

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.)
	☒ 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:	☒ 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 NAS SALARY REDUCTION CONTRIBUTION RETIREMENT PLAN	1b Three-digit plan number (PN) ▶	004
	1c Effective date of plan	01/01/1989
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) NATIONAL ACADEMY OF SCIENCES 500 5TH STREET NW WASHINGTON, DC 20001-2736	2b Employer Identification Number (EIN) 53-0196932	
	2c Plan Sponsor's telephone number	202-334-3400
	2d Business code (see instructions)	541990

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	DON LAING
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE			
	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

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Form 5500 (2022)
v. 220413

3a Plan administrator's name and address ☒ 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 2766
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) 913
a(2) Total number of active participants at the end of the plan year		6a(2) 1119
b Retired or separated participants receiving benefits		6b 0
c Other retired or separated participants entitled to future benefits.....		6c 1752
d Subtotal. Add lines 6a(2) , 6b , and 6c		6d 2871
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.		6e 76
f Total. Add lines 6d and 6e		6f 2947
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item).....		6g 2858
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested.....		6h 0
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: 2F 2G 2L 2M 2S 2T		
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) ☒ 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) ☒ 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) ☒ 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) ☒ H (Financial Information) (2) ☐ I (Financial Information – Small Plan) (3) ☒ 1 A (Insurance Information) (4) ☒ 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 A (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Insurance Information 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. ▶ Insurance companies are required to provide the information pursuant to ERISA section 103(a)(2).	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 NAS SALARY REDUCTION CONTRIBUTION RETIREMENT PLAN	B Three-digit plan number (PN) ▶	004
C Plan sponsor's name as shown on line 2a of Form 5500 NATIONAL ACADEMY OF SCIENCES	D Employer Identification Number (EIN) 53-0196932	

Part I	Information Concerning Insurance Contract Coverage, Fees, and Commissions	Provide information for each contract on a separate Schedule A. Individual contracts grouped as a unit in Parts II and III can be reported on a single Schedule A.
--------	---	--

1 Coverage Information:

(a) Name of insurance carrier TIAA-CREF
--

(b) EIN	(c) NAIC code	(d) Contract or identification number	(e) Approximate number of persons covered at end of policy or contract year	Policy or contract year	
				(f) From	(g) To
13-1624203	69345	151063	1528	01/01/2022	12/31/2022

2 Insurance fee and commission information. Enter the total fees and total commissions paid. List in line 3 the agents, brokers, and other persons in descending order of the amount paid.
--

(a) Total amount of commissions paid	(b) Total amount of fees paid

3 Persons receiving commissions and fees. (Complete as many entries as needed to report all persons).

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid
--

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

(a) Name and address of the agent, broker, or other person to whom commissions or fees were paid

(b) Amount of sales and base commissions paid	Fees and other commissions paid		(e) Organization code
	(c) Amount	(d) Purpose	

Part II Investment and Annuity Contract Information

Where individual contracts are provided, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

4	Current value of plan's interest under this contract in the general account at year end.....	4	71686927
5	Current value of plan's interest under this contract in separate accounts at year end.....	5	57517524

6 Contracts With Allocated Funds:**a** State the basis of premium rates ▶

b	Premiums paid to carrier	6b	
c	Premiums due but unpaid at the end of the year	6c	
d	If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, enter amount..... Specify nature of costs ▶	6d	

e Type of contract: (1) ☐ individual policies (2) ☐ group deferred annuity
(3) ☐ other (specify) ▶

f If contract purchased, in whole or in part, to distribute benefits from a terminating plan, check here ▶ ☐**7** Contracts With Unallocated Funds (Do not include portions of these contracts maintained in separate accounts)

a Type of contract: (1) ☐ deposit administration (2) ☐ immediate participation guarantee
(3) ☒ guaranteed investment (4) ☐ other ▶

b	Balance at the end of the previous year	7b	73374343
----------	---	-----------	----------

c	Additions: (1) Contributions deposited during the year	7c(1)	584912	
	(2) Dividends and credits	7c(2)	0	
	(3) Interest credited during the year	7c(3)	2652727	
	(4) Transferred from separate account	7c(4)	3956703	
	(5) Other (specify below)	7c(5)	82007	

▶ PLAN SERVICING CREDIT

(6) Total additions	7c(6)	7276349
---------------------------	--------------	---------

d	Total of balance and additions (add lines 7b and 7c(6))	7d	80650692
----------	--	-----------	----------

e Deductions:

(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1)	4860164	
(2) Administration charge made by carrier	7e(2)		
(3) Transferred to separate account	7e(3)	4081921	
(4) Other (specify below)	7e(4)	21680	

▶ LOANS, LOAN REPAYMENTS AND FEES

(5) Total deductions	7e(5)	8963765
----------------------------	--------------	---------

f	Balance at the end of the current year (subtract line 7e(5) from line 7d)	7f	71686927
----------	--	-----------	----------

Part III Welfare Benefit Contract Information

If more than one contract covers the same group of employees of the same employer(s) or members of the same employee organizations(s), the information may be combined for reporting purposes if such contracts are experience-rated as a unit. Where contracts cover individual employees, the entire group of such individual contracts with each carrier may be treated as a unit for purposes of this report.

