

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

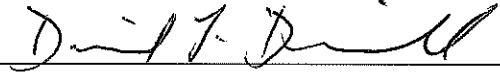
- A** This return/report is for:
 - a multiemployer plan
 - a multiple-employer plan (Filers checking this box must attach a list of participating employer information in accordance with the form instructions.)
 - a single-employer plan
 - a DFE (specify) _____
- B** This return/report is:
 - the first 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 RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY	1b Three-digit plan number (PN) ▶ 001 1c Effective date of plan 01/01/1976
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) TRUSTEES OF COLUMBIA UNIVERSITY C/O RETIREMENT DEPARTMENT 615 W 131ST ST STUDEBAKER, 4TH FLOOR NEW YORK NY 10027-7922	2b Employer Identification Number (EIN) 13-5598093 2c Plan Sponsor's telephone number 212-851-7000 2d Business code (see instructions) 611000

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

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

SIGN HERE		09/08/2023	Daniel Driscoll
	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

Form 5500/SF E-File Confirmation

Acceptance Status: Accepted

Plan Name: RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY

Plan Number: 001

Plan Year: 2022

Plan Year Begin/End Date: 01/01/2022 - 12/31/2022

Signer: Daniel Driscoll

Date Signed: 09/08/2023

Date Submitted: 09/08/2023

Date Accepted: 09/08/2023

AckID: 20230908103637NAL0010824851001



Plan Home

Documents

Check 5500 Status

E-File 8955

5500 Status

Acceptance Status: Accepted
Plan Name: RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY
Plan Number: 001
Plan Year: 2022
Plan Year Begin/End Date: 01/01/2022 - 12/31/2022

Signer: Daniel Driscoll
Date Signed: 09/08/2023

Date Submitted: 09/08/2023
Date Accepted: 09/08/2023
AckID: 20230908103637NAL0010824851001

Form 5500Department of the Treasury
Internal Revenue ServiceDepartment 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 RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY	1b Three-digit plan number (PN) ▶	001
	1c Effective date of plan	01/01/1976
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) TRUSTEES OF COLUMBIA UNIVERSITY C/O RETIREMENT DEPARTMENT 615 W 131ST ST STUDEBAKER, 4TH FLOOR NEW YORK NY 10027-7922	2b Employer Identification Number (EIN)	13-5598093
	2c Plan Sponsor's telephone number	212-851-7000
	2d Business code (see instructions)	611000

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

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

SIGN HERE			Daniel Driscoll
	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 <input type="checkbox"/> Same as Plan Sponsor COLUMBIA UNIVERSITY VICE PRESIDENT OF HUMAN RESOURCES 615 W 131ST ST NEW YORK NY 10027-7922	3b Administrator's EIN 13-2855235 3c Administrator's telephone number 212-851-7000
--	---

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	31,043
---	----------	--------

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	14,287
a(2) Total number of active participants at the end of the plan year	14,407
b Retired or separated participants receiving benefits	0
c Other retired or separated participants entitled to future benefits	17,208
d Subtotal. Add lines 6a(2) , 6b , and 6c	31,615
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.	192
f Total. Add lines 6d and 6e	31,807
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)	31,600
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested.....	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:
 2M

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) <input checked="" type="checkbox"/> Insurance (2) <input type="checkbox"/> Code section 412(e)(3) insurance contracts (3) <input checked="" type="checkbox"/> Trust (4) <input type="checkbox"/> General assets of the sponsor	9b Plan benefit arrangement (check all that apply) (1) <input checked="" type="checkbox"/> Insurance (2) <input type="checkbox"/> Code section 412(e)(3) insurance contracts (3) <input checked="" type="checkbox"/> Trust (4) <input type="checkbox"/> 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) <input checked="" type="checkbox"/> R (Retirement Plan Information) (2) <input type="checkbox"/> MB (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary (3) <input type="checkbox"/> SB (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary	b General Schedules (1) <input checked="" type="checkbox"/> H (Financial Information) (2) <input type="checkbox"/> I (Financial Information – Small Plan) (3) <input checked="" type="checkbox"/> 1 A (Insurance Information) (4) <input checked="" type="checkbox"/> C (Service Provider Information) (5) <input checked="" type="checkbox"/> D (DFE/Participating Plan Information) (6) <input type="checkbox"/> 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
RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY

B Three-digit plan number (PN) ▶ 001

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

TRUSTEES OF COLUMBIA UNIVERSITY

D Employer Identification Number (EIN)

13-5598093

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	100430	10,337	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	957,702,842
5	Current value of plan's interest under this contract in separate accounts at year end.....	1,268,388,702
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) <input type="checkbox"/> individual policies (2) <input type="checkbox"/> group deferred annuity (3) <input type="checkbox"/> other (specify) ▶	
f	If contract purchased, in whole or in part, to distribute benefits from a terminating plan, check here ▶ <input type="checkbox"/>	
7	Contracts With Unallocated Funds (Do not include portions of these contracts maintained in separate accounts)	
a	Type of contract: (1) <input type="checkbox"/> deposit administration (2) <input type="checkbox"/> immediate participation guarantee (3) <input checked="" type="checkbox"/> guaranteed investment (4) <input type="checkbox"/> other ▶	
b	Balance at the end of the previous year	7b 949,546,138
c	Additions: (1) Contributions deposited during the year	7c(1) 9,412,865
	(2) Dividends and credits.....	7c(2) 0
	(3) Interest credited during the year.....	7c(3) 40,162,703
	(4) Transferred from separate account.....	7c(4) 71,863,137
	(5) Other (specify below).....	7c(5) 1,775,779
	▶FEES AND OTHER DEDUCTIONS	
	(6) Total additions	7c(6) 123,214,484
d	Total of balance and additions (add lines 7b and 7c(6))	7d 1,072,760,622
e	Deductions:	
	(1) Disbursed from fund to pay benefits or purchase annuities during year	7e(1) 48,816,227
	(2) Administration charge made by carrier.....	7e(2)
	(3) Transferred to separate account.....	7e(3) 66,107,502
	(4) Other (specify below).....	7e(4) 134,051
▶FEES AND OTHER DEDUCTIONS		
	(5) Total deductions	7e(5) 115,057,780
f	Balance at the end of the current year (subtract line 7e(5) from line 7d).....	7f 957,702,842

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 <input type="checkbox"/> paid in cash, or <input type="checkbox"/> 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.	10b	

Specify nature of costs.

