/or 303(k)(4)? Check the applicable box:

☐ Yes.

☐ No. Reporting was waived under 29 CFR 4043.25(c)(2) because contributions equal to or exceeding the unpaid minimum required contribution were made by the 30th day after the due date.

☐ No. The 30-day period referenced in 29 CFR 4043.25(c)(2) has not yet ended, and the sponsor intends to make a contribution equal to or exceeding the unpaid minimum required contribution by the 30th day after the due date.

☐ No. Other. Provide explanation_____

THE CARNEGIE MELLON UNIVERSITY
401(K) PLAN
Pittsburgh, Pennsylvania

Financial Statements and
Supplementary Information
As of December 31, 2022 and 2021
and for the years ended December 31, 2022 and 2021
and Independent Auditor's Report Thereon

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Schedule H, line 4i - Schedule of Assets (Held at End of Year)	13
All other schedules required by Section 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable	

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INDEPENDENT AUDITOR'S REPORT

To the Plan Administrator
The Carnegie Mellon University 401(k) Plan
Pittsburgh, Pennsylvania

Scope and Nature of the ERISA Section 103(a)(3)(C) Audit

We have performed audits of the accompanying financial statements of The Carnegie Mellon University 401(k) Plan (the Plan), an employee benefit plan subject to the Employee Retirement Income Security Act of 1974 (ERISA), as permitted by ERISA Section 103(a)(3)(C) (ERISA Section 103(a)(3)(C) audit). The financial statements comprise the statements of net assets available for benefits as of December 31, 2022 and 2021, and the related statements of changes in net assets available for benefits for the years then ended, and the related notes to the financial statements.

Management, having determined it is permissible in the circumstances, has elected to have audits of the Plan's financial statements performed in accordance with ERISA Section 103(a)(3)(C) pursuant to 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. As permitted by ERISA Section 103(a)(3)(C), our audits need not extend to any statements or information related to assets held for investment of the Plan (investment information) by a bank or similar institution or insurance carrier that is regulated, supervised, and subject to periodic examination by a state or federal agency, provided that the statements or information regarding assets so held are prepared and certified to by the bank or similar institution or insurance carrier in accordance with 29 CFR 2520.103-5 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA (qualified institution).

Management has obtained certifications from a qualified institution as of December 31, 2022 and 2021, and for the years then ended, stating that the certified investment information, as described in Note H to the financial statements, is complete and accurate.

Opinion

In our opinion, based on our audits and on the procedures performed as described in the Auditor's Responsibilities for the Audit of the Financial Statements section—

- the amounts and disclosures in the financial statements referred to above, other than those agreed to or derived from the certified investment information, are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).
- the information in the financial statements referred to above related to assets held by and certified to by a qualified institution agrees to, or is derived from, in all material respects, the information prepared and certified by an institution that management determined meets the requirements of ERISA Section 103(a)(3)(C).

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Suite 600
McLean, VA 21102
TEL 571.380.9003

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Plan and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our ERISA Section 103(a)(3)(C) audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error. Management's election of the ERISA Section 103(a)(3)(C) audit does not affect management's responsibility for the financial statements.

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

Management is also responsible for maintaining a current Plan instrument, including all Plan amendments; administering the Plan; and determining that the Plan's transactions that are presented and disclosed in the financial statements are in conformity with the Plan's provisions, including maintaining sufficient records with respect to each of the participants, to determine the benefits due or which may become due to such participants.

Auditor's Responsibilities for the Audit of the Financial Statements

Except as described in the Scope and Nature of the ERISA Section 103(a)(3)(C) Audit section of our report, our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

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

- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for a reasonable period of time.

Our audits did not extend to the certified investment information, except for obtaining and reading the certification, comparing the certified investment information with the related information presented and disclosed in the financial statements, and reading the disclosures relating to the certified investment information to assess whether they are in accordance with the presentation and disclosure requirements of U.S. GAAP.