8 Benefit and contract type (check all applicable boxes)

- a** ☐ Health (other than dental or vision)
 b ☐ Dental
 c ☐ Vision
 d ☐ Life insurance
e ☐ Temporary disability (accident and sickness)
 f ☐ Long-term disability
 g ☐ Supplemental unemployment
 h ☐ Prescription drug
i ☐ Stop loss (large deductible)
 j ☐ HMO contract
 k ☐ PPO contract
 l ☐ Indemnity contract
m ☐ Other (specify) ▶

9 Experience-rated contracts:

a Premiums: (1) Amount received	9a(1)		
(2) Increase (decrease) in amount due but unpaid	9a(2)		
(3) Increase (decrease) in unearned premium reserve.....	9a(3)		
(4) Earned ((1) + (2) - (3)).....		9a(4)	0
b Benefit charges (1) Claims paid.....	9b(1)		
(2) Increase (decrease) in claim reserves	9b(2)		
(3) Incurred claims (add (1) and (2)).....		9b(3)	0
(4) Claims charged		9b(4)	
c Remainder of premium: (1) Retention charges (on an accrual basis) --			
(A) Commissions	9c(1)(A)		
(B) Administrative service or other fees	9c(1)(B)		
(C) Other specific acquisition costs.....	9c(1)(C)		
(D) Other expenses	9c(1)(D)		
(E) Taxes	9c(1)(E)		
(F) Charges for risks or other contingencies	9c(1)(F)		
(G) Other retention charges.....	9c(1)(G)		
(H) Total retention.....		9c(1)(H)	0
(2) Dividends or retroactive rate refunds. (These amounts were ☐ paid in cash, or ☐ credited.)		9c(2)	
d Status of policyholder reserves at end of year: (1) Amount held to provide benefits after retirement.....		9d(1)	
(2) Claim reserves		9d(2)	
(3) Other reserves		9d(3)	
e Dividends or retroactive rate refunds due. (Do not include amount entered in line 9c(2).).....		9e	

10 Nonexperience-rated contracts:

a Total premiums or subscription charges paid to carrier	10a	
b If the carrier, service, or other organization incurred any specific costs in connection with the acquisition or retention of the contract or policy, other than reported in Part I, line 2 above, report amount. Specify nature of costs.	10b	

Part IV Provision of Information

11 Did the insurance company fail to provide any information necessary to complete Schedule A? ☐ Yes ☒ No

12 If the answer to line 11 is "Yes," specify the information not provided. ▶

SCHEDULE C (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	Service Provider Information 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.	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 NAS SALARY REDUCTION CONTRIBUTION RETIREMENT PLAN	B Three-digit plan number (PN) ▶	004
C Plan sponsor's name as shown on line 2a of Form 5500 NATIONAL ACADEMY OF SCIENCES	D Employer Identification Number (EIN) 53-0196932	

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
TIAA
13-1624203
(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation
(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation
(b) Enter name and EIN or address of person who provided you disclosures on eligible indirect compensation

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

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

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

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

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

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

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

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

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)

TIAA

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?
15 50 64 65	NONE	143865	Yes ☒ No ☐	Yes ☒ No ☐	0	Yes ☐ No ☒

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

CAP FINANCIAL PARTNERS, LLC

26-0058143

(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?
16 50	NONE	67500	Yes ☐ No ☒	Yes ☐ No ☐		Yes ☐ No ☐

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

GROOM LAW GROUP

52-1219029

(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?
29 50	NONE	18910	Yes ☐ No ☒	Yes ☐ No ☐		Yes ☐ No ☐

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)

GRANT THORNTON LLP

36-6055558

(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?
10 50	NONE	16500	Yes ☐ No ☒	Yes ☐ No ☐		Yes ☐ No ☐

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

MERCER

13-2834414

(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?
16 50	NONE	6000	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
(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
(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
(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
(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
(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

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 D (Form 5500) Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration	DFE/Participating Plan Information 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.	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 NAS SALARY REDUCTION CONTRIBUTION RETIREMENT PLAN	B Three-digit plan number (PN) ►	004
C Plan or DFE sponsor's name as shown on line 2a of Form 5500 NATIONAL ACADEMY OF SCIENCES	D Employer Identification Number (EIN) 53-0196932	

Part I	Information on interests in MTIAs, CCTs, PSAs, and 103-12 IEs (to be completed by plans and DFEs) (Complete as many entries as needed to report all interests in DFEs)
--------	---

a Name of MTIA, CCT, PSA, or 103-12 IE: TIAA REAL ESTATE		
b Name of sponsor of entity listed in (a): TIAA-CREF		
c EIN-PN 13-1624203-004	d Entity code P	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions) 12862219
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)
a Name of MTIA, CCT, PSA, or 103-12 IE:		
b Name of sponsor of entity listed in (a):		
c EIN-PN	d Entity code	e Dollar value of interest in MTIA, CCT, PSA, or 103-12 IE at end of year (see instructions)

a Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)**a** Name of MTIA, CCT, PSA, or 103-12 IE:**b** Name of sponsor of entity listed in (a):**c** EIN-PN**d** Entity
code**e** Dollar value of interest in MTIA, CCT, PSA, or
103-12 IE at end of year (see instructions)

Part II **Information on Participating Plans (to be completed by DFEs)**

(Complete as many entries as needed to report all participating plans)

a Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN**a** Plan name**b** Name of
plan sponsor**c** EIN-PN

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 <u>01/01/2022</u> and ending <u>12/31/2022</u>		
A Name of plan <u>NAS SALARY REDUCTION CONTRIBUTION RETIREMENT PLAN</u>	B Three-digit plan number (PN) ►	<u>004</u>
C Plan sponsor's name as shown on line 2a of Form 5500 <u>NATIONAL ACADEMY OF SCIENCES</u>	D Employer Identification Number (EIN) <u>53-0196932</u>	

