

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 <br> HERE | Signature of plan administrator | $05 / 11 / 2020$ | Daniel Driscoll |
| :--- | :--- | :--- | :--- |
| SIGN |  | Date | Enter name of individual signing as plan administrator |
|  <br> HERE | Signature of employer/plan sponsor |  |  |
| SIGN <br> HERE |  |  |  |

For Paperwork Reduction Act Notice, see the Instructions for Form 5500.
Form 5500 (2018)
v. 171027

| 3a Plan administrator's name and address $\square$ Same as Plan Sponsor COLUMBIA UNIVERSITY VICE PRESIDENT OF HUMAN RESOURCES | 3b Administrator's EIN 13-2855235 |  |
| :---: | :---: | :---: |
| 615 WEST 131ST STREET | 3c Administrator's telephone number$212-851-7000$ |  |
| NEW YORK NY 10027-7922 |  |  |
| 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: <br> a Sponsor's name <br> c Plan Name | 4d PN |  |
| 5 Total number of participants at the beginning of the plan year | 5 | 1,562 |
| 6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines 6a(1), $\mathbf{6 a ( 2 )}, \mathbf{6 b}, 6 \mathrm{c}$, and 6d). |  |  |
| $\mathbf{a}(1)$ Total number of active participants at the beginning of the plan year | 6a(1) | 865 |
| a(2) Total number of active participants at the end of the plan year | 6a(2) | 902 |
| b Retired or separated participants receiving benefits. | 6b | 350 |
| C Other retired or separated participants entitled to future benefits | 6c | 223 |
| d Subtotal. Add lines 6a(2), 6b, and 6c. | 6d | 1,475 |
| e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits. | 6 e | 130 |
| f Total. Add lines 6d and $\mathbf{6 e}$. | 6 f | 1,605 |
| g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item) | 6 g |  |
| h Number of participants who terminated employment during the plan year with accrued benefits that were less than $100 \%$ vested | 6h | 26 |
| 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: 1A
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) | $\square$ | Insurance |
| :--- | :--- | :--- |
| (2) | $\square$ | Code section 412(e)(3) insurance contracts |
| (3) | X | Trust |
| (4) | $\square$ | General assets of the sponsor |

9b Plan benefit arrangement (check all that apply)

| (1) | $\square$ | Insurance |
| :--- | :--- | :--- |
| (2) | $\square$ | Code section 412(e)(3) insurance contracts |
| (3) | $X$ | Trust |
| (4) | $\square$ | 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) $\quad R$ (Retirement Plan Information)
(2) $\quad \square$ MB (Multiemployer Defined Benefit Plan and Certain Money Purchase Plan Actuarial Information) - signed by the plan actuary
(3) $X$ SB (Single-Employer Defined Benefit Plan Actuarial Information) - signed by the plan actuary

## b General Schedules

| (1) | X | H (Financial Information) |
| :--- | :--- | :--- |
| (2) | $\square$ | I (Financial Information - Small Plan) |
| (3) | $\square$ | A (Insurance Information) |
| (4) | $X$ | C (Service Provider Information) |
| (5) | $X$ | D (DFE/Participating Plan Information) |
| (6) | $\square$ | 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.) $\square$ Yes No

If " Yes " is checked, complete lines 11 b and 11 c .
11b Is the plan currently in compliance with the Form M-1 filing requirements? (See instructions and 29 CFR 2520.101-2.) $\qquad$ $\square$ Yes $\square$
11c Enter the Receipt Confirmation Code for the 2018 Form M-1 annual report. If the plan was not required to file the 2018 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


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

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| (b) Service Code(s) | (c) <br> Relationship to employer, employee organization, or person known to be a party-in-interest | (d) <br> Enter direct compensation paid by the plan. If none, enter -0-. | (e) <br> Did service provider receive indirect compensation? (sources other than plan or plan sponsor) | (f) <br> Did indirect compensation include eligible indirect compensation, for which the plan received the required disclosures? | (g) <br> Enter total indirect compensation received by service provider excluding eligible indirect compensation for which you answered "Yes" to element <br> (f). If none, enter -0- | (h) <br> Did the service provider give you a formula instead of an amount or estimated amount? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 51 | TRUSTEE | 195,324 | Yes X No $\square$ | Yes X No $\square$ | 0 | Yes X No $\square$ |

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

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

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

| (b) <br> Service <br> Code(s) | (c) <br> Relationship to <br> employer, employee <br> organization, or <br> person known to be <br> a party-in-interest | (d) <br> Enter direct <br> compensation paid the plan. If none, <br> enter -0-. | (e) <br> Did service provider <br> receive indirect <br> compensation? (sources <br> other than plan or plan <br> sponsor) | (f) | Did indirect compensation <br> include eligible indirect <br> compensation, for which the <br> plan received the required <br> disclosures? | Enter total indirect <br> compensation received by <br> service provider excluding <br> eligible indirect <br> compensation for which you <br> answered "Yes" to element <br> (f). If none, enter -0-. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | | Did the service |
| :---: |
| provider give you a |
| formula instead of |
| en amount or |

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)

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

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

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

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

| (b) <br> Service <br> Code(s) | (c) <br> Relationship to <br> employer, employee <br> organization, or <br> person known to be <br> a party-in-interest | (d) <br> Enter direct <br> compensation paid the plan. If none, <br> enter -0-. | (e) <br> Did service provider <br> receive indirect <br> compensation? (sources <br> other than plan or plan <br> sponsor) | (f) <br> Did indirect compensation <br> include eligible indirect <br> compensation, for which the <br> plan received the required <br> disclosures? | (g) | Enter total indirect <br> compensation received by <br> service provider excluding <br> eligible indirect <br> compensation for which you <br> answered "Yes" to element <br> (f). If none, enter $-0-$. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | | Did the service |
| :---: |
| provider give you a |
| formula instead of |
| an amount or |


\section*{| 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 <br> (see instructions) | (c) Enter amount of indirect <br> compensation |
| :--- | :--- | :--- |
|  |  | (e) Describe the indirect compensation, including any <br> formula used to determine the service provider's eligibility <br> for or the amount of the indirect compensation. |
| (d) Enter name and EIN (address) of source of 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)
(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 |
|  |  |  |

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## Part III $\quad$ Termination Information on Accountants and Enrolled Actuaries (see instructions) <br> (complete as many entries as needed)



| $\mathbf{a}$ | Name: | b EIN: |
| :--- | :--- | :--- |
| C | Position: |  |
| d | Address: | e Telephone: |
|  |  |  |

Explanation:

| a | Name: | b EIN: |
| :--- | :--- | :--- |
| c | Position: |  |
| d | Address: | e Telephone: |
|  |  |  |

Explanation:

| $\mathbf{a}$ | Name: | b |
| :--- | :--- | :--- |
| $\mathbf{C}$ | Position: | EIN: |
| $\mathbf{d}$ | Address: | e Telephone: |
|  |  |  |

Explanation:

| $\mathbf{a}$ | Name: | b EIN: |
| :--- | :--- | :--- |
| $\mathbf{C}$ | Position: |  |
| $\mathbf{d}$ | Address: | e Telephone: |
|  |  |  |