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) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	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.	<small>OMB No. 1210-0110</small> 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 RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY	B Three-digit plan number (PN) ▶	001
C Plan sponsor's name as shown on line 2a of Form 5500 TRUSTEES OF COLUMBIA UNIVERSITY	D Employer Identification Number (EIN) 13-5598093	

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)

THE VANGUARD GROUP, INC

23-1945930

(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 99	TRUSTEE	335,147	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>

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

SEYFARTH SHAW

36-2152202

(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	ATTORNEY	104,763	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>

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

AON HEWITT INVESTMENT CONSULTING

36-3109431

(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?
17	CONSULTANT	62,727	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>

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)

PRICEWATERHOUSECOOPERS LLP

13-4008324

(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	NONE	51,100	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>

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

WILLIS TOWERS WATSON US LLC

53-0181291

(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?
11 50	NONE	21,000	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>

(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 <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>		Yes <input type="checkbox"/> No <input type="checkbox"/>

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) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small>	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.	<small>OMB No. 1210-0110</small> 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 RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY	B Three-digit plan number (PN) ▶	001
--	---	-----

C Plan or DFE sponsor's name as shown on line 2a of Form 5500 TRUSTEES OF COLUMBIA UNIVERSITY	D Employer Identification Number (EIN) 13-5598093
---	---

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-CREF REAL ESTATE ACCOUNT

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) 93,208,510
--------------------------------	------------------------	--

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)

SCHEDULE H (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	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.	<small>OMB No. 1210-0110</small> 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 RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY	B Three-digit plan number (PN) ▶ 001
C Plan sponsor's name as shown on line 2a of Form 5500 TRUSTEES OF COLUMBIA UNIVERSITY	D Employer Identification Number (EIN) 13-5598093

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)	782,217
		690,172
c General investments:		
(1) Interest-bearing cash (include money market accounts & certificates of deposit)	1c(1)	
(2) U.S. Government securities	1c(2)	
(3) Corporate debt instruments (other than employer securities):		
(A) Preferred	1c(3)(A)	
(B) All other	1c(3)(B)	
(4) Corporate stocks (other than employer securities):		
(A) Preferred	1c(4)(A)	
(B) Common	1c(4)(B)	
(5) Partnership/joint venture interests	1c(5)	
(6) Real estate (other than employer real property)	1c(6)	
(7) Loans (other than to participants).....	1c(7)	
(8) Participant loans	1c(8)	
(9) Value of interest in common/collective trusts	1c(9)	
(10) Value of interest in pooled separate accounts	1c(10)	90,458,367
(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)	3,955,217,881
(14) Value of funds held in insurance company general account (unallocated contracts).....	1c(14)	949,546,138
(15) Other.....	1c(15)	93,208,510
		3,300,242,021
		957,702,842

		(a) Beginning of Year	(b) End of Year
1d	Employer-related investments:		
(1)	Employer securities.....	1d(1)	
(2)	Employer real property.....	1d(2)	
e	Buildings and other property used in plan operation.....	1e	
f	Total assets (add all amounts in lines 1a through 1e).....	1f	4,996,004,603 4,351,843,545
Liabilities			
g	Benefit claims payable.....	1g	
h	Operating payables.....	1h	
i	Acquisition indebtedness.....	1i	
j	Other liabilities.....	1j	376,034 29,220
k	Total liabilities (add all amounts in lines 1g through 1j).....	1k	376,034 29,220
Net Assets			
l	Net assets (subtract line 1k from line 1f).....	1l	4,995,628,569 4,351,814,325

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.

		(a) Amount	(b) Total
Income			
a	Contributions:		
(1)	Received or receivable in cash from: (A) Employers.....	2a(1)(A)	186,679,474
	(B) Participants.....	2a(1)(B)	1,791,713
	(C) Others (including rollovers).....	2a(1)(C)	
(2)	Noncash contributions.....	2a(2)	
(3)	Total contributions. Add lines 2a(1)(A) , (B) , (C) , and line 2a(2)	2a(3)	188,471,187
b	Earnings on investments:		
(1)	Interest:		
	(A) Interest-bearing cash (including money market accounts and certificates of deposit).....	2b(1)(A)	
	(B) U.S. Government securities.....	2b(1)(B)	
	(C) Corporate debt instruments.....	2b(1)(C)	
	(D) Loans (other than to participants).....	2b(1)(D)	
	(E) Participant loans.....	2b(1)(E)	
	(F) Other.....	2b(1)(F)	40,162,703
	(G) Total interest. Add lines 2b(1)(A) through (F)	2b(1)(G)	40,162,703
(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)	68,688,594
	(D) Total dividends. Add lines 2b(2)(A) , (B) , and (C)	2b(2)(D)	68,688,594
(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)	-302,772,798
	(C) Total unrealized appreciation of assets. Add lines 2b(5)(A) and (B)	2b(5)(C)	-302,772,798

		(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)		7,459,171
(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)		-451,990,065
c Other income.....	2c		2,829,507
d Total income. Add all income amounts in column (b) and enter total.....	2d		-447,151,701
Expenses			
e Benefit payment and payments to provide benefits:			
(1) Directly to participants or beneficiaries, including direct rollovers.....	2e(1)	195,825,960	
(2) To insurance carriers for the provision of benefits.....	2e(2)		
(3) Other.....	2e(3)		
(4) Total benefit payments. Add lines 2e(1) through (3).....	2e(4)		195,825,960
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)	239,590	
(2) Contract administrator fees.....	2i(2)		
(3) Investment advisory and management fees.....	2i(3)	596,993	
(4) Other.....	2i(4)		
(5) Total administrative expenses. Add lines 2i(1) through (4).....	2i(5)		836,583
j Total expenses. Add all expense amounts in column (b) and enter total.....	2j		196,662,543
Net Income and Reconciliation			
k Net income (loss). Subtract line 2j from line 2d.....	2k		-643,814,244
l Transfers of assets:			
(1) To this plan.....	2l(1)		
(2) From this plan.....	2l(2)		

Part III Accountant's Opinion

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

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

(1) 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: PRICEWATERHOUSECOOPERS

(2) EIN: 13-4008324

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?	4e	X		25,000,000
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?	4f		X	
g Did the plan hold any assets whose current value was neither readily determinable on an established market nor set by an independent third party appraiser?	4g		X	
h Did the plan receive any noncash contributions whose value was neither readily determinable on an established market nor set by an independent third party appraiser?	4h		X	
i Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.)	4i	X		
j Were any plan transactions or series of transactions in excess of 5% of the current value of plan assets? (Attach schedule of transactions if "Yes" is checked and see instructions for format requirements.)	4j		X	
k Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?	4k		X	
l Has the plan failed to provide any benefit when due under the plan?	4l		X	
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.)	4m	X		
n If 4m was answered "Yes," check the "Yes" box if you either provided the required notice or one of the exceptions to providing the notice applied under 29 CFR 2520.101-3.	4n	X		

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) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	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.	<small>OMB No. 1210-0110</small> 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 RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY	B Three-digit plan number (PN)	001
C Plan sponsor's name as shown on line 2a of Form 5500 TRUSTEES OF COLUMBIA UNIVERSITY	D Employer Identification Number (EIN) 13-5598093	

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 23-2186884

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

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

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

4 Is the plan administrator making an election under Code section 412(d)(2) or ERISA section 302(d)(2)? Yes No N/A
If the plan is a defined benefit plan, go to line 8.