Accordingly, the objective of an ERISA Section 103(a)(3)(C) audit is not to express an opinion about whether the financial statements as a whole are presented fairly, in all material respects, in accordance with U.S. GAAP.

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

Supplemental Schedule Required by ERISA

The supplemental schedule of assets (held at end of year) as of December 31, 2022 is presented for purposes of additional analysis and is not a required part of the financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. 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 financial statements. The information included in the supplemental schedule, other than that agreed to or derived from the certified investment information, has been subjected to auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with GAAS. For information included in the supplemental schedule that agreed to or is derived from the certified investment information, we compared such information to the related certified investment information.

In forming our opinion on the supplemental schedule, we evaluated whether the supplemental schedule, other than the information agreed to or derived from the certified investment information, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA.

In our opinion—

- the form and content of the supplemental schedule, other than the information in the supplemental schedule that agreed to or is derived from the certified investment information, is presented, in all material respects, in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA.
- the information in the supplemental schedule related to assets held by and certified to by a qualified institution agrees to, or is derived from, in all material respects, the information prepared and certified by an institution that management determined meets the requirements of ERISA Section 103(a)(3)(C).



Pittsburgh, Pennsylvania
October 12, 2023

THE CARNEGIE MELLON UNIVERSITY
401(K) PLAN

EIN: 25-0969449
PLAN NUMBER: 009

SCHEDULE H, LINE 4i - SCHEDULE OF ASSETS (HELD AT END OF YEAR)

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investments Including Maturity Date, Rate of Interest, Collateral, Par or Maturity Value	(d) Cost	(e) Current Value
	Vanguard	Vanguard Institutional Target Retirement 2045 Fund	N/A	$ 11,338,105
	Vanguard	Vanguard Institutional Target Retirement 2050 Fund	N/A	8,595,967
	Vanguard	Vanguard Institutional Target Retirement 2055 Fund	N/A	5,460,207
	Vanguard	Vanguard Institutional Target Retirement 2040 Fund	N/A	4,295,592
	Vanguard	Vanguard Institutional Index Fund	N/A	2,480,583
	Vanguard	Vanguard Institutional Target Retirement 2060 Fund	N/A	949,343
	Vanguard	Vanguard Institutional Target Retirement 2025 Fund	N/A	767,940
	Vanguard	Vanguard Institutional Target Retirement 2035 Fund	N/A	693,914
	Vanguard	Vanguard Institutional Target Retirement 2030 Fund	N/A	584,088
*	TIAA and CREF	TIAA-CREF Self Directed Account	N/A	529,674
	Vanguard	Vanguard Total International Stock Index Fund: Institutional Shares	N/A	458,438
	Vanguard	Vanguard Federal Cash Reserve Money Market Fund	N/A	417,716
	Vanguard	Vanguard Mid-Cap Index Fund Institutional Shares	N/A	351,954
	Vanguard	Vanguard Small-Cap Index Fund Institutional Shares	N/A	344,788
	Vanguard	Vanguard REIT Index Fund Institutional Shares	N/A	284,880
	Vanguard	Vanguard Total Bond Market Index Fund: Institutional Shares	N/A	279,566
	Vanguard	Vanguard Institutional Target Retirement 2020 Fund	N/A	201,641
	Vanguard	Vanguard Institutional Target Retirement Income Fund	N/A	158,801
	Vanguard	Vanguard Inflation-Protected Securities Fund: Institutional Shares	N/A	142,280
	Vanguard	Vanguard Emerging Markets Stock Index Fund: Institutional Shares	N/A	121,691
	Vanguard	Vanguard Institutional Target Retirement 2065 Fund	N/A	118,817
	Vanguard	Vanguard Institutional Target Retirement 2070 Fund	N/A	22,261
				$ 38,598,246

* Party-in-interest

The Independent Auditor's Report should be read with this schedule.