## Explanation:


a Name of MTIA, CCT, PSA, or 103-12 IE:U.S. TIPS INDEX NL FUND
b Name of sponsor of entity listed in (a): STATE STREET GLOBAL ADVISORS TRUST COMPANY
c EIN-PN 04-0025081 152
d Entity
code C
e Dollar value of interest in MTIA, CCT, PSA, or 4,162,786
a Name of MTIA, CCT, PSA, or 103-12 IE: DAILY MSCI EAFE INDEX NL FUND
b Name of sponsor of entity listed in (a): STATE STREET GLOBAL ADVISORS TRUST COMPANY

| c EIN-PN | $04-0025081$ | 182 | d Entity <br> code | C | Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12 ~ I E ~ a t ~ e n d ~ o f ~ y e a r ~(s e e ~ i n s t r u c t i o n s) ~$ |
| :--- | :--- | :--- | :--- | :--- | :--- |$\quad 12,959,268$

a Name of MTIA, CCT, PSA, or 103-12 IE: RUSSELL 1000 INDEX NL CTF
b Name of sponsor of entity listed in (a): STATE STREET GLOBAL ADVISORS TRUST COMPANY

c EIN-PN 04-6809841 001 \begin{tabular}{r|r|l|l}
d Entity <br>
code

$\quad$ C $\quad$

e Dollar value of interest in MTIA, CCT, PSA, or <br>
$103-12$ IE at end of year (see instructions)
\end{tabular}$\quad 18,710,521$

a Name of MTIA, CCT, PSA, or 103-12 IE:RUSSELL 2000 INDEX NL CTF
b Name of sponsor of entity listed in (a): STATE STREET GLOBAL ADVISORS TRUST COMPANY

| c EIN-PN | $04-6809842$ | 001 | d Entity <br> code | C | e Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12 ~ I E ~ a t ~ e n d ~ o f ~ y e a r ~(s e e ~ i n s t r u c t i o n s) ~$ |
| :--- | :--- | :--- | :--- | :--- | :--- |$\quad 4,329,172$

a Name of MTIA, CCT, PSA, or 103-12 IE:
b Name of sponsor of entity listed in (a):

| c EIN-PN | d Entity <br> code | e Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12$ 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 |
| :--- | :--- |
| a Name of MTIA, CCT, PSA, or 103-12 IE: |  |
| b Name of sponsor of entity listed in (a): |  |


| c EIN-PN | d Entity <br> code | e Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12$ 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 <br> code | e Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12$ 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 <br> code | e Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12$ 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 <br> code | e Dollar value of interest in MTIA, CCT, PSA, or <br> $103-12 ~ I E ~ a t ~ e n d ~ o f ~ y e a r ~(s e e ~ i n s t r u c t i o n s) ~$ |
| :--- | :--- | :--- |


\section*{| Part II | Information on Participating Plans (to be completed by DFEs) |
| :--- | :--- |}

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

| bName of <br> plan sponsor | c EIN-PN |
| :--- | :--- |

a Plan name

| bName of <br> plan sponsor | c EIN-PN |
| :--- | :--- |

a Plan name

| bName of <br> plan sponsor | C EIN-PN |
| :--- | :--- |

a Plan name

| b Name of |
| :--- | :--- |
| plan sponsor |$\quad$ C EIN-PN

a Plan name

| bName of <br> plan sponsor | c EIN-PN |
| :--- | :--- |

a Plan name

| b Name of |
| :--- | :--- |
| plan sponsor |$\quad$ C EIN-PN

a Plan name

| $\mathbf{b}$Name of <br> plan sponsor | c EIN-PN |
| :--- | :--- |

a Plan name

| b Name of |
| :--- | :--- | :--- |
| plan sponsor |$\quad$ C EIN-PN

a Plan name

| $\mathbf{b}$Name of <br> plan sponsor | C EIN-PN |
| :--- | :--- |

a Plan name

| $\mathbf{b}$Name of <br> plan sponsor | C EIN-PN |
| :--- | :--- |

a Plan name

| $\mathbf{b}$Name of <br> plan sponsor | c EIN-PN |
| :--- | :--- | :--- |

a Plan name

| $\mathbf{b}$Name of <br> plan sponsor | c EIN-PN |
| :--- | :--- |



## 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 $1 \mathrm{c}(9)$ 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 $1 \mathrm{~b}(1), 1 \mathrm{~b}(2), 1 \mathrm{c}(8), 1 \mathrm{~g}, 1 \mathrm{~h}$, 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.. | 1 a |  |  |
| b Receivables (less allowance for doubtful accounts): |  |  |  |
| (1) Employer contributions.... | 1b(1) |  |  |
| (2) Participant contributions | 1b(2) |  |  |
| (3) Other... | 1b(3) |  |  |
| C General investments: |  |  |  |
| (1) Interest-bearing cash (include money market accounts \& certificates of deposit) | 1c(1) |  |  |
| (2) U.S. Government securities | 1c(2) |  |  |
| (3) Corporate debt instruments (other than employer securities): |  |  |  |
| (A) Preferred.. | 1c(3)(A) |  |  |
| (B) All other.............................................................................. | 1c(3)(B) |  |  |
| (4) Corporate stocks (other than employer securities): |  |  |  |
| (A) Preferred .................................... | 1c(4)(A) |  |  |
| (B) Common.. | 1c(4)(B) |  |  |
| (5) Partnership/joint venture interests . | 1c(5) |  |  |
| (6) Real estate (other than employer real property). | 1c(6) |  |  |
| (7) Loans (other than to participants). | 1c(7) |  |  |
| (8) Participant loans. | 1c(8) |  |  |
| (9) Value of interest in common/collective trusts. | 1c(9) | 125,057,443 | 142,613,714 |
| (10) Value of interest in pooled separate accounts .. | 1c(10) |  |  |
| (11) Value of interest in master trust investment accounts | 1c(11) |  |  |
| (12) Value of interest in 103-12 investment entities... | 1c(12) |  |  |
| (13) Value of interest in registered investment companies (e.g., mutual funds). | 1c(13) |  |  |
| (14) Value of funds held in insurance company general account (unallocated contracts) | 1c(14) |  |  |
| (15) Other.. | 1c(15) |  |  |



## 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 $2 \mathrm{a}, 2 \mathrm{~b}(1)(\mathrm{E}), 2 \mathrm{e}, 2 \mathrm{f}$, and 2 g .

## Income

a Contributions:
(1) Received or receivable in cash from: (A) Employers
(B) Participants
(C) Others (including rollovers)
(2) Noncash contributions
(3) Total contributions. Add lines $\mathbf{2 a}(\mathbf{1})(\mathbf{A}),(B),(C)$, and line $\mathbf{2 a ( 2 )}$

|  | (a) Amount | (b) Total |
| :---: | :---: | :---: |
| 2a(1)(A) | 8,488,784 |  |
| 2a(1)(B) |  |  |
| 2a(1)(C) |  |  |
| 2a(2) |  |  |
| 2a(3) |  | 8,488,784 |
| 2b(1)(A) |  |  |
| 2b(1)(B) |  |  |
| 2b(1)(C) |  |  |
| 2b(1)(D) |  |  |
| 2b(1)(E) |  |  |
| 2b(1)(F) |  |  |
| 2b(1)(G) |  | 0 |
| 2b(2)(A) |  |  |
| 2b(2)(B) |  |  |
| 2b(2)(C) |  |  |
| 2b(2)(D) |  | 0 |
| 2b(3) |  |  |
| 2b(4)(A) |  |  |
| 2b(4)(B) |  |  |
| 2b(4)(C) |  | 0 |
| 2b(5)(A) |  |  |
| 2b(5)(B) |  |  |
| 2b(5)(C) |  | 0 |