5 If a waiver of the minimum funding standard for a prior year is being amortized in this plan year, see instructions and enter the date of the ruling letter granting the waiver. **Date:** Month _____ Day _____ Year _____
If you completed line 5, complete lines 3, 9, and 10 of Schedule MB and do not complete the remainder of this schedule.

6 a Enter the minimum required contribution for this plan year (include any prior year accumulated funding deficiency not waived)	6a	
b Enter the amount contributed by the employer to the plan for this plan year	6b	
c Subtract the amount in line 6b from the amount in line 6a. Enter the result (enter a minus sign to the left of a negative amount).....	6c	

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

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

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

Part III	Amendments
-----------------	-------------------

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

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

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

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

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

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

Part V Additional Information for Multiemployer Defined Benefit Pension Plans

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

a Name of contributing employer _____

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

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

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

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

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

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

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

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

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

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

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

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

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

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

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

a Name of contributing employer _____

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

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

e Contribution rate information (If more than one rate applies, check this box and see instructions regarding required attachment. Otherwise, complete lines 13e(1) and 13e(2).)

(1) Contribution rate (in dollars and cents) _____

(2) Base unit measure: Hourly Weekly Unit of production Other (specify): _____

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

a The current plan year. Check the box to indicate the counting method used to determine the number of inactive participants: <input type="checkbox"/> last contributing employer <input type="checkbox"/> alternative <input type="checkbox"/> reasonable approximation (see instructions for required attachment).....	14a	
b The plan year immediately preceding the current plan year. <input type="checkbox"/> 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. <input type="checkbox"/> 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 _____

Plan Name	RETIREMENT PLAN FOR OFFICERS OF COLUMBIA UNIVERSITY
Plan Sponsor EIN	13-5598093
ERISA Plan #	001
Plan Year Ending	12/31/2022

The required attachment marked with an "X" in the Attachment column is included within the Accountant's Opinion attachment to Sch. H, Part III, Line 3, which consists of the entire audit report issued by the plan's Independent Qualified Public Accountant (IQPA).

Form/Schedule	Line #	Description	Attachment
5500 Sch. H	Line 3	Financial statements used in formulating the IQPA's opinion	X
5500 Sch. H	Line 4i	Schedule of Assets (Held at End of Year)	X
5500 Sch. H	Line 4i	Schedule of Assets (Acquired and Disposed of Within Year)	
5500 Sch. H	Line 4j	Schedule of Reportable Transactions	
5500 Sch. H	Line 4a	Schedule of Delinquent Participant Contributions	

Retirement Plan for Officers of Columbia University

**Financial Statements and Supplemental Schedule
Required by ERISA
December 31, 2022 and 2021**

Retirement Plan for Officers of Columbia University

Index

December 31, 2022 and 2021

	Page(s)
Report of Independent Auditors	1–2
Financial Statements	
Statements of Net Assets Available for Benefits December 31, 2022 and 2021	3
Statement of Changes in Net Assets Available for Benefits Year Ended December 31, 2022	4
Notes to Financial Statements December 31, 2022 and 2021	5–15
Supplemental Schedule Required by ERISA	
Schedule H, Part IV, Line 4i - Schedule of Assets (Held at End of Year) December 31, 2022.....	16–17
Note: Other supplemental schedules required by Section 29 CFR 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.	



Report of Independent Auditors

To the Administrator of Retirement Plan for Officers of Columbia University

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

We were engaged to perform an audit of the financial statements of Retirement Plan for Officers of Columbia University (the "Plan"), an employee benefit plan subject to the Employee Retirement Income Security Act of 1974 (ERISA), as permitted by ERISA Section 103(a)(3)(C) (ERISA Section 103(a)(3)(C) audit). The financial statements comprise the statements of net assets available for benefits as of December 31, 2022 and 2021, and the related statement of changes in net assets available for benefits for the year ended December 31, 2022, including the related notes (collectively referred to as the "financial statements").

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

Management has obtained certifications from qualified institutions 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 4 to the financial statements, is complete and accurate.

Disclaimer of Opinion

We do not express an opinion on the accompanying financial statements of the Plan. Because of the significance of the matter described in the Basis for Disclaimer of Opinion section of our report, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion on these financial statements.

Basis for Disclaimer of Opinion

The Plan sponsor's accounting records for contracts and custodial accounts issued to current or former employees prior to January 1, 2009 do not provide sufficient evidence supporting investments, benefit payments, investment income and net assets available for benefits to permit the application of adequate auditing procedures.



Responsibilities of Management for the Financial Statements

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

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

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

Auditors' Responsibilities for the Audit of the Financial Statements

Our responsibility is to conduct an audit of the Plan's financial statements in accordance with auditing standards generally accepted in the United States of America and to issue an auditors' report. However, because of the matter described in the Basis for Disclaimer of Opinion section of our report, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion on these financial statements.

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 audit.

Supplemental Schedule Required by ERISA

Schedule H, Part IV, Line 4i - Schedule of Assets (Held at End of Year) as of December 31, 2022 ("supplemental schedule"), is presented for purposes of additional analysis and is not a required part of the financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Because of the significance of the matter described in the Basis for Disclaimer of Opinion section of our report, it is inappropriate to and we do not express an opinion on this supplemental schedule.