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)	42075308301
(9) Value of interest in common/collective trusts.....		1c(9)	
(10) Value of interest in pooled separate accounts		1c(10)	1215277912862219
(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)	254416730211200547
(14) Value of funds held in insurance company general account (unallocated contracts).....		1c(14)	7337434371686927
(15) Other		1c(15)	

1d Employer-related investments:		(a) Beginning of Year	(b) End of Year
(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	339985927	296057994

Liabilities

g Benefit claims payable	1g		
h Operating payables	1h		
i Acquisition indebtedness	1i		
j Other liabilities	1j		
k Total liabilities (add all amounts in lines 1g through 1j)	1k	0	0

Net Assets

l Net assets (subtract line 1k from line 1f)	1l	339985927	296057994
---	-----------	-----------	-----------

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)		
(B) Participants	2a(1)(B)	9539416	
(C) Others (including rollovers)	2a(1)(C)	3579792	
(2) Noncash contributions	2a(2)		
(3) Total contributions. Add lines 2a(1)(A) , (B) , (C) , and line 2a(2)	2a(3)		13119208
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)	9440	
(F) Other	2b(1)(F)	2652727	
(G) Total interest. Add lines 2b(1)(A) through (F)	2b(1)(G)		2662167
(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)	7299254	
(D) Total dividends. Add lines 2b(2)(A) , (B) , and (C)	2b(2)(D)		7299254
(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)		0
(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)		0

		(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)		995438
(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)		-52963726
c Other income	2c		264768
d Total income. Add all income amounts in column (b) and enter total	2d		-28622891
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers	2e(1)	13656939	
(2) To insurance carriers for the provision of benefits	2e(2)	1400074	
(3) Other	2e(3)		
(4) Total benefit payments. Add lines 2e(1) through (3)	2e(4)		15057013
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)	108910	
(2) Contract administrator fees	2i(2)	141164	
(3) Investment advisory and management fees	2i(3)		
(4) Other	2i(4)		
(5) Total administrative expenses. Add lines 2i(1) through (4)	2i(5)		250074
j Total expenses. Add all expense amounts in column (b) and enter total	2j		15307087
Net Income and Reconciliation			
k Net income (loss). Subtract line 2j from line 2d	2k		-43929978
l Transfers of assets:			
(1) To this plan	2l(1)		2045
(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) ☒ 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) ☒ 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: GRANT THORNTON, LLP

(2) EIN: 36-6055558

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:

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.)

	Yes	No	Amount
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?	X		5000000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?		X	
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.)	X		
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 NAS SALARY REDUCTION CONTRIBUTION RETIREMENT PLAN	B Three-digit plan number (PN) ► 004
C Plan sponsor's name as shown on line 2a of Form 5500 NATIONAL ACADEMY OF SCIENCES	D Employer Identification Number (EIN) 53-0196932

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	0
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): 13-1624203		
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	

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

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.

Schedule R (Form 5500) 2022
v. 220413

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 _____

Financial Statements and Report of
Independent Certified Public
Accountants

National Academy of Sciences
Salary Reduction Contribution Retirement Plan

December 31, 2022 and 2021

Contents

Page

Report of Independent Certified Public Accountants	3
Financial Statements	
Statements of net assets available for benefits (modified cash basis)	7
Statement of changes in net assets available for benefits (modified cash basis)	8
Notes to financial statements	9
Supplemental Information	
Schedule H, line 4i - schedule of assets (held at end of year)	18

GRANT THORNTON LLP

1000 Wilson Blvd., Suite 1500
Arlington, VA 22209

D +1 703 847 7500

F +1 703 848 9580

REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

The Participants and Plan Administrator
National Academy of Sciences Salary Reduction Contribution Retirement Plan

Scope and nature of the ERISA Section 103(a)(3)(C) audit

We have performed audits of the financial statements of National Academy of Sciences Salary Reduction Contribution Retirement 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 – modified cash basis as of December 31, 2022 and 2021, and the related statement of changes in net assets available for benefits – modified cash basis for the year ended December 31, 2022, and the related notes to the financial statements.

Management, having determined it is permissible in the circumstances, has elected to have the 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 a certification from a qualified institution as of December 31, 2022 and 2021, and for the year ended December 31, 2022, stating that the certified investment information, as described in Note C 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 accompanying financial statements, other than those agreed to or derived from the certified investment information, are presented fairly, in all material respects, in accordance with the modified cash basis of accounting described in Note C.
- The information in the accompanying financial statements 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).

Basis for opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the 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.

Emphasis of matter – Basis of accounting

We draw attention to Note B of the financial statements, which describes the basis of accounting. The financial statements are prepared on the modified cash basis of accounting, which is a basis of accounting other than accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Responsibilities of management for the financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the modified cash basis of accounting described in Note B, and for determining that the modified cash basis of accounting is an acceptable basis for the preparation of the financial statements in the circumstances. Management is also responsible 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.

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 US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they

would influence the judgment made by a reasonable user based on the financial statements.

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

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the 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 the modified cash basis of accounting described in Note B.

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 the modified cash basis of accounting described in Note B.

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.

Other matter – supplemental schedules 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 supplementary 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 the auditing procedures applied in the audits of the financial statements and certain additional procedures. These additional procedures included 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 US 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).