| (6) Net investment gain (loss) from common/collective trusts. |  | (a) Amount | (b) Total |
| :---: | :---: | :---: | :---: |
|  | 2b(6) |  | 13,952,150 |
| (7) Net investment gain (loss) from pooled separate accounts | 2b(7) |  |  |
| (8) Net investment gain (loss) from master trust investment accounts. | 2b(8) |  |  |
| (9) Net investment gain (loss) from 103-12 investment entities | 2b(9) |  |  |
| (10) Net investment gain (loss) from registered investment companies (e.g., mutual funds). | 2b(10) |  |  |
| c Other income | 2c |  | -1 |
| d Total income. Add all income amounts in column (b) and enter total. | 2d |  | 22,440,933 |
| Expenses |  |  |  |
| e Benefit payment and payments to provide benefits: |  |  |  |
| (1) Directly to participants or beneficiaries, including direct rollovers. | 2e(1) | 4,589,547 |  |
| (2) To insurance carriers for the provision of benefits. | 2e(2) |  |  |
| (3) Other | 2e(3) |  |  |
| (4) Total benefit payments. Add lines $\mathbf{2 e}(\mathbf{1}$ ) through (3). | 2e(4) |  | 4,589,547 |
| f Corrective distributions (see instructions) | $2 f$ |  |  |
| g Certain deemed distributions of participant loans (see instructions) | 2g |  |  |
| h Interest expense. | 2h |  |  |
| i Administrative expenses: (1) Professional fees. | 2i(1) |  |  |
| (2) Contract administrator fees. | 2i(2) |  |  |
| (3) Investment advisory and management fees. | 2i(3) | 313,038 |  |
| (4) Other | 2i(4) |  |  |
| (5) Total administrative expenses. Add lines $\mathbf{2 i} \mathbf{( 1 )}$ through (4). | 2i(5) |  | 313,038 |
| j Total expenses. Add all expense amounts in column (b) and enter total | 2 j |  | 4,902,585 |
| Net Income and Reconciliation |  |  |  |
| k Net income (loss). Subtract line 2j from line 2d | 2k |  | 17,538,348 |
| I Transfers of assets: |  |  |  |
| (1) To this plan... | 21(1) |  |  |
| (2) From this plan. | 21(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) $\square$ Unqualified
(2) $\square$ Qualified
(3) X Disclaimer
(4) $\square$ Adverse
$\begin{array}{llll}\text { b Did the accountant perform a limited scope audit pursuant to } 29 \text { CFR 2520.103-8 and/or 103-12(d)? } & \text { X } & \text { Yes }\end{array}$ 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) $\square$ This form is filed for a CCT, PSA, or MTIA.
(2) $\square$ 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 $4 \mathrm{a}, 4 \mathrm{e}, 4 \mathrm{f}, 4 \mathrm{~g}, 4 \mathrm{~h}, 4 \mathrm{k}, 4 \mathrm{~m}, 4 \mathrm{n}$, or 5 .
103-12 IEs also do not complete lines 4 j and 4 I. MTIAs also do not complete line 41 .
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.)
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.)

|  | Yes | No | Amount |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| 4a |  | X |  |
|  |  |  |  |
|  |  |  |  |
| 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.)
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.).
e Was this plan covered by a fidelity bond?
f Did the plan have a loss, whether or not reimbursed by the plan's fidelity bond, that was caused by fraud or dishonesty?
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?.
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?
i Did the plan have assets held for investment? (Attach schedule(s) of assets if "Yes" is checked, and see instructions for format requirements.).
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.)
k Were all the plan assets either distributed to participants or beneficiaries, transferred to another plan, or brought under the control of the PBGC?
I Has the plan failed to provide any benefit when due under the plan?.
m If this is an individual account plan, was there a blackout period? (See instructions and 29 CFR 2520.101-3.).
n If 4 m 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. $\qquad$

|  | Yes | No | Amount |
| :---: | :---: | :---: | :---: |
| 4c |  | $X$ |  |
| 4d |  |  | $X$ |
| $\mathbf{4 e}$ | $X$ |  |  |
| $\mathbf{4 f}$ |  | $X$ |  |
| $\mathbf{4 g}$ |  | $X$ |  |
| $\mathbf{4 h}$ |  |  |  |
| $\mathbf{4 i}$ | $X$ |  |  |
|  |  |  |  |
| $\mathbf{4 j}$ | $X$ |  |  |
| $\mathbf{4 k}$ |  | $X$ |  |
| $\mathbf{4 l}$ |  | $X$ |  |
| $\mathbf{4 m}$ |  |  |  |
| $\mathbf{4 n}$ |  |  |  |

5a Has a resolution to terminate the plan been adopted during the plan year or any prior plan year?........ $\square$ Yes X 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.)



## Part V $\quad$ Additional Information for Multiemployer Defined Benefit Pension Plans

13 Enter the following information for each employer that contributed more than $5 \%$ of total contributions to the plan during the plan year (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 $\square$ 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 $\square$ and see instructions regarding required attachment. Otherwise, complete lines $13 e(1)$ and $13 e(2)$.)
(1) Contribution rate (in dollars and cents)
(2) Base unit measure: $\square$ Hourly $\square$ Weekly $\square$ Unit of production $\square$ 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 $\square$ 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 $\square$ 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: $\square$ 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 $\square$ 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 $\square$ and see instructions regarding required attachment. Otherwise, complete lines $13 \mathrm{e}(1)$ and $13 \mathrm{e}(2)$.)
(1) Contribution rate (in dollars and cents)
(2) Base unit measure: $\square$
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 $\square$ 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 $\square$ and see instructions regarding required attachment. Otherwise, complete lines $13 e(1)$ and $13 e(2)$. )
(1) Contribution rate (in dollars and cents)
(2) Base unit measure: $\square$ 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 $\square$ 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 $\square$ and see instructions regarding required attachment. Otherwise, complete lines $13 e(1)$ and $13 e(2)$.)
(1) Contribution rate (in dollars and cents)
(2) Base unit measure: $\square$
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 $\square$ 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 $\square$ and see instructions regarding required attachment. Otherwise, complete lines $13 e(1)$ and $13 e(2)$.)
(1) Contribution rate (in dollars and cents)
(2) Base unit measure: $\square$ Hourly $\square \overline{\text { Weekly } \quad \square}$ Unit of production $\square$ Other (specify):

14 Enter the number of participants on whose behalf no contributions were made by an employer as an employer of the participant for:

| a | The current year. | 14a |
| :---: | :---: | :---: |
| b | The plan year immediately preceding the current plan year | 14b |
| C | The second preceding plan year | 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
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 $\quad$ 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: 38.0\% Investment-Grade Debt: 50.0\% High-Yield Debt: 10.0\% Real Estate: 2.0\% Other: 0.0\%
b Provide the average duration of the combined investment-grade and high-yield debt:
$\square 0-3$ years $\quad \square 3$ years $\quad \square 6-9$ years $\quad \square 9-12$ years $\quad$ X 12-15 years $\quad \square 15-18$ years $\quad \square 18-21$ years $\square 21$ years or more

C What duration measure was used to calculate line 19(b)?
V Effective duration $\quad \square$ Macaulay duration $\quad \square$ Modified duration $\quad \square$ Other (specify):


[^0] combination, offer my best estimate of anticipated experience under the plan.


## Part II Beginning of Year Carryover and Prefunding Balances

| 7 | Balance at beginning of prior year after applicable adjustments (line 13 from prior year) | (a) Carryover balance | (b) Prefunding balance |
| :---: | :---: | :---: | :---: |
|  |  | 0 | 30,548,715 |
| 8 | Portion elected for use to offset prior year's funding requirement (line 35 from prior year) | 0 | 4,085,904 |
| 9 | Amount remaining (line 7 minus line 8) | 0 | 26,462,811 |
| 10 | Interest on line 9 using prior year's actual return of 4.03\% ..... | 0 | 1,066,451 |
| 11 | Prior year's excess contributions to be added to prefunding balance: |  |  |
|  | a Present value of excess contributions (line 38a from prior year). |  | 6,642,082 |
|  | $\mathbf{b}(1)$ Interest on the excess, if any, of line 38a over line 38 b from prior year Schedule SB, using prior year's effective interest rate of 6.02\%.. $\qquad$ |  | 153,882 |
|  | b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return $\qquad$ |  | 164,662 |
|  | C Total available at beginning of current plan year to add to prefunding balance. |  | 6,960,626 |
|  | d Portion of (c) to be added to prefunding balance. |  | 6,960,626 |
| 12 | Other reductions in balances due to elections or deemed elections .......................... | 0 |  |
| 13 | Balance at beginning of current year (line $9+$ line $10+$ line 11d - line 12)........ | 0 | 34,489,888 |

## Part III $\quad$ Funding Percentages

| 14 | Funding target attainment percentage | 14 | 92.47\% |
| :---: | :---: | :---: | :---: |
| 15 | Adjusted funding target attainment percentage. | 15 | 124.57\% |
| 16 | Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement | 16 | 93.82\% |
| 17 | If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage | 17 | \% |