PricewaterhouseCoopers LLP

New York, New York
August 31, 2023

Retirement Plan for Officers of Columbia University
Statements of Net Assets Available for Benefits
December 31, 2022 and 2021

	2022	2021
Assets		
Investments, at fair value		
CREF Variable annuities	\$ 1,175,180,192	\$ 1,675,710,678
TIAA Traditional annuities (Note 2)	957,452,086	949,381,990
Registered investment companies	2,125,061,829	2,279,507,203
TIAA Pooled separate account	<u>93,208,510</u>	<u>90,458,367</u>
Total investments, at fair value	<u>4,350,902,617</u>	<u>4,995,058,238</u>
Investments, at contract value		
TIAA Traditional annuities (Note 2)	<u>250,756</u>	<u>164,148</u>
Total investments, at contract value	250,756	164,148
Other receivable	<u>690,172</u>	<u>782,217</u>
Total assets	4,351,843,545	4,996,004,603
Liabilities		
Accrued expenses	<u>29,220</u>	<u>376,034</u>
Net assets available for benefits	<u>\$ 4,351,814,325</u>	<u>\$ 4,995,628,569</u>

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

Retirement Plan for Officers of Columbia University
Statement of Changes in Net Assets Available for Benefits
Year Ended December 31, 2022

Additions (reductions) to net assets attributed to	
Investment income (loss)	
Net depreciation in fair value of investments	\$ (747,303,691)
Interest and dividend income	<u>108,851,296</u>
Net investment loss	(638,452,395)
Contributions	188,471,187
Other revenue	<u>2,829,507</u>
Net reductions	<u>(447,151,701)</u>
Deductions from net assets attributed to	
Benefits paid to participants	195,825,960
Administrative expense	<u>836,583</u>
Total deductions	<u>196,662,543</u>
Net decrease in net assets available for benefits	(643,814,244)
Net assets available for benefits	
Beginning of year	<u>4,995,628,569</u>
End of year	<u>\$ 4,351,814,325</u>

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

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

1. Plan Description

The following description of the Retirement Plan for Officers of Columbia University (the “Plan”) is provided for general information purposes only. Participants should refer to the Plan Document for more complete information.

General

The Plan was established in 1976 and was amended and restated, effective July 1, 2013, to provide retirement income benefits to eligible officers of Columbia University (the “University”) and their beneficiaries as defined in the plan document. The University is the Plan Sponsor and Administrator. The Plan is funded primarily through the University contributions, which are held in fixed dollar annuities and invested in investment funds as selected by participants as described in the Investment Options and Participant Accounts section of Note 1. The assets of the Plan are administered, distributed, forfeited and otherwise governed by the provisions of the Plan. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (“ERISA”).

The Plan was amended, effective July 1, 2013, to (1) clarify provisions to reflect and facilitate the administration of the Plan, (2) add matching contributions not to exceed 3% which will be computed and deposited on a pay period basis, (3) reduce the core contribution formula, and (4) add a tenure bonus contribution.

The Plan was amended, effective June 1, 2018, to recognize prior employment with a predecessor employer in the years of eligibility service determination for certain employees whose employment with the University was effective on the same date of the amendment.

Contributions

The University contributes amounts for each participant for each pay date within the plan year subject to the applicable dollar amounts of Internal Revenue Code (the “Code”) Section 415.

Participants with an Employment Date on or After July 1, 2013

For employees who were employed on or after July 1, 2013, contributions are the sum of (i) 15% of the amount of the participant’s guaranteed income from clinical activities plus (ii) the amount determined in accordance with the following schedule:

Employment Date on or After July 1, 2013

Contribution Service	Age	Contribution, Expressed as a Percentage of Participant’s Compensation		
Less than five (5) years	Any age	5% of Compensation at or below the Social Security Wage Base	Plus	9% of Compensation above the Social Security Wage Base
Five (5) years or more	Less than Age 40	5% of Compensation at or below the Social Security Wage Base	Plus	9% of Compensation above the Social Security Wage Base
Five (5) years or more	Age 40+	6% of Compensation at or below the Social Security Wage Base	Plus	10% of Compensation above the Social Security Wage Base

Matching Contributions – Participants with Employment Date on or After July 1, 2013

For each active participant who is an eligible employee and who makes elective deferrals of at least one percent (1%) of gross compensation under the Columbia University Voluntary Retirement Savings Plan for a pay period (“VRSP Contributions”), the University shall make a matching

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

contribution for that pay period. When an eligible employee's VRSP Contribution exceeds three percent (3%), the University's matching contribution is capped at 3%.

Tenure Bonus Contribution

A one-time tenure bonus contribution shall apply to any eligible employee who becomes tenured during a plan year beginning on or after July 1, 2012; provided, that he or she (i) was not hired directly into tenured status or hired with an offer of tenure or (ii) is not a highly compensated employee for that plan year. Pre-July 1, 2013, the tenure bonus contribution was 20% of his or her regular pay for the determination period ending within the plan year in which he or she became tenured. Post-July 1, 2013, the tenure bonus contribution is 10% of his or her regular pay for the University fiscal year ended June 30th during the plan year in which he or she is tenured.

Participants with an Employment Date Before July 1, 2013

For employees who were employed on or after July 1, 1994 (but before July 1, 2013), contributions are the sum of (i) 15% of the amount of the participant's guaranteed income from clinical activities plus (ii) the amount determined in accordance with the following schedule:

Employment Date on or After July 1, 1994

Contribution Service	Age	Contribution, Expressed as a Percentage of Participant's Compensation		
Less than five (5) years	Any age	5% of Compensation at or below the Social Security Wage Base	Plus	10% of Compensation above the Social Security Wage Base
Less than five (5) years with tenure	Age 40+	7.5% of Compensation at or below the Social Security Wage Base	Plus	12.5% of Compensation above the Social Security Wage Base
Five (5) years or more	Age 40+	7.5% of Compensation at or below the Social Security Wage Base	Plus	12.5% of Compensation above the Social Security Wage Base
Fifteen (15) years or more	Age 55+	12.5% of Compensation at or below the Social Security Wage Base	Plus	17.5% of Compensation above the Social Security Wage Base

Contribution formulas in effect for periods prior to July 1, 1994 were determined in accordance with the terms of the Plan then in effect.

Vesting of Plan Contributions

A participant is 100% vested in all plan contributions once they are made, and the earnings thereon are at all times nonforfeitable. This does not limit the deduction from a participant's account of such fees and charges that may be imposed by the insurance companies or custodian of the Plan, or other plan expense changes which may be charged to the account under applicable law, the removal of plan contributions made under a Mistake of Fact form, as defined by the Plan document, or the University's right to reallocate contributions or earnings which were incorrectly allocated to any account.

Benefit Payments

Plan benefits are paid to employees upon retirement, disability and certain terminations of employment. Benefit Payments take place in the form of withdrawals of lump sums or annuity payments as allowed by the investment option. A participant may commence distributions from his or her account at any time following termination of employment due to retirement, death, disability,

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

resignation or dismissal. Retirement is generally at age 65, but a phased retirement agreement is available at age 55. Distributions can also occur due to hardship.

Administration

The general administration of the Plan and the responsibility for carrying out the Plan's provisions are performed by the Vice President for Human Resources of the University.