Grant Thornton LLP

Arlington, Virginia
October 12, 2023

**National Academy of Sciences
Salary Reduction Contributions Retirement Plan**

**STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS
(Modified Cash Basis)**

December 31, 2022 and 2021

	<u>2022</u>	<u>2021</u>
ASSETS		
Investments, at fair value	\$ 250,869,940	\$ 294,156,732
Investments, at contract value	<u>44,879,753</u>	<u>45,787,120</u>
Total investments	295,749,693	339,943,852
Participant loans	<u>308,301</u>	<u>42,075</u>
NET ASSETS AVAILABLE FOR BENEFITS	<u><u>\$ 296,057,994</u></u>	<u><u>\$ 339,985,927</u></u>

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

**National Academy of Sciences
Salary Reduction Contributions Retirement Plan**

**STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
(Modified Cash Basis)**

Year ended December 31, 2022

Additions to net assets attributed to:

Investment income (loss):

Net depreciation in fair value of investments	\$ (51,968,288)
Interest and dividends	9,951,981
Loan interest	<u>9,440</u>

Total investment loss	<u>(42,006,867)</u>
-----------------------	---------------------

Contributions:

Employee	9,539,416
Rollover	<u>3,579,792</u>

Total contributions	<u>13,119,208</u>
---------------------	-------------------

Plan servicing credit	<u>264,768</u>
-----------------------	----------------

Total additions	(28,622,891)
-----------------	--------------

Deductions from net assets attributed to:

Benefits paid to participants	15,054,313
Administrative expenses, paid from servicing credit	<u>250,729</u>

Total deductions	<u>15,305,042</u>
------------------	-------------------

NET DECREASE	(43,927,933)
---------------------	--------------

Net assets available for benefits:

Beginning of year	<u>339,985,927</u>
-------------------	--------------------

End of year	<u><u>\$ 296,057,994</u></u>
-------------	------------------------------

The accompanying notes are an integral part of this financial statement.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS

December 31, 2022 and 2021

NOTE A - DESCRIPTION OF PLAN AND ADMINISTRATION

The following description of the National Academy of Sciences Salary Reduction Contribution Retirement Plan (the “Plan”) provides only general information. Participants should refer to the Plan documents for a more complete description of the Plan’s provisions.

General

The Plan was established as of January 1, 1989 for the benefit of all eligible employees of the National Academy of Sciences (the “Academy”), including any of its constituent organizational units such as the National Academy of Engineering, the National Academy of Medicine, and the National Research Council. Effective January 1, 2009, the Plan was amended and restated, which superseded all previous Plan documents. The Plan is a 403(b) defined contribution plan that provides retirement benefits to eligible employees on a contributory basis. The funding vehicles under the Plan consist of group investments issued by Teachers Insurance and Annuity Association (“TIAA”), College Retirement Equities Fund (“CREF”), as well as mutual funds issued by third parties. TIAA and CREF serve as custodians of the Plan. The Academy, which is the employer and the sponsor of the Plan, is the administrator of the Plan. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (“ERISA”), as amended.

Contributions

Each employee who is eligible to participate in the Plan may elect tax deferred contributions, after-tax contributions, or a combination of both to the Plan through a salary reduction agreement specifying the amount of the participant’s regular earnings to be contributed. A salary reduction agreement may be modified or terminated at any time. With the exception of certain catch-up contributions by participants who have attained the age of 50 prior to the close of the Plan year, a participant’s salary reduction contributions to the Plan during any calendar year may not exceed the dollar limit applicable to the Plan for that year under Internal Revenue Code (“IRC”) Section 402(g) (\$20,500 for 2022 and \$19,500 for 2021). Catch-up contributions are subject to the limitations of IRC Section 414(v) (\$6,500 for 2022 and 2021). Employees hired on or after January 1, 2012, are automatically enrolled in the Plan with a 4% contribution. Those employees can choose to opt-out of the auto-enrollment within 90 days of their first contribution and have those contributions refunded. For employees hired on or after January 1, 2019, contributions are automatically increased by 1% each year until a 10% maximum contribution rate is reached. Employees may elect to stop the automatic increase at any time.

Active participants in the Plan may elect to have an eligible rollover distribution from another eligible retirement plan contributed to the Plan.

Investment Options

Plan contributions are invested at the direction of each participant in group investments issued by TIAA or in third-party mutual funds. The allocation of assets and future contributions may be changed by the participants at any time by notifying TIAA. Each participant may have individual contracts with TIAA, CREF, or both. Participants may direct contributions to any of the available investment options. In addition, there are six funds that hold assets but are not open to new contributions.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

Participant Accounts

Each participant's account is credited with the participant's contributions and an allocation of Plan earnings (losses), thereon. Allocations are based on participant earnings or account balances, as defined, on a daily basis. Upon enrollment in the Plan, a participant may direct their contributions in any of the investment options offered by the Plan in increments of whole number percentages. Participants may change their investment options at any time, provided the transfer is \$1,000 or greater (or the entire balance in an investment option, if less).

Payment of Benefits

Upon attaining age 59½ or termination of service (including death, disability, or retirement), a participant may elect to leave the balance in the Plan, receive a periodic payout, receive a lump-sum amount equal to the value of their vested interest, or rollover the balance into another qualified plan, annuity, or an Individual Retirement Account.

A hardship withdrawal from a participant account may be permitted while a participant is still actively employed if the participant has a financial hardship for which funds are not reasonably available from other resources of the participant. For the purposes of the Plan, financial hardship may include expenses for medical care, the purchase of a principal residence, payment of the next 12 months of post-secondary education, or to prevent the loss of a participant's primary residence. All hardship withdrawal requests are subject to the approval of the Plan administrator.