## Part IV Contributions and Liquidity Shortfalls

18 Contributions made to the plan for the plan year by employer(s) and employees:

| (a) Date <br> (MM-DD-YYY) | (b) Amount paid by <br> employer(s) | (c) Amount paid by <br> employees | (a) Date <br> (MM-DD-YYYY) | (b) Amount paid by <br> employer(s) | (c) Amount paid by <br> employees |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $12 / 18 / 2019$ | $7,036,375$ |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

19 Discounted employer contributions - see instructions for small plan with a valuation date after the beginning of the year:

(1) 1 Liquidity shortfall as of end of quarter of this plan year
(1) 1st (2) 2nd $\quad$ (3) 3rd
(4) 4 th

| Part V | Assumptions Used to Determine Funding Target and Target Normal Cost |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 Discount rate: |  |  |  |  |  |  |
| a Segment rates: |  | 1st segment: $3.92 \%$ | 2nd segment: 5.52 \% | 3rd segment:$6.29 \%$ |  | $\square$ N/A, full yield curve used |
| b Applicable month (enter code) |  |  |  |  | 21b | 4 |
| 22 Weighted average retirement age |  |  |  |  | 22 | 65 |
| 23 Mortality table(s) ( |  | s) Prior regulation: |  | X Prescribed - separate $\quad \square$ Substitute |  |  |
| Part VI | Miscellaneous Items |  |  |  |  |  |
| 24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment. $\qquad$ |  |  |  |  |  |  |
| 25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment........................... $\square$ Yes X No |  |  |  |  |  |  |
| 26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. ..................... X (Yes $\square$ No |  |  |  |  |  |  |
| 27 If the plan is subject to alternative funding rules, enter applicable code and see instructions........................................................................................................................................................attachment |  |  |  |  |  |  |
| Part VII | Reconciliation of Unpaid Minimum Required Contributions For Prior Years |  |  |  |  |  |
| 28 Unpaid minimum required contributions for all prior years ...................................................................... |  |  |  |  | 28 | 0 |
| 29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a). |  |  |  |  | 29 | 0 |
| 30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29) |  |  |  |  | 30 | 0 |
| Part VIII | Minimum Required Contribution For Current Year |  |  |  |  |  |
| 31 Target normal cost and excess assets (see instructions): |  |  |  |  |  |  |
| a Target normal cost (line 6). |  |  |  |  | 31a | 4,448,915 |
| b Excess assets, if applicable, but not greater than line 31a |  |  |  |  | 31b | 0 |
| 32 Amortization installments: <br> a Net shortfall amortization installment. <br> b Waiver amortization installment |  |  |  | Outstanding Balance |  | Installment |
|  |  |  |  | 8,087,113 |  | 1,513,242 |
|  |  |  |  |  | 0 | 0 |
| 33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month $\qquad$ Day $\qquad$ Year $\qquad$ ) and the waived amount ............................................ |  |  |  |  | 33 |  |
| 34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a-31b + 32a + 32b-33).... |  |  |  |  | 34 | 5,962,157 |
|  |  |  | Carryover balance | Prefunding balance |  | Total balance |
| 35 Balances elected for use to offset funding requirement |  |  |  | 5,236,388 |  | 5,236,388 |
| 36 Additional cash requirement (line 34 minus line 35). |  |  |  |  | 36 | 725,769 |
| 37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c). |  |  |  |  | 37 | 6,477,158 |
| 38 Present value of excess contributions for current year (see instructions) |  |  |  |  |  |  |
| a Total (excess, if any, of line 37 over line 36) |  |  |  |  | 38a | 5,751,389 |
| b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances ......... |  |  |  |  | 38b | 5,236,388 |
| 39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)........................ |  |  |  |  | 39 | 0 |
| 40 Unpaid minimum required contributions for all years ............................................................................. |  |  |  |  | 40 | 0 |
| Part IX | Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions) |  |  |  |  |  |
| 41 If an election was made to use PRA 2010 funding relief for this plan: |  |  |  |  |  |  |
| a Schedule elected .............................................................................................................................. $\square 2$ plus 7 years $\square 15$ years |  |  |  |  |  |  |
| b Eligible plan year(s) for which the election in line 41a was made .......................................................... |  |  |  |  | . $\square 2008 \square 2009 \square 2010 \square 2011$ |  |



## Statement by Enrolled Actuary


 combination, offer my best estimate of anticipated experience under the plan.

SIGN
HERE
Amy Elizabeth Ayres
Signature of actuary
Amy Elizabeth Ayres, F.S.A., E.A.
Type or print name of actuary
Willis Towers Watson US LLC


Most recent enrollment number

$$
212-309-3662
$$

Telephone number (including area code)
200 Liberty Street

New York NY 10281
Address of the firm
If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions
For Paperwork Reduction Act Notice, see the Instructions for Form 5500 or 5500-SF.
Schedule SB (Form 5500) 2018
v. 171027

## Part II Beginning of Year Carryover and Prefunding Balances



| 19 | Discounted employer contributions - see instructions for small plan with a valuation date after the beginning of the year: |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | a Contributions allocated toward unpaid minimum required contributions from prior years. | 19a |  |  |
|  | b Contributions made to avoid restrictions adjusted to valuation date | 19b |  |  |
|  | c Contributions allocated toward minimum required contribution for current year adjusted to valuation date.................. 19c |  | 6,477,158 |  |
| 20 | Quarterly contributions and liquidity shortfalls: |  |  |  |
|  | a Did the plan have a "funding shortfall" for the prior year? $\qquad$ |  |  | No |
|  | b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ........................................... $X$ X Yes |  |  | No |
|  | C If line 20a is "Yes," see instructions and complete the following table as applicable: |  |  |  |

(1) 1 st
iquidity shortfall as of end of quarter of this plan year
(2) 2nd (3) 3rd
(4) 4 th

## Part V $\quad$ Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

| a Segment rates: | 1st segment: $3.92 \%$ | 2nd segment: $5.52 \%$ | 3rd segment:$6.29 \%$ |  | $\square \mathrm{N} / \mathrm{A}$, full yield curve used |
| :---: | :---: | :---: | :---: | :---: | :---: |
| b Applicable month (enter code)..................................................................................................... |  |  |  | 21b | 4 |
| Weighted average retirement age ...................................................................................................... |  |  |  | 22 | 65 |
| Mortality table(s) (see instructions) | Prior regulation: | Prescribed - combined X Prescribed - separate |  |  | $\square$ Substitute |
|  | Current regulation: | Prescribed - combined | $\square$ Prescribed | sepa | $\square$ Substitute |

## Part VI Miscellaneous Items



## Part VIII $\quad$ Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

| a Target normal cost (line 6)..................... |  | 31a | 4,448,915 |
| :---: | :---: | :---: | :---: |
| b Excess assets, if applicable, but not greater than line 31a |  | 31b | 0 |
| Amortization installments: <br> a Net shortfall amortization installment. $\qquad$ <br> b Waiver amortization installment $\qquad$ | Outstanding Balance |  | Installment |
|  | 8,087 | , 113 | 1,513,242 |
|  |  | 0 | 0 |



38 Present value of excess contributions for current year (see instructions)

| a Total (excess, if any, of line 37 over line 36) ........................................................................................... | 38a | 5,751,389 |
| :---: | :---: | :---: |
| b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances ......... | 38b | 5,236,388 |
| Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)....................... | 39 | 0 |
| Unpaid minimum required contributions for all years ............................................................................. | 40 | 0 |

## Part IX $\quad$ Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:
a Schedule elected
b Eligible plan year(s) for which the election in line 41a was made ...................................................................... $\square 2008 \square 2009 \square 2010 \square 2011$

# Schedule SB - Statement by Enrolled Actuary 

| Plan Sponsor | Columbia University |
| :--- | :--- |
| EIN/PN | $13-5598093$ / 005 |
| Plan Name | Columbia University Retirement Plan - Local 241, Transport Workers Union <br> of America |
| Valuation Date | July 1, 2018 |
| Enrolled Actuary | Amy Elizabeth Ayres, FSA, EA |
| Enrollment Number | $17-06594$ |

The actuarial assumptions that are not mandated by IRC § 430 and regulations, represent the enrolled actuary's best estimate of anticipated experience under the plan, subject to the following conditions:

The actuarial valuation, on which the information in this Schedule SB is based, has been prepared in reliance upon the employee and financial data furnished by the plan administrator and the trustee. The enrolled actuary has not made a rigorous check of the accuracy of this information but has accepted it after reviewing it and concluding it is reasonable in relation to similar information furnished in previous years. The amounts of contributions and dates paid shown in Item 18 of Schedule SB were listed in reliance on information provided by the plan administrator and/or trustee.