Investment Options and Participant Accounts

Plan investments are managed under the terms of agreements between the University and the Teachers Insurance and Annuity Association ("TIAA") and College Retirement Equities Fund ("CREF") (collectively, "TIAA-CREF"), who serve as insurance companies, and Vanguard Fiduciary Trust Company ("Vanguard"), who serves as custodian. Participants may elect to allocate contributions among the TIAA Traditional Annuities, TIAA Real Estate, CREF and TIAA-CREF registered investment companies, and the Vanguard and Calvert Trust Company ("Calvert") registered investment companies. The allocations may be in any whole number or percentage proportion, including full allocation to any annuity or account. Each participant's account is credited with the employer and employee contribution and charged with an allocation of administrative expenses and Plan earnings (losses). Allocations are based on participant earnings or account balances, as defined. Effective June 1, 2022, participants may also direct the investment of their accounts into mutual funds via a self-directed brokerage account with TIAA-CREF or Vanguard.

The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

Teachers Insurance and Annuity Association

Participants can choose from a series of annuity investment options. Refer to the TIAA prospectuses for detailed descriptions of the investment options. TIAA is a legal reserve life insurance and annuity company.

The TIAA traditional annuity contracts are guaranteed insurance contracts. Contributions to the TIAA Traditional Annuities are used to purchase a guaranteed amount of future retirement benefits. TIAA provides to participants fixed dollar annuities, which are considered unallocated contracts.

Until September 2017, TIAA Traditional Annuities were offered through the Retirement Annuity ("RA") contracts. As of September 2017, TIAA Traditional Annuities are offered through Retirement Choice ("RC") contracts for all newly invested funds. The TIAA Traditional Annuity holdings within the RA and RC contracts have liquidity restrictions and distributions, withdrawals, and transfers out of these contracts can only be made in 10 annual installments for the RA contracts and generally must be paid in 84 monthly installments for the RC contracts through Transfer Payout Annuities, and are considered "nonbenefit responsive".

TIAA Traditional Annuities are also used as the investment vehicle for the Revenue Credit Account (refer to Other Revenue in Note 2) through the Retirement Choice Plus ("RCP") contract. The TIAA Traditional Annuity holdings within the RCP contracts are nonparticipant directed, contain no liquidity restrictions and are considered "benefit responsive".

The TIAA Real Estate Account is a pooled separate account investing mostly in real estate and real estate related investments.

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

College Retirement Equities Fund – Variable Annuities

Participants have a choice of eight variable annuities to which they can direct their investments. Refer to the CREF prospectuses for detailed descriptions of the investment options.

Upon retirement, investments in the TIAA Real Estate Account and the CREF variable annuities may remain in each or be invested in the Traditional Annuities (RA and RC).

Teachers Insurance and Annuity Association–College Retirement Equities Fund – Institutional Mutual Funds

Participants have a choice of various TIAA-CREF Institutional Mutual Funds to which they can direct their investments. TIAA-CREF Institutional Mutual Funds are not eligible to be annuitized by TIAA. TIAA, FSB is the directed custodian for the TIAA-CREF Institutional Mutual Funds.

Vanguard Fiduciary Trust Company – Mutual Funds

Participants have a choice of a variety of mutual funds to which they can direct their investments. Refer to the Vanguard prospectuses for detailed descriptions of the investment options.

Calvert Trust Company – Mutual Funds

Participants have a choice of a variety of mutual funds to which they can direct their investments. Refer to the Calvert prospectuses for detailed descriptions of the investment options.

Self-Directed Brokerage Accounts – Mutual Funds

Participants may invest in mutual funds via the self-directed brokerage options offered through both TIAA-CREF and Vanguard.

Participants direct the investment of their account balance into various investment options offered by the Plan and may change their investment options at any time, subject to the terms of the service provider agreements governing the investment options.

2. Summary of Significant Accounting Policies

Basis of Accounting

The accompanying financial statements are prepared on the accrual basis of accounting and in conformity with accounting principles generally accepted in the United States of America (“GAAP”).

Investment Valuation and Income Recognition

Investments in registered investment companies, the pooled separate account and variable annuities are stated at fair value based on the net asset value on the last day of the plan year. The Trustees of the University Retirement Trust determine the Plan’s valuation policies utilizing information provided by the investment advisors, custodians and insurance companies. 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. See Note 3 for discussion of fair value measurements.

Shares of registered investment company mutual funds and institutional mutual funds, variable annuities, and the pooled separate account are reported at quoted market prices, which represent the net asset value (“NAV”) of shares held by the Plan at year end. NAV, calculated daily, is applied to daily purchase and sale transactions in addition to being used to value ending market values. Accumulation units for variable annuities and the TIAA real estate pooled separate account are recorded at fair value at the NAV of units held by the Plan at year end.

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

TIAA Traditional Annuities are valued at the amount that would be received by the participant at the reporting date if the amounts were withdrawn or funds transferred within the plan prior to maturity. The TIAA Traditional Annuity RA and RC contracts are nonbenefit responsive and reported at contract value which approximates fair value. Contract value is the aggregation of contributions, plus interest, less withdrawals and expenses, if any. Contract value approximates a discounted cash flow value calculated using an appropriate risk-adjusted market discount rate which correlates closely with TIAA Traditional Annuity's historical crediting rates. At December 31, 2022, the balance of the RA contracts was \$883,286,907 and the RC contracts was \$74,165,179 totaling \$957,452,086. At December 31, 2021, the balance of the RA contracts was \$891,362,337 and the RC contracts was \$58,019,653, totaling \$949,381,990. The RCP contract is fully benefit responsive and reported at contract value. Contract value is the relevant measure for fully benefit responsive investment contracts because this is the amount received by participants if they were to initiate permitted transactions under the terms of the Plan. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. At December 31, 2022 and 2021, the balance of the RCP contract was \$250,756 and \$164,148, respectively.

The TIAA Traditional Annuities guarantee principal and pays a guaranteed minimum interest, which was 3% during 2022. Additional amounts above the guaranteed minimum interest rate may be declared at the discretion of the TIAA Board of Trustees on a year-by-year basis. When declared, the additional amounts remain in effect for the declaration year that begins each March 1, and are not guaranteed for future years. Together the guaranteed minimum and additional amounts make up the crediting rate in the accumulation phase. TIAA groups premium dollars received over defined periods into vintages for the purposes of determining the crediting rate for applicable declaration year during the accumulation period. During the year ended December 31, 2022, the average crediting rate for the RA contracts was 4.2%, the average crediting rate for the RCP contracts was 3.6% and the average crediting rate for the RC contract was 4.7%.

Investment Income

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded as earned. Dividends are recorded on the ex-dividend date, or as soon as the investment advisor is informed of the ex-dividend date.

Net appreciation (depreciation) in the fair value of investments consists of the realized gains or losses and the unrealized appreciation or depreciation on those investments.

Benefits to Participants

Benefits to participants are recorded when paid.