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THE CARNEGIE MELLON UNIVERSITY
401(K) PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	December 31	
	2022	2021
Assets		
Investments, at fair value	$ 38,598,246	$ 42,651,692
Liabilities		
Excess contributions payable	477,787	343,165
Net assets available for benefits	$ 38,120,459	$ 42,308,527

See notes to financial statements.

THE CARNEGIE MELLON UNIVERSITY
401(K) PLAN

STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021

	2022	2021
Additions:		
Contributions:		
Employer	$ 3,288,606	$ 2,506,792
Employee	1,097,874	1,172,181
Rollover	38,511	14,433
	4,424,991	3,693,406
Interest and dividends	1,158,003	992,616
Net appreciation in fair value of investments	-	4,629,917
Total additions	5,582,994	9,315,939
Deductions:		
Net depreciation in fair value of investments	8,669,232	-
Benefits paid to participants	991,318	654,624
Administrative expenses	110,512	101,475
Total deductions	9,771,062	756,099
Net (decrease)/increase	(4,188,068)	8,559,840
Net assets available for benefits:		
Beginning of year	42,308,527	33,748,687
End of year	$ 38,120,459	$ 42,308,527

See notes to financial statements.

A. Description of the Plan

The following description of The Carnegie Mellon University 401(k) Plan (Plan) provides only general information. Participants should refer to the Plan document for a complete description of the Plan's provisions.

1. *General.* Subject to certain exceptions, the Plan covers employees the first of the month coincident with or next following their date of hire. Employees who are not eligible to participate in the Plan include the following: a) a leased employee, an independent contractor or an individual not considered to be an actual employee of Carnegie Mellon University (University); b) any employee who is eligible to participate or accrue or receive retirement benefits under the laws of a foreign (non-United States of America) country; c) any employee who is eligible to participate in the Carnegie Mellon University Faculty and Staff Retirement Plan, which is another qualified plan sponsored by the University; and d) employees of any related employers who are not classified as eligible to participate in the Plan by Carnegie Mellon University, including but not limited to any employee of Advanced Robotics for Manufacturing Institute. Effective January 1, 2017, the Plan was amended to change the eligibility requirements to permit a participant in the Plan to change to the Carnegie Mellon University Faculty and Staff Retirement Plan if they became a U.S. citizen or U.S. permanent resident after being enrolled in the Plan.

   The Plan provides for profit sharing contributions to employees who meet the eligibility criteria: (i) attainment of age 21 and (ii) either employed on a full-time basis or, if part-time, at the completion of 1,000 hours of service. In addition, employees who are not eligible to receive profit sharing contributions under the Plan are: (a) an employee whose primary relationship to the University is as a student; (b) any employee who is a member of any union other than the Campus Police Association or Teamsters Chauffeurs and Helpers Local Union 249; (c) any employee who is a post-doctoral associate if the department with which such an individual is associated advises the University that the applicable funding source does not provide for these benefits; (d) employees of any related employers who are not classified as eligible to participate in the Plan by the University, including but not limited to any employee of Advanced Robotics for Manufacturing Institute; (e) any employee who is eligible to participate in the Carnegie Mellon University Faculty and Staff Retirement Plan; and (f) any employee who is eligible to participate or accrue or receive retirement benefits under the laws of a foreign (non-United States) country. The Plan is a defined contribution plan under the Employee Retirement Income Security Act of 1974 (ERISA), as amended. The Board of Trustees is responsible for oversight of the Plan. The Benefits Investment Committee determines the appropriateness of the Plan's investment offerings, monitors investment performance and reports to the Plan's Board of Trustees.

2. *Contributions.* Each year, participants may contribute up to the 402(g) limit of the Internal Revenue Code of 1986 (IRC), as amended. Participants who have attained age 50 before the end of the plan year are eligible to make catch-up contributions. Participants may also contribute amounts representing distributions from other qualified defined benefit or defined contribution plans (rollover). Participants direct the investment of their contributions into various investment options offered by the Plan. Generally, University contributions are made at the rate of 8% of the participant's base salary. As an exception, for those employees with a nine-month academic appointment, the rate of contribution is 9.78% of base pay for those nine months. Contributions are subject to certain limitations required by the IRC.