## Schedule SB, Line 22 <br> Description of Weighted Average Retirement Age as of July 1, 2018

The weighted average retirement age of 65 is calculated assuming a sample population of 1,000 lives currently age 55. It is weighted based on the expected number of retirements at each age. The steps of the calculation are summarized below:


Plan Name: Columbia University Retirement Plan - Local 241, Transport Workers Union of America
EIN / PN:
Plan Sponsor:
13-5598093 / 005
Columbia University
Valuation Date July 1,2018

SCHEDULE SB ATTACHMENTS

$\begin{array}{r}454,800 \\ 648,769 \\ 290,182 \\ 119,491 \\ 1,513,242 \\ \hline\end{array}$
Schedule of Amortization Bases
as of July 1, 2018


## Schedule SB, Part V <br> Statement of Actuarial Assumptions/Methods

## Actuarial Assumptions and Methods - Contributions

## Economic Assumptions

Interest rate basis:

| -Applicable month | March 2018 <br> Segment rates |  |
| :--- | ---: | ---: |
| - Interest rate basis |  | Yes |
| - MAP-21 applied for funding |  | Yes |
| - MAP-21 applied for benefit |  |  |
| restrictions |  | Not Reflecting Corridors |
| Interest rates: | Reflecting Corridors | $1.89 \%$ |
| - First segment rate | $3.92 \%$ | $3.66 \%$ |
| - Second segment rate | $5.52 \%$ | $4.46 \%$ |
| - Third segment rate | $6.29 \%$ | $4.05 \%$ |
| - Effective interest rate | $5.82 \%$ |  |

## Annual rates of increase:

- Compensation $\quad 3.25 \%$ *
- Future Social Security wage N/A bases
- Statutory limits on compensation
* The salary scale assumption reflects near-term rates of compensation increase reflecting collective bargaining agreements between Columbia University and the TWU union. The near-term compensation increase in the TWU collective bargaining agreement is $3.00 \%$ as of April 2018, and April 2019. The long-term rate of compensation increase effective for years after the end of the current bargaining agreement is $3.25 \%$.
Demographic Assumptions - Contributions

Inclusion date

New or rehired
employees

## Mortality

- Disabled Separate rates for non-annuitants (based on RP-2000 "Employees" table without collar or amount adjustments, projected to 2033 using Scale AA) and

| Plan Name: | Columbia University Retirement Plan - Local 241, Transport Workers Union of |
| :--- | :--- |
|  | America |
| EIN / PN: | 13-5598093 / 005 |
| Plan Sponsor: | Columbia University |
| Valuation Date | July 1,2018 |

annuitants (based on RP-2000 "Healthy Annuitants" table without collar or amount adjustments, projected to 2025 using Scale AA)

## Termination

Rates varying by age and service
Representative Termination Rates

| Percentage leaving during the year |  |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Age | $<1$ | $1-2$ | $2-3$ | $3-4$ | $4-5$ | $\geq 5$ |
| 20 | $0.0 \%$ | $10.0 \%$ | $10.0 \%$ | $10.0 \%$ | $5.0 \%$ | $5.0 \%$ |
| 25 | $0.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ |
| 30 | $0.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ | $4.0 \%$ | $4.0 \%$ |
| 35 | $0.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ | $6.0 \%$ | $6.0 \%$ |
| 40 | $0.0 \%$ | $5.0 \%$ | $5.0 \%$ | $5.0 \%$ | $4.0 \%$ | $3.0 \%$ |
| 45 | $0.0 \%$ | $10.0 \%$ | $10.0 \%$ | $10.0 \%$ | $5.0 \%$ | $3.0 \%$ |
| 50 | $0.0 \%$ | $5.0 \%$ | $10.0 \%$ | $4.0 \%$ | $4.0 \%$ | $2.0 \%$ |
| 55 | $0.0 \%$ | $5.0 \%$ | $10.0 \%$ | $4.0 \%$ | $4.0 \%$ | $2.0 \%$ |
| 60 | $0.0 \%$ | $5.0 \%$ | $10.0 \%$ | $4.0 \%$ | $4.0 \%$ | $2.0 \%$ |
| 65 | $0.0 \%$ | $5.0 \%$ | $10.0 \%$ | $4.0 \%$ | $4.0 \%$ | $2.0 \%$ |

Plan Name: $\quad$ Columbia University Retirement Plan - Local 241, Transport Workers Union of America

EIN / PN:
Plan Sponsor:
Valuation Date

13-5598093 / 005
Columbia University
July 1, 2018

| Disability | Representative Disability Rates <br>  <br> The rates at which participants become disabled by age are shown below: |
| :--- | :--- | :--- |
|  |  |
| Percen |  |
| Age | Rate |
| 25 | $.03 \%$ |
| 30 | $.03 \%$ |
| 35 | $.03 \%$ |
| 40 | $.04 \%$ |
| 45 | $.08 \%$ |
| 50 | $.21 \%$ |
| 55 | $.45 \%$ |
| 60 | $1.01 \%$ |
| 65 | $0.00 \%$ |

Plan Name: Columbia University Retirement Plan - Local 241, Transport Workers Union of America

EIN / PN:
Plan Sponsor: Valuation Date

13-5598093 / 005
Columbia University
July 1, 2018

## Demographic Assumptions - Contributions



## Benefit

 commencement date:- Preretirement death benefit

The later of the death of the active participant or the date the participant would have attained age 55

- Deferred vested benefit
- Disability benefit
- Retirement benefit

The later of age 65 or termination of employment
Upon disablement
Upon termination of employment

EIN / PN:
Plan Sponsor:
Valuation Date

13-5598093 / 005
Columbia University
July 1, 2018

## Demographic Assumptions - Contributions

| Form of payment | 100\% of assumed married participants are assumed to elect a joint and survivor annuity with the spouse as the contingent annuitant and $50 \%$ continuation. $100 \%$ of assumed single participants are assumed to elect a life annuity. |
| :---: | :---: |
| Percent married | $70 \%$ of males; $50 \%$ of females. Used to value pre-retirement surviving spouse benefits and in determining the optional forms expected to be elected at commencement. |
| Spouse age | Wife three years younger than husband |
| Covered pay | Base rate of pay on the valuation date |
| Administrative and investment expenses | \$0; the plan sponsor pays administrative expenses directly |
| Methods |  |
| Valuation date | First day of plan year |
| Funding target | Present value of accrued benefits |
| Target normal cost | Present value of benefits expected to accrue during plan year plus planrelated expenses expected to be paid from plan assets during plan year |
| Actuarial value of assets | Average of the fair market value of assets on the valuation date and the two immediately preceding valuation dates, adjusted for contributions, benefits, administrative expenses and expected earnings (with such expected earnings limited as described in IRS Notice 2009-22). The average asset value must be within $10 \%$ of market value, including discounted contributions receivable (discounted using the effective interest rate for the 2017 plan year). |
|  | The method of computing the actuarial value of assets complies with rules governing the calculation of such values under the Pension Protection Act of 2006 (PPA). These rules produce smoothed values that reflect the underlying market value of plan assets but fluctuate less than the market value. As a result, the actuarial value of assets will be lower than the market value in some years and greater in other years. However, over the long term under PPA's smoothing rules, the method has a significant bias to produce an actuarial value of assets that is below the market value of assets. |
| Benefits not valued | All benefits described in the Plan Provisions section of this report were valued. Willis Towers Watson has reviewed the plan provisions with Columbia University and, based on that review, is not aware of any significant benefits required to be valued that were not. |
| Assumptions Rationale - Significant Economic Assumptions for Contributions |  |
| Discount rate | The basis chosen was selected by the plan sponsor from among the choices prescribed by law, all of which are based on observed market data over certain periods of time. |


| Plan Name: | Columbia University Retirement Plan - Local 241, Transport Workers Union of |
| :--- | :--- |
| America |  |
| EIN / PN: | $13-5598093$ / 005 |
| Plan Sponsor: | Columbia University |
| Valuation Date | July 1,2018 |

## Rates of increase in:

- Compensation Assumed compensation increases are based on plan sponsor expectations and collective bargaining agreements for near-term years and the effect that the assumed long-term CPI and NAW will have on compensation increases over the longer term.