Administrative Expenses

Administrative expenses directly related to the Plan, which consist primarily of audit services, and preparation of participant related communication materials, are paid by the Plan from the Revenue Credit Account (refer to Other Revenue section of this Note), a component of net assets available for benefits. Certain other administrative expenses paid by the University (primarily production/ mailing costs) are not reflected in the Plan's financial statements.

Other Revenue

Other revenue represents a negotiated agreement with TIAA-CREF with specific allocation methods for revenue sharing to the Plan. The credit will be deposited into the Revenue Credit Account as defined by the Plan and may only be used either to pay direct, reasonable and necessary expenses of the Plan for which the Plan is authorized to pay or to provide benefits for

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

Plan participants and beneficiaries. Other revenue related to this agreement amounted to \$2,829,507 for the year ended December 31, 2022.

Forfeitures

In the event University contributions are made to a participant's account subsequent to the termination of the employment or as a result of an adjustment in the calculation of the contribution amount, such amounts are considered unearned. These unearned amounts are forfeited and may be applied as an offset against the University's subsequent cash contributions to the Plan. Available forfeiture balances amounted to \$86,512 and \$40,833 at December 31, 2022 and 2021, respectively. Forfeitures used during the year ended December 31, 2022 were \$115,667.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities at the dates of the financial statements. Actual results could differ from those estimates and such differences could be material.

Risk and Uncertainties

The Plan provides for various investment options in investment securities. Investments are exposed to various risks, such as interest rate, market, and credit risks. Market values of investments can decline for a number of reasons, including changes in prevailing market and interest rates, increased market volatility due to the global pandemic, international conflict, inflationary pressure, increases in defaults, and credit rating downgrades. Due to the level of risk associated with certain investments, it is at least reasonably possible that changes in the values of investments will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statement of net assets available for benefits.

3. Fair Value Measurements

FASB Accounting Standards Codification ("ASC") 820, *Fair Value Measurement and Disclosures*, establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity and unobservable inputs reflect the entities own assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value under ASC 820 utilize relevant observable inputs and minimize the use of unobservable inputs. The standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by the Plan for financial instruments measured at fair value on a recurring basis. A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of inputs are as follows:

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

Level 2 Inputs other than Level 1 that are observable, either directly or indirectly, 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 corroborated by observable market data for substantially the same term of the assets or liabilities.

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

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.

A financial instruments categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement. In determining the categorization of the Plan's investments within the fair value hierarchy, the Plan has considered market information, including observable net asset values, and the length of time until the investment will become redeemable. The categorization of a financial instrument within the hierarchy is based upon the pricing transparency of that instrument and does not necessarily correspond to the Plan's perceived risk of that instrument.

The fair value methods described above 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. There have been no changes in the fair value methods used as of December 31, 2022 and 2021.

The following presents investments of the Plan as of December 31, 2022 and 2021, respectively, by caption and by level within the valuation hierarchy.

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets				
Investments, at fair value				
TIAA Traditional annuities	\$ -	\$ -	957,452,086	\$ 957,452,086
Pooled separate account	93,208,510	-	-	93,208,510
Registered investment companies				
Variable annuities				
Equities	803,292,010	-	-	803,292,010
Global Equities	135,934,474	-	-	135,934,474
Index ⁽¹⁾	93,817,162	-	-	93,817,162
Money Market Funds	40,175,400	-	-	40,175,400
Fixed Income	101,961,146	-	-	101,961,146
Mutual Funds ⁽³⁾				
Equities	149,832,413	-	-	149,832,413
Global Equities	11,888,358	-	-	11,888,358
Lifecycle Funds ⁽²⁾	1,212,634,261	-	-	1,212,634,261
Index ⁽¹⁾	568,084,630	-	-	568,084,630
Fixed Income	66,079,453	-	-	66,079,453
Money Market Funds	116,542,714	-	-	116,542,714
Total investments, at fair value	\$ 3,393,450,531	\$ -	\$ 957,452,086	\$ 4,350,902,617

Retirement Plan for Officers of Columbia University
Notes to Financial Statements
December 31, 2022 and 2021

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
Assets				
Investments, at fair value				
TIAA Traditional annuities	\$ -	\$ -	\$ 949,381,990	\$ 949,381,990
Pooled separate account	90,458,367	-	-	90,458,367
Registered investment companies				
Variable annuities				
Equities	1,101,790,738	-	-	1,101,790,738
Global Equities	257,251,900	-	-	257,251,900
Index ⁽¹⁾	145,228,030	-	-	145,228,030
Money Market Funds	44,529,702	-	-	44,529,702
Fixed Income	126,910,309	-	-	126,910,309
Mutual Funds				
Equities	444,450,117	-	-	444,450,117
Global Equities	48,179,615	-	-	48,179,615
Lifecycle Funds ⁽²⁾	1,167,973,271	-	-	1,167,973,271
Index ⁽¹⁾	473,613,781	-	-	473,613,781
Fixed Income	31,166,749	-	-	31,166,749
Money Market Funds	114,123,669	-	-	114,123,669
Total investments, at fair value	<u>\$ 4,045,676,248</u>	<u>\$ -</u>	<u>\$ 949,381,990</u>	<u>\$ 4,995,058,238</u>

- (1) Index variable annuities and institutional mutual funds represent the different CREF, TIAA-CREF, Vanguard and Calvert index funds, generally containing specific portfolios selected to track the overall market for common stocks publicly traded in the United States, as represented by broad stock market indexes.
- (2) Lifecycle funds are investments that seek high total return over time, through a combination of capital appreciation and income with allocations of investments changing based on a specific retirement date.
- (3) Self-directed brokerage accounts are included in the mutual fund category as they exclusively hold mutual funds, which are reported at quoted market prices and represent the NAV of shares held by the Plan at year end.

For the year ended December 31, 2022, there were no material transfers in or out of Level 3.

The pooled separate account invests in real estate and real-estate related investments. Although the underlying assets of the pooled separate accounts cannot be quickly sold and converted to liquid assets, the TIAA general account provides a liquidity guarantee to meet participant redemption, transfer or cash withdrawal requests varying from one to three days. Redemptions out of the investment are limited to once per quarter. Internal transfers into the TIAA Real Estate Account will be prohibited if the transfer causes the value of the participant's total accumulation in the account to exceed \$150,000. The purpose of this limitation is to ensure more predictable account inflows and outflows, which is expected to facilitate efficient portfolio management over the long-term.

The registered investment company variable annuities invest in equities, global equity, index, other index, fixed income, lifecycle and money market funds. All variable annuities have daily liquidity. Participants will be locked out of the variable annuity for 90 days if a purchase, sale and

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

repurchase within that variable annuity is made within a 60-day period. The funds have different trading terms varying from one to three days.