Participation and Vesting

All employees of the Academy are eligible to become active participants in the Plan. For any employee hired prior to January 1, 2012 or re-hired after that date, in order to become an active participant, an employee must complete a Salary Reduction Agreement as well as complete an enrollment form with TIAA. Participants are 100% vested at all times.

Plan Loans

Through December 31, 2021, participants had the ability to enter into loans directly with TIAA. Such a loan, referred to as a Plan loan, was issued directly from funds owned by TIAA and not from a participant's account. The loans are not shown in the Plan's statements of net assets available for benefits as the loans are not made from Plan assets and, therefore, are not considered assets of the Plan. Adequate security is required and a portion of the participant's TIAA Traditional Annuity Contract ("Traditional Annuity") account (see Note E) is reserved, or held in collateral, to cover 110% of the outstanding loan in case of default. The loan interest rate for these Plan loans may be fixed or variable and the initial rate is determined by the terms of the controlling contract as is the rate adjustment details and frequency.

As of December 31, 2022 and 2021, participants had outstanding Plan loan balances due to TIAA of \$609,546 and \$991,341, respectively. These loans were collateralized by Traditional Annuity account balances of \$670,500 and \$1,090,475 as of December 31, 2022 and 2021, respectively. These amounts are included in the Traditional Annuity account balances reported in the accompanying statements of net assets available for benefits. Participants pay interest on their Plan loans to TIAA; this interest expense is offset by the income received by the participants on the collateralized annuity contracts.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

Participant Loans

Beginning in 2021, participants have the ability to enter into loans issued directly from the participant's account, referred to as a Participant Loan. The permitted loan term for conventional loans ranges from one to five years and for primary residence loans ranges from six to ten years. The maximum loan amount is the lesser of 45% of the vested participant balance or \$50,000 and there are no loan origination or maintenance fees. The interest rate for Participant Loans is fixed at the time of issuance based on the Moody's Corporate Bond Index rate and is 4.25% to 8.0% for all outstanding Participant Loans at December 31, 2022. Repayments of Participant Loans are reinvested based on the participant's investment elections in place at the time of repayment. Participant Loans are reported at the unpaid principal balance plus accrued interest. Defaulted Participant Loans are deemed distributed and recorded as benefits paid to participants in the statement of changes in net assets available for benefits.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The accompanying financial statements and the related schedule are prepared on the modified cash basis of accounting. Consequently, certain revenue and the related assets are recognized when received rather than when earned and certain expenses are recognized when paid rather than when the related obligations incurred. Participant contributions are recorded when received by TIAA.

Investment contracts held by a defined contribution plan are required to be reported at fair value, except for fully benefit-responsive investment contracts, which are reported at contract value. Contract value is the relevant measure for that portion of the net assets available for benefits of a defined contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount participants would receive if they were to initiate permitted transactions under the terms of the Plan. Certain Traditional Annuity contract types, including the Supplemental Retirement Annuities ("SRA") and Group Supplemental Retirement Annuities ("GSRA"), are considered fully benefit-responsive (Note E).

Use of Estimates

The preparation of financial statements in conformity with the modified cash basis requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and changes therein and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Investment Valuation and Income Recognition

Except for fully benefit-responsive contracts, investments are reported at fair value. Fair value 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. Plan management determines the Plan's valuation policies utilizing information provided by the Plan's investment advisor and the Plan's custodian. See Note D for discussion of fair value measurements.

Purchases and sales are recorded on a trade-date basis. Interest income is recorded on a modified cash 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.

Payment of Benefits

Benefits are recorded when paid.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

Administrative Expenses

In accordance with the terms of the Plan, the administrative expenses of the Plan are paid by the Academy, except for fees associated with certain participant directed investment transactions. Unless paid by the Academy, all fees and expenses incurred in connection with the operation and administration of the Plan, including, but not limited to, legal, accounting, actuarial, investment, management, and administrative fees and expenses, are paid out of Plan assets to the extent that it is legally permissible for these fees and expenses to be so paid. To the extent permitted under ERISA, plan administrative expenses may be paid out of a revenue credit account earned by the Plan. The revenue credit account is funded by TIAA under the recordkeeping agreement with the Plan sponsor and can be used to pay direct, reasonable, and necessary expenses of the Plan.

The Academy may advance amounts properly chargeable to the Plan and then obtain reimbursement from the Plan for these advances.

NOTE C - INVESTMENTS AND INFORMATION CERTIFIED BY THE CUSTODIANS

Investments, investment income, loans, and loan interest utilized in the preparation of the accompanying financial statements and related schedule was provided to the Plan administrator and certified as complete and accurate by TIAA and CREF, custodians of the Plan. The certification also extends to those investments, if any, which TIAA, FSB, a federal saving association, held as a directed trustee or custodian that were recordkept by TIAA.

NOTE D - FAIR VALUE MEASUREMENTS

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Financial Accounting Standards Board Accounting Standards Codification Section 820 establishes a fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

Level 1 - Quoted prices in active markets for identical assets or liabilities.

Level 2 - Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The following discussion describes the valuation methodologies used for financial assets measured at fair value. The techniques utilized in estimating the fair values are affected by the assumptions used, including discount rates and estimates of the amount and timing of future cash flows. Care should be exercised in deriving conclusions about the Plan, its value or financial position based on the fair value information of financial assets presented.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

Fair value estimates are made at a specific point in time, based on available market information and judgments about the financial asset, including estimates of timing, amount of expected future cash flows, and the credit standing of the issuer. In some cases, the fair value estimates cannot be substantiated by comparison to independent markets. In addition, the disclosed fair value may not be realized in the immediate settlement of the financial asset. Furthermore, the disclosed fair values do not reflect any premium or discount that could result from offering for sale at one time an entire holding of a particular financial asset. Potential taxes and other expenses that would be incurred in an actual sale or settlement are not reflected in amounts disclosed.