The resulting salary increase assumption is select and ultimate.

## Assumptions Rationale - Significant Demographic Assumptions

Healthy Mortality Assumptions used for funding purposes are as prescribed by IRC $\S 430(\mathrm{~h})$.
Disabled Mortality Assumptions used for funding purposes are as prescribed by IRC §430(h).
Termination Termination rates were based on an experience study conducted in 2015, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.

Retirement Retirement rates were based on an experience study conducted in 2015, with annual consideration of whether any conditions have changed that would be expected to produce different results in the future.

## Benefit <br> commencement date <br> for deferred benefits:

- Deferred vested Deferred vested participants' assumed commencement age is a single age benefit intended to capture the average age at commencement. Deferred vested early commencement factors are not subsidized so that the difference between this approach and using assumed commencement rates at multiple ages is not expected to be significant.


## Source of Prescribed Methods

Funding methods The methods used for funding purposes as described in Appendix A, including the method of determining plan assets, are "prescribed methods set by law", as defined in the actuarial standards of practice (ASOPs). These methods are required by IRC $\S 430$, or were selected by the plan sponsor from a range of methods permitted by IRC $\S 430$.

## Change in assumptions and methods

Change in assumptions since prior valuation

The segment interest rates used to calculate the funding target and target normal cost were updated from an applicable month of March 2017 to March 2018 and were adjusted by applying the corridors of MAP-21 as amended by HATFA.

The mortality table for contribution purposes was updated to include one additional year of projected mortality improvements.

Change in methods There have been no changes in methods since the prior valuation. since prior valuation

Plan Name: Columbia University Retirement Plan - Local 241, Transport Workers Union of America
EIN / PN:
Plan Sponsor:
13-5598093 / 005
Columbia University
Valuation Date July 1,2018

## Sources of Data and Other Information

Columbia University furnished participant data as of June 30, 2018. Columbia University also supplied information on assets, contributions and plan provisions. Data and other information were reviewed for reasonableness and consistency, but no audit was performed. Based on discussions with the plan sponsor, assumptions or estimates were made when data were not available. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

Plan Name: Columbia University Retirement Plan - Local 241, Transport Workers Union of America

EIN / PN:
Plan Sponsor:
Valuation Date

13-5598093 / 005
Columbia University
July 1, 2018

## Schedule SB, Part V <br> Summary of Plan Provisions

## Plan Provisions

The most recent amendment reflected in the following plan provisions was adopted and effective July 1, 2017.

| Plan status | Open with continued accruals |
| :---: | :---: |
| Covered Employees | Any employee whose terms of employment are the subject of collective bargaining between Columbia University and Local 241 of the Transport Workers Union of America, AFL-CIO. |
| Participation Date | The first day a covered employee is regularly scheduled to work 12 months per year and at least 20 hours per week. |
| Definitions |  |
| Vesting service | One year for each 1,000-hour calendar year of employment by Columbia University |
| Pension service | Years and months of service as a covered employee |
| Pensionable pay | Aggregate compensation, excluding overtime |
| Average earnings | The average of the highest five consecutive calendar years of pensionable pay during the five-year period ending on the earlier of the participant's termination date or retirement date |
| Normal retirement date (NRD) | First of month coinciding with or next following the attainment of age 65 with five years of pension service. In the case of an employee who was hired prior to July 1, 1988, first of month coinciding with or next following the attainment of age 65. |
| Monthly pension benefit | One-twelfth of $2.00 \%$ of pensionable pay for each year of pension service up to ten years, plus one-twelfth of $2.20 \%$ of pensionable pay for each year of pension service in excess of ten years up to 30 years, plus one-twelfth of $2.30 \%$ of pensionable pay for each year of pension service in excess of 30 years, not less than one-twelfth of $1.20 \%$ of average earnings times years of pension service. |
| Monthly preretirement death benefit | $50 \%$ of the monthly pension benefit as of the date of death, reduced for the $50 \%$ joint and survivor election and reduced for payment as early as the participant's 55th birthday |
| Eligibility for Benefits |  |
| Normal retirement | Retirement on NRD |
| Early retirement | Retirement before NRD and on or after both attaining age 55 and completing five years of vesting service |
| Postponed retirement | Retirement after NRD |
| Vested termination | Termination for reasons other than death or retirement after completing five years of vesting service |
| Plan Name: $\quad$ Colum | Columbia University Retirement Plan - Local 241, Transport Workers Union of America |
| EIN / PN: 13-559 | 13-5598093 / 005 |
| Plan Sponsor: Colum | Columbia University |
| Valuation Date July 1, | July 1, 2018 |


| Disability | Permanent and total disability prior to NRD and on or after completing five years of vesting service |
| :---: | :---: |
| Preretirement death benefit | Death while eligible for normal, early, postponed, or deferred vested retirement benefits, with a surviving spouse |
| Benefits Paid Upon the Following Events |  |
| Normal retirement | Monthly pension benefit determined as of NRD |
| Early retirement | Monthly pension benefit determined as of early retirement date, reduced $5.0 \%$ for each year of payment before the participant's NRD. There is no reduction for retirement on or after attaining age 62 and completing 20 years of pension service. |
| Postponed retiremen | Monthly pension benefit determined as of actual retirement date |
| Vested termination | Monthly pension benefit determined as of termination date, reduced $5.0 \%$ for each year that payment precedes the participant's NRD |
| Disablement | Monthly pension benefit determined as of the date of disablement, payable immediately without reduction for early commencement |
| Preretirement death | Monthly preretirement death benefit is reduced by $5.0 \%$ for each year that payment precedes the participant's NRD; the benefit is unreduced if the participant died at age 62 or later with at least 20 years of pension service. |
| Other Plan Provisions |  |
| Forms of payment | Preretirement death benefits are payable only as described above. Monthly pension benefits are paid as described above as a life annuity, if the participant has no spouse as of the date payments begin, or if the participant so elects. Otherwise, benefits are paid in the form of $50 \%$ joint and survivor annuity option or, if the participant elects and the spouse consents, another actuarially equivalent optional form offered by the plan. Optional forms are a $100 \%$ joint and survivor annuity, a $75 \%$ joint and survivor annuity, an elective lump sum under $\$ 20,000$, or (for married participants) a life annuity. Actuarial equivalence is based on: <br> - For lump sums paid during the plan year: <br> Prescribed 417(e) mortality table and the interest rate from March prior to the start of the plan year equal to the adjusted first, second and third segment rates as computed under Section 430(h)(2) of the Code, but determined without regard to yield curve rates for the preceding 23 months blended with the applicable rate of 417(e)(3)(A)(ii)(II) of the Code. <br> - For optional payment form conversion: <br> 1965 Group Annuity mortality table, using female rates for all participants and male rates for all beneficiaries and a $6.00 \%$ interest rate |
| Pension Increases | None |
| Plan Name: $\quad$ Co | Columbia University Retirement Plan - Local 241, Transport Workers Union of America |
| EIN / PN: 13 | 13-5598093 / 005 |
| Plan Sponsor: Colu | Columbia UniversityJuly 1, 2018 |
| Valuation Date Jul |  |


#### Abstract

Plan participants' None contributions

Maximum on benefits and All benefits and pay for any calendar year may not exceed the pay maximum limitations for that year as defined in the Internal Revenue Code. The plan provides for increasing the dollar limits automatically as such changes become effective. Increases in the dollar limits are assumed for determining pension cost but not for determining contributions.