The Level 3 investment asset consists of the TIAA Traditional Annuity unallocated RA and RC contracts, which are nonbenefit responsive and not available for sale or transfer on any securities exchange. Accordingly, transactions in similar investment instruments are not observable, and the investments are valued using unobservable inputs (Level 3). While transactions involving the purchases/sales of individual TIAA Traditional Annuity RA and RC contracts are not observable in a public marketplace, contract value approximates fair value.

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

Type	Fair Value 2022	Principal Valuation Technique	Significant Unobservable Inputs	Significant Input Values
TIAA Traditional Non Benefits Responsive - RA	\$ 883,286,907	Discounted Cash Flow Theoretical Transfer (exit value)	Risk-adjusted discount rate applied	Between 3.70% and 6.25%
TIAA Traditional Non Benefits Responsive - RC	\$ 74,165,179	Discounted Cash Flow Theoretical Transfer (exit value)	Risk-adjusted discount rate applied	Between 3.95% and 6.50%

Type	Fair Value 2021	Principal Valuation Technique	Significant Unobservable Inputs	Significant Input Values
TIAA Traditional Non Benefits Responsive - RA	\$ 891,362,327	Discounted Cash Flow Theoretical Transfer (exit value)	Risk-adjusted discount rate applied	Between 3.00% and 3.80%
TIAA Traditional Non Benefits Responsive - RC	\$ 58,019,653	Discounted Cash Flow Theoretical Transfer (exit value)	Risk-adjusted discount rate applied	Between 2.75% and 3.90%

Retirement Plan for Officers of Columbia University

Notes to Financial Statements

December 31, 2022 and 2021

4. Information Certified by the Custodian and Insurance Companies

The Plan's management has elected the method of compliance permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under ERISA. The Plan's assets were held by Vanguard, the custodian and TIAA-CREF, as insurance companies. TIAA has been authorized by TIAA, FSB to certify the investments and investment information for which TIAA, FSB is the directed custodian. Certified information related to investments, at fair value, investments, at contract value, interest and dividends, net depreciation in the fair value of investments and all other related investment information in the accompanying financial statements, notes to the financial statements, other than the leveling provided in Note 3, was obtained by management and agreed to or derived from information certified as complete and accurate by the custodian and insurance companies.

5. Plan Termination

The University has not expressed any intent to discontinue its contributions. However, it is free to do so at any time, subject to the provisions set forth in ERISA. In the event such discontinuance results in the termination of the Plan, participants remain 100% vested in their accounts and, subject to certain restrictions in the unallocated insurance contracts, amounts will be distributed in a lump sum.

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

TIAA-CREF, as insurance companies, and Vanguard, as custodian, are related parties. Investments managed by the insurance companies and custodian qualify as party-in-interest transactions which are exempt from prohibited transaction rules.

In addition, the University is a related party and a party-in-interest as it provides certain services for the Plan. Currently, the University does not seek reimbursement for such services.

7. Federal Income Tax Status

The Plan has been designed to qualify for tax-exempt status under Section 403(b) of the Code. The terms of the Plan have been prepared to conform to the sample language provided by the Internal Revenue Service ("IRS") in the draft Listing of Required Modifications issued April 4, 2009. The Plan is required to operate in conformity with the Code 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 compliance with tax applicable requirements of Section 403(b) of the Code and, therefore, believes the Plan is qualified and the related custodial accounts and tax-deferred annuities are tax-exempt. Therefore, no provision for income taxes has been included in the Plan's financial statements.

GAAP requires plan management to evaluate tax positions taken by the Plan and recognize a tax liability (or asset) if the organization has taken an uncertain position that more likely would not be sustained upon examination by the relevant tax authorities. 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 tax 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. The Plan Administrator believes it is no longer subject to income tax examinations for years prior to 2019.

Retirement Plan for Officers of Columbia University
Notes to Financial Statements
December 31, 2022 and 2021

8. Subsequent Events

Subsequent events have been evaluated through August 31, 2023, the date the financial statements were available to be issued. There have been no subsequent events that occurred during this period that would require recognition or disclosure in the financial statements as of December 31, 2022 or for the year then ended.

Supplemental Schedule Required by ERISA

Retirement Plan for Officers of Columbia University
Schedule H, Part IV, Line 4i – Schedule of Assets (Held at End of Year)
December 31, 2022

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment	(d) Cost	(e) Current Value
	Vanguard Fiduciary Trust Company			
*	Vanguard Emerging Markets Stock Index Fund: Inst'l Shares	Registered investment company - Mutual funds	#	11,612,992
*	Vanguard Extended Market Index Fund: Inst'l Shares	Registered investment company - Mutual funds	#	54,607,853
*	Vanguard Federal Money Market Fund	Registered investment company - Mutual funds	#	89,140,628
*	Vanguard Inflation-Protected Securities Fund: Inst'l Shares	Registered investment company - Mutual funds	#	2,889,231
*	Vanguard Institutional Index Fund Plus Shares	Registered investment company - Mutual funds	#	224,738,326
*	Vanguard Institutional Target Retirement 2020 Fund	Registered investment company - Mutual funds	#	52,382,060
*	Vanguard Institutional Target Retirement 2025 Fund	Registered investment company - Mutual funds	#	101,107,291
*	Vanguard Institutional Target Retirement 2030 Fund	Registered investment company - Mutual funds	#	127,756,659
*	Vanguard Institutional Target Retirement 2035 Fund	Registered investment company - Mutual funds	#	145,276,606
*	Vanguard Institutional Target Retirement 2040 Fund	Registered investment company - Mutual funds	#	165,347,036
*	Vanguard Institutional Target Retirement 2045 Fund	Registered investment company - Mutual funds	#	162,628,131
*	Vanguard Institutional Target Retirement 2050 Fund	Registered investment company - Mutual funds	#	101,996,158
*	Vanguard Institutional Target Retirement 2055 Fund	Registered investment company - Mutual funds	#	37,356,444
*	Vanguard Institutional Target Retirement 2060 Fund	Registered investment company - Mutual funds	#	8,125,686
*	Vanguard Institutional Target Retirement 2065 Fund	Registered investment company - Mutual funds	#	2,046,836
*	Vanguard Institutional Target Retirement 2070 Fund	Registered investment company - Mutual funds	#	207,484
*	Vanguard Developed Markets Index Fund Institutional Shares	Registered investment company - Mutual funds	#	11,888,358
*	Vanguard Target Retirement Income	Registered investment company - Mutual funds	#	49,863,903
*	Vanguard Total International Bond Index Fund Admiral Shr	Registered investment company - Mutual funds	#	582,520
*	Vanguard Total World Stock Index Fund: Inst'l Shr	Registered investment company - Mutual funds	#	5,715,000
*	New York Life Guaranteed Interest Account; 10 bps Fee Class	Registered investment company - Mutual funds	#	2,448,472
*	Vanguard Real Estate Index Fund - Inst'l Shares	Registered investment company - Mutual funds	#	10,658,009
*	Vanguard Self-Directed Brokerage Account	Registered investment company - Mutual funds	#	36,264,878
*	Vanguard Total Bond Market Index Fund: Inst'l Shr	Registered investment company - Mutual funds	#	63,018,136
*	Vanguard Total International Stock Index Fund: Inst'l Shr	Registered investment company - Mutual funds	#	38,447,115
*	Vanguard Total Stock Market Index Fund: Inst'l Shr	Registered investment company - Mutual funds	#	180,659,807
	Subtotal			<u>\$ 1,686,765,618</u>