The following methods, assumptions, and inputs were used to estimate the fair value of each class of financial instruments:

- The fair values of mutual fund investments (registered investment companies) are determined by obtaining quoted prices on nationally recognized securities exchanges (Level 1).
- The fair values of accumulation units held by the Plan in the CREF accounts (registered investment companies held as variable annuity accounts) are based on each account's daily net asset value ("NAV"), which is considered by Plan management to be the best approximation of fair value. These accounts are not exchange-traded. Data for NAVs are available daily to plan administrators and client investors on NASDAQ's website (Level 1), and provides sufficient corroborative evidence to ascertain the relationship between each fund's NAV and the values of individual underlying holdings. Underlying holdings are primarily valued using market quotations or prices obtained from independent pricing sources.
- The fair value of the Plan's interest in the TIAA Real Estate Account (a pooled separate account) is based on the fund's daily NAV, which is considered by Plan management to be the best approximation of fair value. The unit value of the fund is calculated daily and available to Plan administrators and client investors on NASDAQ's website. Underlying holdings are primarily valued using independent appraisals or independent pricing sources (Level 2). Although the underlying assets of the fund cannot be quickly sold and converted to liquid assets, the TIAA general account provides the fund with a liquidity guarantee whereby TIAA ensures that the fund has funds available to meet participant redemption, transfer or cash withdrawal requests.
- Investments in non-benefit responsive TIAA Traditional Annuity contracts are reported at contract value, which approximates fair value. As these investments are contract-based, observable prices for identical or similar investments do not exist and, accordingly, these investments are valued using unobservable inputs (Level 3). The contract value equals the accumulated cash contributions and interest credited to the contract, less any withdrawals. Liquidity restrictions apply to certain of these investments that could impact the value realized upon exiting certain types of contracts within the TIAA Traditional Annuity account. See also Note E for discussion of the TIAA Traditional Annuity. In determining the reasonableness of the methodology, Plan management evaluates a variety of factors including a review of existing contracts, economic conditions, industry and market developments, and overall credit ratings. Certain unobservable inputs are assessed through review of contract terms, while others are substantiated utilizing available market data.

The preceding methods described may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Plan believes its valuation methods are 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.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

Plan investments measured at fair value on a recurring basis as of December 31, 2022 are summarized below:

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
TIAA Traditional Annuities - Non Benefit-Responsive	\$ -	\$ -	\$ 26,807,174	\$ 26,807,174
TIAA Real Estate Fund	-	12,862,219	-	12,862,219
Registered Investment Companies	<u>211,200,547</u>	<u>-</u>	<u>-</u>	<u>211,200,547</u>
Total	<u>\$ 211,200,547</u>	<u>\$ 12,862,219</u>	<u>\$ 26,807,174</u>	<u>\$ 250,869,940</u>

Plan investments measured at fair value on a recurring basis as of December 31, 2021 are summarized below:

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
TIAA Traditional Annuities - Non Benefit-Responsive	\$ -	\$ -	\$ 27,587,223	\$ 27,587,223
TIAA Real Estate Fund	-	12,152,779	-	12,152,779
Registered Investment Companies	<u>254,416,730</u>	<u>-</u>	<u>-</u>	<u>254,416,730</u>
Total	<u>\$ 254,416,730</u>	<u>\$ 12,152,779</u>	<u>\$ 27,587,223</u>	<u>\$ 294,156,732</u>

Gains and losses (realized and unrealized) included in changes in net assets are reported in net depreciation in fair value of investments in the statement of changes in net assets available for benefits.

The availability of observable market data is monitored to assess the appropriate classification of financial instruments within the fair value hierarchy. Changes in economic conditions or model-based valuation techniques may require the transfer of financial instruments from one fair value level to another.

The Plan's Level 3 assets for the year ended December 31, 2022 included purchases of \$1,834,296 and sales of \$3,771,000. There were no transfers into or out of level 3 during 2022 and 2021.

The following table presents information about significant unobservable inputs related to the Plan's investment in assets categorized as Level 3 at December 31, 2022 and 2021:

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

Type	Valuation Technique	Significant Unobservable Inputs	Rates	Year	Fair Value
TIAA Traditional Annuities	Discounted cash flow and Theoretical transfer (exit value)	Risk-adjusted discount rate applied	RA: 3.70% to 6.25% SRA: 3.00% to 5.50% GSRA: 3.00% to 5.50%	2022	\$ 26,807,175
			RA: 3.00% to 3.80% SRA: 3.00% to 3.05% GSRA: 3.00% to 3.05%	2021	\$ 27,587,223

NOTE E - TIAA TRADITIONAL ANNUITY

The TIAA Traditional Annuity contracts are guaranteed fixed annuity contracts available as investment options to Plan participants. Each contract is fully and unconditionally guaranteed by TIAA. The Traditional Annuity is offered through a variety of contract types, including Retirement Annuities ("RA"), Supplemental Retirement Annuities ("SRA"), and Group Supplemental Retirement Annuities ("GSRA"). The type of contract through which a participant invests in the TIAA Traditional Annuity determines the applicability of certain account features, such as the guaranteed minimum interest rate, additional interest declarations, the degree of liquidity of the participant's account, and the options for receiving income upon retirement.