\section*{Future Plan Changes}


No future plan changes were recognized in determining pension cost or in determining minimum contributions. Willis Towers Watson is not aware of any future plan changes which are required to be reflected.

## Changes in Benefits Valued Since Prior Year

There have been no changes in benefits valued since the prior year other than increases in statutory pay and benefit limits.

Plan Name: Columbia University Retirement Plan - Local 241, Transport Workers Union of America

EIN / PN:
Plan Sponsor:
Valuation Date

13-5598093 / 005
Columbia University
July 1, 2018

| Plan Name | COLUMBIA UNIVERSITY RETIREMENT PLAN - LOCAL 241, <br> TRANSPORT WORKERS UNION OF AMERICA |
| :--- | :--- |
| Plan Sponsor EIN | $13-5598093$ |
| ERISA Plan \# | 005 |
| Plan Year Ending | $06 / 30 / 2019$ |

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 <br> 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 <br> Within Year) |  |
| 5500 Sch. H | Line 4j | Schedule of Reportable Transactions | X |
| 5500 Sch. H | Line 4a | Schedule of Delinquent Participant <br> Contributions |  |


| Plan Name | COLUMBIA UNIVERSITY RETIREMENT PLAN - LOCAL 241, <br> TRANSPORT WORKERS UNION OF AMERICA |
| :--- | :--- |
| Plan Sponsor EIN | $13-5598093$ |
| ERISA Plan \# | 005 |
| Plan Year Ending | $06 / 30 / 2019$ |

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 |
| :---: | :---: | :---: | :---: |
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| 5500 Sch. H | Line 4i | Schedule of Assets (Acquired and Disposed of <br> Within Year) |  |
| 5500 Sch. H | Line 4j | Schedule of Reportable Transactions | X |
| 5500 Sch. H | Line 4a | Schedule of Delinquent Participant <br> Contributions |  |

# Columbia University Retirement Plan - Local 241, Transport Workers Union of America 

 Financial Statements and Supplemental Schedules June 30, 2019 and 2018
## Columbia University Retirement Plan - Local 241, Transport Workers Union of America Index

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* Other schedules required by 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 are not included because they are not applicable.


## Report of Independent Auditors

To the Administrator of
Columbia University Retirement Plan - Local 241, Transport Workers Union of America

## Report on the Financial Statements

We were engaged to audit the accompanying financial statements of Columbia University Retirement Plan - Local 241, Transport Workers Union of America (the "Plan"), which comprise the statements of net assets available for benefits and of accumulated plan benefits as of June 30, 2019 and 2018, and the related statements of changes in net assets available for benefits and of changes in accumulated plan benefits for the year ended June 30, 2019, and the related notes to the financial statements.

## Management's Responsibilityfor 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; this includes 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.

## Auditors' Responsibility

Our responsibility is to express an opinion on the financial statements based on conducting the audit in accordance with auditing standards generally accepted in the United States of America. Because of the matter described in the Basis for Disclaimer of Opinion paragraph, however, we were not able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion.

## Basisfor Disclaimer of Opinion

As permitted by 29 CFR 2520.103-8 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974, the plan administrator instructed us not to perform, and we did not perform, any auditing procedures with respect to the information summarized in Note 5, which was certified by State Street Global Advisors Trust Company, the trustee of the Plan, except for comparing such information with the related information included in the financial statements. We have been informed by the plan administrator that the trustee holds the Plan's investment assets and executes investment transactions. The plan administrator has obtained a
certification from the trustee as of June 30, 2019 and 2018 and for the year ended June 30, 2019 that the information provided to the plan administrator by the trustee is complete and accurate.

## Disclaimer of Opinion

Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we have not been able to obtain sufficient appropriate audit evidence to provide a basis for an audit opinion. Accordingly, we do not express an opinion on the financial statements.

## Other Matter

The supplemental schedule of Schedule H, line 4 i - Schedule of Assets (Held at End of Year) at June 30, 2019 and of Schedule H, line 4j - Schedule of Reportable Transactions for the year ended June 30, 2019 are required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 and are presented for the purpose of additional analysis and are not a required part of the financial statements. Because of the significance of the matter described in the Basis for Disclaimer of Opinion paragraph, we do not express an opinion on these supplemental schedules.

## Report on Form and Content in Compliance with DOL Rules and Regulations

The form and content of the information included in the financial statements and supplemental schedules, other than that derived from the information certified by the trustee, have been audited by us in accordance with auditing standards generally accepted in the United States of America and, in our opinion, are presented in compliance with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974.


New York, New York
April 30, 2020
20192018

## Assets

Investments, at fair value
Common collective trust funds
Total assets

| $\frac{\$ 142,613,714}{142,613,714}$ |  | $\$ 125,057,443$ |
| ---: | :--- | :--- |

Liabilities
Amount payable to Columbia University

| 388,755 | 375,855 |
| :---: | :---: |
| 100,792 | 95,769 |
| 489,547 | 471,624 |
| \$ 142,124,167 | \$ 124,585,819 |


|  |  | 2019 |
| :---: | :---: | :---: |
| Additions to net assets attributed to |  |  |
| Net appreciation in the fair value of common collective trusts | \$ | 13,952,149 |
| Employer contributions |  | 8,488,784 |
| Total additions |  | 22,440,933 |
| Deductions from net assets attributed to |  |  |
| Benefits paid to participants |  | 4,589,547 |
| Administrative expenses |  | 313,037 |
| Total deductions |  | 4,902,585 |
| Net increase in net assets available for benefits |  | 17,538,348 |
| Net assets available for benefits |  |  |
| Beginning of year |  | 124,585,819 |
| End of year | \$ | 142,124,167 |

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

## Columbia University Retirement Plan - Local 241, Transport Workers

 Union of America
## Statements of Accumulated Plan Benefits

June 30, 2019 and 2018

|  | 2019 | 2018 |
| :---: | :---: | :---: |
| Actuarial present value of accumulated plan benefits |  |  |
| Vested benefits |  |  |
| Participants currently receiving payments | \$ 55,267,097 | \$ 51,472,616 |
| Other participants | 96,641,663 | 82,073,074 |
|  | 151,908,760 | 133,545,690 |
| Nonvested benefits | 6,876,193 | 5,660,226 |
| Total actuarial present value of accumulated plan benefits | \$ 158,784,953 | \$ 139,205,916 |

# Columbia University Retirement Plan - Local 241, Transport Workers Union of America <br> Statement of Changes in Accumulated Plan Benefits <br> Year Ended June 30, 2019 

|  | 2019 |
| :---: | :---: |
| Actuarial present value of accumulated plan benefits at beginning of year | \$ 139,205,916 |
| Increase (decrease) during the year attributable to |  |
| Additional benefits accumulated | 6,675,061 |
| Experience loss (gain) | 726,618 |
| Interest due to the decrease in the discount period | 6,103,700 |
| Benefits paid | $(4,589,547)$ |
| Assumption changes | 10,663,205 |
| Net increase | 19,579,037 |
| Actuarial present value of accumulated plan benefits at end of year | \$ 158,784,953 |

## 1. Plan Description

The following description of the Columbia University Retirement Plan - Local 241, Transport Workers Union of America (the "Plan") is provided for general information purposes only. Participants should refer to the plan document for more complete information.

## General

The Columbia University Retirement Plan - Local 241, Transport Workers Union of America was established to provide retirement, disability and death benefits for all employees of Columbia University in the City of New York (the "University") whose terms of employment are subject to the collective bargaining agreement between the University and Local 241 of the Transport Workers Union of America, AFL-CIO. The Plan is noncontributory on the part of employees. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974, ("ERISA").

Only employees who have completed the earlier of one year of service and at least 20 hours per week or 1,000 hours over one year of service are eligible to participate in the Plan.

As required by ERISA, the Trustees of the University Retirement Trust (all of whom are officers of the University) established on July 1, 1972 to be effective as of July 1976, the Columbia University Retirement Plan for Members of Local 241, of the Transport Workers Union of America Trust Fund (the "Fund") to hold the assets of the Plan. With respect to services rendered on or after July 1, 1976, the Plan is a defined benefit plan to which the University contributes such amounts as are necessary to fund the Plan on an actuarial basis. The defined benefits of the Plan are insured by the Pension Benefit Guaranty Corporation ("PBGC"), a United States Government agency, at the level of which would be in effect at the date of the Plan's termination if a termination should occur.