The above information was derived from data certified accurate and complete by Vanguard Fiduciary Trust Company, custodian, and Teachers Insurance and Annuity Association and College Retirement Equities Fund, insurance companies.

Retirement Plan for Officers of Columbia University

Schedule H, Part IV, Line 4i – Schedule of Assets (Held at End of Year)

December 31, 2022

(a)	(b) Identity of Issue, Borrower, Lessor or Similar Party	(c) Description of Investment	(d) Cost	(e) Current Value
	TIAA			
*	TIAA TRADITIONAL NON BENEFIT RESPONSIVE NBR - RA	Unallocated Annuity Contracts	#	\$ 883,286,907
*	TIAA TRADITIONAL NON BENEFIT RESPONSIVE 2 NB2 - RC	Unallocated Annuity Contracts	#	74,165,179
*	TIAA TRADITIONAL BENEFIT RESPONSIVE 2 BR2 - RCP	Unallocated Annuity Contracts	\$ 250,756	\$ 250,756
*	Real Estate Account	Pooled separate account	#	93,208,510
	CREF			
*	CREF STOCK R3 KH	Registered investment company - Variable annuity	#	642,654,113
*	CREF MONEY MARKET R3 KI	Registered investment company - Variable annuity	#	40,175,400
*	CREF SOCIAL CHOICE R3 KJ	Registered investment company - Variable annuity	#	59,648,274
*	CREF BOND MARKET R3 KK	Registered investment company - Variable annuity	#	135,934,474
*	CREF GLOBAL EQUITIES R3 KO	Registered investment company - Variable annuity	#	100,989,623
*	CREF GROWTH R3 KQ	Registered investment company - Variable annuity	#	93,817,162
*	CREF EQUITY INDEX R3 KR	Registered investment company - Variable annuity	#	38,194,992
*	TIAA-CREF SELF-DIRECTED BROKERAGE ACCOUNT	Registered investment company - Variable annuity	#	1,445,687
*	CREF INFLATION-LINKED BOND R3 KS	Registered investment company - Variable annuity	#	63,766,155
	TIAA-CREF			
*	VANGUARD FEDERAL MONEY MKT INV RY	Registered investment company - Institutional mutual funds	#	9,831,158
*	VANGUARD EMR MKTS STK IDX INST ZQ	Registered investment company - Institutional mutual funds	#	2,148,388
*	VANGUARD INST IDX INST PLUS WK	Registered investment company - Institutional mutual funds	#	21,316,268
*	VANGUARD DEVELOP MKTS IDX INS BS	Registered investment company - Institutional mutual funds	#	5,364,821
*	VANGUARD EXTEND MKIDX INST PL BT	Registered investment company - Institutional mutual funds	#	4,808,297
*	VANGUARD TTL BD MKT IDX INSTPL BV	Registered investment company - Institutional mutual funds	#	17,570,928
*	VANGUARD TTL INTL BND IDX ADM BW	Registered investment company - Institutional mutual funds	#	30,326
*	VANGUARD TOTAL INT ST IX ISPLS BX	Registered investment company - Institutional mutual funds	#	20,252
*	VANGUARD TOTAL ST MK IX IN PL BY	Registered investment company - Institutional mutual funds	#	21,486,684
*	VANGUARD TTL WRLD STK IDX INST BZ	Registered investment company - Institutional mutual funds	#	71,815,239
*	VANGUARD SHRT-TERM IP SEC ID I CC	Registered investment company - Institutional mutual funds	#	2,771,519
*	VANGUARD REAL ESTATE IDX INST BD	Registered investment company - Institutional mutual funds	#	12,870,304
*	VANGUARD TARGET RETIRE INCOME ML	Registered investment company - Institutional mutual funds	#	35,769,331
*	VANGUARD INST TG RTM 2020 INST BF	Registered investment company - Institutional mutual funds	#	27,908,509
*	VANGUARD INST TG RTM 2025 INST BG	Registered investment company - Institutional mutual funds	#	36,697,625
*	VANGUARD INST TG RTM 2030 INST BH	Registered investment company - Institutional mutual funds	#	34,579,259
*	VANGUARD INST TG RTM 2035 INST BI	Registered investment company - Institutional mutual funds	#	38,732,308
*	VANGUARD INST TG RTM 2040 INST BJ	Registered investment company - Institutional mutual funds	#	33,607,521
*	VANGUARD INST TG RTM 2045 INST BK	Registered investment company - Institutional mutual funds	#	18,831,626
*	VANGUARD INST TG RTM 2050 INST BL	Registered investment company - Institutional mutual funds	#	8,415,312
*	VANGUARD INST TG RTM 2055 INST BM	Registered investment company - Institutional mutual funds	#	2,096,387
*	VANGUARD INST TG RTM 2060 INST BN	Registered investment company - Institutional mutual funds	#	362,499
*	VANGUARD INST TG RTM 2065 INST BO	Registered investment company - Institutional mutual funds	#	32,652
	Subtotal		<u>250,756</u>	<u>2,634,604,445</u>
	Calvert Trust Company			
	CALVERT US LRGAPCO RESP IDX I AT	Registered investment company - Mutual funds	#	23,933,447
	Calvert US Large-Cap Core Responsible Index Fund; Class R6	Registered investment company - Mutual funds	#	5,849,863
	Subtotal			<u>29,783,310</u>
	Total investments		<u>\$ 250,756</u>	<u>\$ 4,351,153,373</u>

* These are permitted party-in-interest transactions as defined by ERISA.

These are participant-directed investments for which IRS and Department of Labor regulations do not require the cost value to be reported, except where noted.

The above information was derived from data certified accurate and complete by Vanguard Fiduciary Trust Company, custodian, and Teachers Insurance and Annuity Association and College Retirement Equities Fund, insurance companies.