When participants choose to allocate a portion of their retirement savings to the TIAA Traditional Annuity during the accumulation phase of the contract, their contributions purchase a specific amount of lifetime income based on the contractual rate schedule in effect at the time the premium is paid. Participants' principal, plus a specified minimum rate of interest, is guaranteed by TIAA's claims-paying ability. The TIAA Traditional Annuity also provides the potential for additional interest if declared by TIAA's Board of Trustees. Additional interest, when declared, remains in effect for the declaration year, which begins each March 1 for accumulating annuities, and January 1 for lifetime payout annuities. Additional interest is not guaranteed for future years. Together, the guaranteed minimum and additional amounts make up the crediting interest rate. For accumulating RA contracts, the crediting interest rate was 6.60% and 3.70% as of December 31, 2022 and 2021, respectively. For accumulating SRA and GSRA contracts, the crediting interest rates were 5.85% and 3.00% as of December 31, 2022 and 2021, respectively.

All RA contracts require withdrawals in the form of a lifetime payout annuity or in periodic installments over a 10-year period. Therefore, the RA contracts are not fully benefit-responsive; balances in these contracts at fair value totaled \$26,807,175 and \$27,587,223 at December 31, 2022 and 2021, respectively. All SRA and GSRA contracts provide for full participant-directed liquidity. Therefore, the SRA and GSRA contracts are fully benefit-responsive; the SRA and GSRA balances at contract value totaled \$44,879,753 (includes Plan Loan Default) and \$45,787,120 at December 31, 2022 and 2021, respectively. When a participant's accumulation in the TIAA Traditional Annuity is converted to a lifetime payout annuity, the present value of the stream of payments is equal to the accumulated balance, and the entire amount is recorded as a distribution in the statement of changes in net assets available for benefits.

**National Academy of Sciences
Salary Reduction Contribution Retirement Plan**

NOTES TO FINANCIAL STATEMENTS - CONTINUED

December 31, 2022 and 2021

NOTE F - RELATED PARTY TRANSACTIONS

Certain Plan investments are shares of fixed annuities, pooled separate accounts, or registered investment companies managed by TIAA or CREF. TIAA and CREF are the custodians as defined by the Plan and, therefore, these transactions qualify as party-in-interest transactions. Participants are parties-in-interest of the Plan and accordingly, participant loans issued directly from the participant's account qualify as party-in-interest transactions.

NOTE G - PLAN TERMINATION

The Academy has expressed its intent to continue the Plan indefinitely for the benefit of its employees, but reserves the right to terminate or amend the Plan, if necessary. In the event the Plan is terminated or contributions are discontinued, the Academy will notify all participants of the termination and assets will be distributed in accordance with ERISA.

NOTE H - TAX STATUS

The Plan has been designed to qualify under Section 403(b) of the Internal Revenue Code ("IRC"). The terms of the Plan have been prepared to conform to the sample language provided by the Internal Revenue Service ("IRS") in Revenue Procedure 2007-71. The Plan is required to operate in conformity with the IRC to maintain the tax-exempt status for Plan participants under Section 403(b). The Plan administrator believes that the Plan is currently designed and operating in accordance with the applicable requirements of Section 403(b) of the IRC and, therefore, believes that the Plan is qualified and the related accounts are tax exempt. Therefore, no provision for income taxes has been included in the Plan's financial statements.

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 (or asset) if the Plan has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. The Plan administrator has analyzed the tax positions taken by the Plan, and has concluded that as of December 31, 2022 and 2021, there are no uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements. The Plan is subject to routine audits by taxing jurisdictions; however, there are currently no audits for any tax periods in progress.

NOTE I - RISKS AND UNCERTAINTIES

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Market values of investments may decline for a number of reasons, including changes in prevailing market and interest rates, increases in defaults and credit rating downgrades. 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.

NOTE J - SUBSEQUENT EVENTS

The Plan administrator has performed an evaluation of subsequent events through October 12, 2023, which is the date that the financial statements were available to be issued, noting no events which affect the financial statements as of December 31, 2022.