3. *Participant Accounts.* Each participant's account is credited with: (a) participant contributions, (b) the University's contributions and (c) earnings attributable to the investment of such account less the fees associated with the fund. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account. Participants may also make and invest rollover contributions.

4. *Vesting.* A participant is 100% vested in the University contributions and earnings thereon if the participant has completed at least three "years of service" with the University, as defined in the Plan document. Service rendered to another college or university while participating in that institution's qualified plan may be recognized as service for vesting purposes under the Plan. A participant is also vested if employment terminates on or after age 65, or on account of death or permanent and total disability. Additional information regarding vesting may be found in the Plan document. Participants are always 100% vested in their participant contributions plus actual earnings thereon.

5. *Notes Receivable From Participants*. Subject to the terms of the Plan, participants may borrow a minimum of $1,000 up to a maximum equal to the lesser of $50,000, or 50% of their salary reduction contribution and rollover contribution account balance. The notes receivable are secured by the balance in the participant's account. Loan terms range from one to five years in one-year increments (up to 10 years for the purchase of the participant's primary residence). Notes receivable bear interest at the Federal Reserve Board Bank prime rate at the time of loan origination, plus 1%.

6. *Excess Contributions Payable*: Amounts payable to participants for contributions in excess of amounts allowed by the Internal Revenue Service (IRS) are recorded as a liability with a corresponding reduction to contributions. The Plan distributes excess contributions payable to the applicable participants in the following year.

7. *Payment of Benefits*. On termination of service, a participant may elect to receive an amount equal to the value of the vested interest in the account in the form permitted by the Plan and the type of investment held. With notarized spousal consent, the participant may make another individual or entity his/her beneficiary, and, upon death, the specified balance will be distributed to that beneficiary. The Plan permits in-service withdrawals of profit-sharing contributions for (a) employees who meet all of the following: are a fully vested faculty member; are 59½ years of age or older; whose status changed from full-time to part-time or to "retired" or "emeritus," and are considered a "non-highly compensated employee" as defined by IRC Section 414(q) or (b) employees who meet all of the following: are fully vested; are 59½ years of age or older; and have a condition of hardship as outlined in the Plan document.

8. *Forfeited Accounts*. Accounts of nonvested terminated participants are forfeited. These balances will be used to reduce future employer contributions to the Plan. In 2022 and 2021, employer contributions were reduced by approximately $280,000 and $722,000, respectively, from forfeited nonvested accounts. As of December 31, 2022 and 2021, forfeited nonvested accounts totaled approximately $40,000 and $188,000 respectively.

B. Summary of Significant Accounting Policies

A summary of significant accounting policies consistently applied by the Plan administrator in the preparation of the accompanying statements of net assets available for benefits and related statements of changes in net assets available for benefits and the related notes to the financial statements (financial statements) follows:

1. *Basis of Accounting.* The financial statements of the Plan are prepared on the accrual basis of accounting.

2. *Use of Estimates*. The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

3. *Investment Valuation and Income Recognition*. Investments are reported at fair value, which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. See Note C for discussion of fair value measurement. Purchases and sales of investments are recorded on a trade-date basis. Interest income is recorded on an accrual basis. Dividends are recorded on the ex-dividend date. Net appreciation (depreciation) includes the Plan's gains and losses on investments bought and sold as well as held during the year.

4. *Payments of Benefits*. Benefits are recorded when paid.

5. *Expenses*. Certain expenses of maintaining the Plan are paid by the Plan, unless otherwise paid by the University. Operating expenses of the investment funds are paid from the expense ratios of the respective funds and are included in net appreciation (depreciation) in fair value of investments. Certain accounting, legal and other administrative expenses are paid by the University on behalf of the Plan, and are excluded from these financial statements.

6. *Subsequent Events.* Management has evaluated subsequent events through October 12, 2023, the date that the financial statements were available to be issued.