SUPPLEMENTAL INFORMATION

**National Academy of Sciences
Salary Reduction Contributions Retirement Plan**

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

EIN: 53-0196932, Plan #151063

December 31, 2022

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment, Including Maturity Date, Rate of Interest, Collateral, Par or Maturity Value	(e) Current Value
*	CREF	CREF Stock R2 Fund	\$ 28,099,776
*	CREF	CREF Money Market R2 Fund	1,282,515
*	CREF	CREF Social Choice R2 Fund	4,431,466
*	CREF	CREF Bond Market R2 Fund	810,824
*	CREF	CREF Global Equities R2 Fund	2,254,927
*	CREF	CREF Growth R2 Fund	4,214,135
*	CREF	CREF Equity Index R2 Fund	3,211,916
*	CREF	CREF Inflation-Linked Bond R2 Fund	349,746
	American Funds	American Funds EuroPacific Growth Fund R6	12,032,515
	Hancock	John Hancock Disciplined Value Mid Cap R6	2,075,121
	Metropolitan	Metropolitan West Total Return Bond Plan Class Shares	9,049,349
	MetWest Funds	Mainstay Large Cap Growth R6	8,013,642
	Munder Funds	MFS Mid Cap Growth Fund R6 AO	2,434,024
	Vanguard	Vanguard Explorer Fund Admiral	5,594,870
	Vanguard	Vanguard Federal Money Market Fund	1,347,662
	Vanguard	Vanguard Institutional Index	27,333,905
	Vanguard	Vanguard Mid Cap Index Fund Institutional U8	3,196,237
	Vanguard	Vanguard Small-Cap Value Index Institutional U7	1,944,493
	Vanguard	Vanguard Small-Cap Value Index Fund Institutional	5,063,380
	Vanguard	Vanguard Institutional Target Retirement 2020 Fund	4,943,088
	Vanguard	Vanguard Institutional Target Retirement 2025 Fund	3,910,662
	Vanguard	Vanguard Institutional Target Retirement 2030 Fund	4,191,431
	Vanguard	Vanguard Institutional Target Retirement 2035 Fund	3,901,121
	Vanguard	Vanguard Institutional Target Retirement 2040 Fund	5,239,908
	Vanguard	Vanguard Institutional Target Retirement 2045 Fund	5,879,704
	Vanguard	Vanguard Institutional Target Retirement 2050 Fund	4,185,123
	Vanguard	Vanguard Institutional Target Retirement 2055 Fund	3,502,871
	Vanguard	Vanguard Institutional Target Retirement 2060 Fund	831,847
	Vanguard	Vanguard Institutional Target Retirement 2065 Fund	152,826
	Vanguard	Vanguard Target Retirement Income Investment	1,828,109
	Vanguard	Vanguard Total Bond Market Institutional Shares U6	8,255,940
	Vanguard	Vanguard Total International Stock Index Fund Institutional	8,877,278
	Vanguard	Vanguard Wellington Admiral	14,343,514
	Vanguard	Vanguard Windsor II Admiral	18,416,622
*	TIAA	TIAA Traditional Annuities - Non Benefit Responsive	26,807,174
*	TIAA	TIAA Traditional Annuities - Fully Benefit Responsive	44,879,753
*	TIAA	TIAA Real Estate Fund	12,862,219
	Total investments per financial statements		<u>295,749,693</u>
*	Participant loans	Interest rate at 4.25% to 8.0% maturing through December	<u>308,301</u>
	Total investments per Form 5500		<u>\$ 296,057,994</u>

* Party-in-interest as defined by ERISA.

Column (d) cost has been omitted as all investments are participant-directed.

**National Academy of Sciences
Salary Reduction Contributions Retirement Plan**

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

EIN: 53-0196932, Plan #151063

December 31, 2022

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment, Including Maturity Date, Rate of Interest, Collateral, Par or Maturity Value	(e) Current Value
*	CREF	CREF Stock R2 Fund	\$ 28,099,776
*	CREF	CREF Money Market R2 Fund	1,282,515
*	CREF	CREF Social Choice R2 Fund	4,431,466
*	CREF	CREF Bond Market R2 Fund	810,824
*	CREF	CREF Global Equities R2 Fund	2,254,927
*	CREF	CREF Growth R2 Fund	4,214,135
*	CREF	CREF Equity Index R2 Fund	3,211,916
*	CREF	CREF Inflation-Linked Bond R2 Fund	349,746
	American Funds	American Funds EuroPacific Growth Fund R6	12,032,515
	Hancock	John Hancock Disciplined Value Mid Cap R6	2,075,121
	Metropolitan	Metropolitan West Total Return Bond Plan Class Shares	9,049,349
	MetWest Funds	Mainstay Large Cap Growth R6	8,013,642
	Munder Funds	MFS Mid Cap Growth Fund R6 AO	2,434,024
	Vanguard	Vanguard Explorer Fund Admiral	5,594,870
	Vanguard	Vanguard Federal Money Market Fund	1,347,662
	Vanguard	Vanguard Institutional Index	27,333,905
	Vanguard	Vanguard Mid Cap Index Fund Institutional U8	3,196,237
	Vanguard	Vanguard Small-Cap Value Index Institutional U7	1,944,493
	Vanguard	Vanguard Small-Cap Value Index Fund Institutional	5,063,380
	Vanguard	Vanguard Institutional Target Retirement 2020 Fund	4,943,088
	Vanguard	Vanguard Institutional Target Retirement 2025 Fund	3,910,662
	Vanguard	Vanguard Institutional Target Retirement 2030 Fund	4,191,431
	Vanguard	Vanguard Institutional Target Retirement 2035 Fund	3,901,121
	Vanguard	Vanguard Institutional Target Retirement 2040 Fund	5,239,908
	Vanguard	Vanguard Institutional Target Retirement 2045 Fund	5,879,704
	Vanguard	Vanguard Institutional Target Retirement 2050 Fund	4,185,123
	Vanguard	Vanguard Institutional Target Retirement 2055 Fund	3,502,871
	Vanguard	Vanguard Institutional Target Retirement 2060 Fund	831,847
	Vanguard	Vanguard Institutional Target Retirement 2065 Fund	152,826
	Vanguard	Vanguard Target Retirement Income Investment	1,828,109
	Vanguard	Vanguard Total Bond Market Institutional Shares U6	8,255,940
	Vanguard	Vanguard Total International Stock Index Fund Institutional	8,877,278
	Vanguard	Vanguard Wellington Admiral	14,343,514
	Vanguard	Vanguard Windsor II Admiral	18,416,622
*	TIAA	TIAA Traditional Annuities - Non Benefit Responsive	26,807,174
*	TIAA	TIAA Traditional Annuities - Fully Benefit Responsive	44,879,753
*	TIAA	TIAA Real Estate Fund	12,862,219
	Total investments per financial statements		<u>295,749,693</u>
*	Participant loans	Interest rate at 4.25% to 8.0% maturing through December	<u>308,301</u>
	Total investments per Form 5500		<u>\$ 296,057,994</u>

* Party-in-interest as defined by ERISA.

Column (d) cost has been omitted as all investments are participant-directed.