C. Fair Value Measurement

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under the FASB Fair Value Measurement topic are described below:

Level 1 - Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.

Level 2 - Inputs to the valuation methodology include:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable for the asset or liability; and
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

  If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 - Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodology used for assets measured at fair value. There have been no changes in the methodology used at December 31, 2022 and 2021.

Mutual Funds - Valued at the daily closing price as reported by the fund. Mutual funds held by the Plan are open-end mutual funds that are registered with the Securities and Exchange Commission. These funds are required to publish their daily net asset value and to transact at that price. The mutual funds held by the Plan are deemed to be actively traded.

Self-Directed Brokerage Option - The self-directed brokerage account contains mutual funds and money market funds. Mutual funds are valued at the daily closing price as reported by the funds. These funds are required to publish their daily net asset value and to transact at that price. The carrying value of money market funds approximates fair value due to the short-term nature of such interests.

The methods described might produce a fair value calculation that might not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes that its valuation method is appropriate and consistent with other market participants, the use of different methodologies
or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The following tables set forth by level, within the fair value hierarchy, the Plan's assets at fair value as of December 31, 2022 and 2021:

	2022			
	Level 1	Level 2	Level 3	Total
Mutual Funds	$ 38,068,572	-	-	$ 38,068,572
Self-Directed Brokerage Option	529,674	-	-	529,674
Total Assets Measured at Fair Value	$ 38,598,246	-	-	$ 38,598,246

	2021			
	Level 1	Level 2	Level 3	Total
Mutual Funds	$ 42,029,582	-	-	$ 42,029,582
Self-Directed Brokerage Option	622,110	-	-	622,110
Total Assets Measured at Fair Value	$ 42,651,692	-	-	$ 42,651,692

D. Related-Party Transactions and Party-in-Interest Transactions

In part, the Plan invests in shares of funds managed by TIAA and College Retirement Equities Fund (CREF). TIAA and CREF act as trustees for only those investments as defined by the Plan. Transactions in such investments qualify as party-in-interest transactions, which are exempt from the prohibited transactions rules. Certain administrative functions are performed by employees of the University at no cost to the Plan.

E. Plan Termination

The Plan has no set expiration date. When it was established, the Plan was not intended to be temporary. Nevertheless, the University has the right to end the Plan (in whole or in part) at any time subject to provisions set forth in ERISA and the IRC. The procedure for the University to end the Plan is the same as for amending the Plan as described in the Plan document. In the event of Plan termination, participants would become 100% vested in their employer contributions.

F. Tax Status

The Plan adopted a Prototype Non-standardized Profit-Sharing Plan (Prototype) with a cash or deferral arrangement. The Prototype received an opinion letter from the Internal Revenue Service (IRS) on October 7, 2020 that stated that the Plan and related Trust are designed in accordance with applicable sections of the IRC. Although the Plan has been amended since receiving the opinion letter, the Plan administrator and the Plan's tax counsel believe that the Plan is designed and is currently being operated in compliance with the applicable requirements of the IRC and, therefore, believe that the Plan is qualified and the related trust is tax-exempt.

Accounting principles generally accepted in the United States of America require Plan management to evaluate tax positions taken by the Plan and recognize a tax liability if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress. The Plan administrator believes that the Plan is no longer subject to income tax examinations for years prior to 2019.

G. Risks and Uncertainties

The Plan invests in various investment securities that, in general, are exposed to various risks such as interest rate, market and credit risk. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statements of net assets available for benefits.

H. Trustee Certification

Certain information related to investments disclosed in the accompanying financial statements and ERISA-required supplemental schedule, including investments held at December 31, 2022 and 2021, and net appreciation (depreciation) in fair value of investments and interest and dividends for the years then ended, was obtained by management and agreed to or derived from information certified as complete and accurate by TIAA and CREF, the trustees of the Plan, for the years ended December 31, 2022 and 2021.

SUPPLEMENTARY INFORMATION