## Vesting

A participant becomes fully vested upon the earlier of (i) his/her completion of five (5) years of service, or (ii) the date the participant attains age 65.

## Pension and Disability Benefits

A participant who retires on or after age 65 and is vested or age 62 with at least 20 years of service is entitled to receive an unreduced normal retirement benefit. A participant whose right to retirement benefits is vested and who ceases his/her employment with the University prior to his/her normal retirement date is entitled to receive retirement benefits on retirement provided he/she is age 55 or over, at a lower amount. A participant whose right to retirement benefits is vested is entitled to receive retirement benefits as a result of any disability which causes the termination of his/her status as an employee of the University prior to his/her normal retirement date.

A participant's pension is calculated on whichever of the following formulas provides the greatest benefit to a participant:
a. The career formula - changed effective July 1, 2008 to $2 \%$ of the participant's compensation for the first 10 years plus $2.2 \%$ of compensation for the next 20 years plus $2.3 \%$ for each year of credited service over 30 years. For employees who terminated prior to July 1, 2008, 2\% of compensation was applied to all years of service; or
b. The final pay formula $-1.2 \%$ of the participant's base earnings for the last five years' employment at the University multiplied by the total number of years of benefit service with the University.

Benefits are paid to participants in the form of various monthly annuities or lump sum distributions depending on the retiree participant election.

## Death Benefits

If a participant dies before vested benefits under the Plan have begun, his or her designated beneficiary is eligible for a benefit generally calculated as though the participant had begun a $50 \%$ joint and survivor annuity as of the first of the month of the later of the participant's death or $55^{\text {th }}$ birthday. Generally, if the designated beneficiary is the surviving spouse the benefit will begin as of such date (though generally not before the participant's normal retirement age without the surviving spouse's consent). Otherwise, the benefit will begin as of December 31 of the calendar year after the calendar year of the Participant's death. If the participant dies after his benefits have begun, the form of benefit elected by the participant will determine the death benefit, if any.

## Plan 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 Columbia University.

## Contributions

Contributions from the University are reflected on the basis of actuarially computed amounts comprising normal costs plus a portion of unfunded costs, if any, required to be amortized over seven years. It is the University's policy to make contributions to meet the minimum funding requirements required by ERISA and from time to time to make such contributions which may be deemed prudent and cost effective in relation to regulations of any other government agencies such as the PBGC, Internal Revenue Service (IRS) or Department of Labor (DOL). For financial statement purposes, the Plan recognizes contributions required to fulfill the ERISA minimum funding requirement in the current plan year whether or not received prior to the end of the plan year, contributions in excess of the ERISA minimum funding requirements are recognized in the plan year in which the contribution is made. For purposes of determining the minimum funding requirements required by ERISA, the Plan may elect to attribute any or all excess contributions received within eight and one half months following the end of the plan year to the preceding plan year as allowed under IRS regulations for Schedule SB of Form 5500. The University's contribution exceeded the ERISA minimum funding requirements of zero for the 2019 plan year.

## Investments

Plan investments are managed under the terms of agreement between the University and State Street Global Advisors Trust Company, ("State Street"). State Street holds the Plan’s investment assets and serves as the trustee of the State Street commingled trust funds, the Plan's investment assets.

## 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.

## Investment Valuation and Income Recognition

Investments are reported at fair value. The Trustees of the University Retirement Trust determine the Plan's valuation policies utilizing information provided by the investment advisors and trustee. 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 4 for discussion of fair value measurements.

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.

## Actuarial Method

The actuarial method used to calculate the annual defined benefit pension contributions is the present value of accrued benefits method. The projected unit cost method is used for determining the projected benefit obligation.

## Benefits to Participants

Plan benefits are paid to employees upon retirement, disability and certain terminations of employment. Benefits to participants are recorded when paid. Actual benefits to participants are paid by the University on behalf of the Plan. The Plan reimburses the University for such defined benefits paid.

## Administrative Expenses

Investment, PBGC premiums and actuarial expenses are paid by the Plan. Administrative expenses paid by the University (primarily production/mailing costs) are not reflected in the Plan's financial statements.

## Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, disclosure of contingent assets and liabilities, and the actuarial present value of accumulated plan benefits and changes therein at the dates of the financial statements. Actual results could differ from those estimates.

# Columbia University Retirement Plan - Local 241, Transport Workers 

 Union of America
## Notes to Financial Statements

June 30, 2019 and 2018

## Risk and Uncertainties

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, 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 the amounts reported in the statement of net assets available for benefits.

Plan contributions are made, and the actuarial present value of accumulated plan benefits are reported based on certain assumptions pertaining to interest rates, inflation rates and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimates and assumptions process, it is at least reasonably possible that changes in these estimates and assumptions in the near-term would-be material to the financial statements.

## New Authoritative Pronouncements

In August 2018, the Financial Accounting Standards Board issued Accounting Standards Update (ASU) 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework- Changes to the Disclosure Requirements for Fair Value Measurement. The ASU modifies public and nonpublic company fair value disclosure requirements. For nonpublic companies, the new standard removes or modifies certain disclosure requirements, including; (1) removes the requirement to disclose transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers, the valuation processes for Level 3 fair value measurements, and changes in unrealized gains and losses included in income for recurring Level 3 investments, and (2) modifies disclosure of timing of liquidation of investee funds, measurement uncertainty and the Level 3 roll-forward. The ASU is effective for fiscal years beginning on or after December 15, 2019, with early adoption permitted. The Plan is evaluating the impact of the new standard on the disclosures in the Plan financial statements.

## 3. Actuarial Present Value of Accumulated Plan Benefits

Accumulated plan benefits are those future periodic payments, including lump-sum distribution that are attributable under the Plan's provisions to the service that employees have rendered. Accumulated plan benefits include benefits expected to be paid to (a) retired or terminated employees or their beneficiaries, (b) beneficiaries of employees who have died, and (c) present employees or their beneficiaries. Benefits payable under all circumstances (retirement, death, disability, and termination of employment) are included, to the extent they are deemed attributable to employee service rendered to the valuation date.

The actuarial present value of accumulated plan benefits is determined by an independent actuarial firm. The actuarial present value of accumulated plan benefits is the amount that results from applying actuarial assumptions to adjust the future periodic payments attributable to service that employees have rendered to reflect the time value of money and probability of payment between the valuation date and the expected date of payment. Vested benefits are those that are not contingent on an employee's future service.

## Notes to Financial Statements

June 30, 2019 and 2018

The significant assumptions underlying the computations of the actuarial present value of accumulated plan benefits at June 30, 2019 and 2018 were as follows:

Discount rate
Mortality basis
3.75\% for 2019 and $4.25 \%$ for 2018

For 2019, Pri-2012 "Health Annuitant" and "Employee" mortality tables with MP-2019 generational mortality improvement. For 2018, RP-2014 "Healthy Annuitant" and "Employee" mortality tables adjusted to 2006 by removing improvement based on MP-2014, replaced with MP-2018 generational mortality improvement.

Significant assumption changes that impacted the present value of accumulated plan benefits as of June 30, 2019 was a decrease in the discount rate which increased the present value of accumulated plan benefits and was partially offset by updated mortality tables, which decreased the present value of accumulated plan benefits.

The foregoing actuarial assumptions are based on the presumption that the Plan will continue. Were the Plan to terminate, different actuarial assumptions and other factors might be applicable in determining the actuarial present value of accumulated plan benefits.

## 4. Fair Value Measurements

ASC 820 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.

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.


#### Abstract

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. 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. Investments for which fair value is measured using net asset values as a practical expedient are excluded from the hierarchy and have been reported separately within the table below. 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 Plan holds investments for which fair value is determined by using the unadjusted net asset value per share (NAV) as provided by the fund as a practical expedient. Investments categorized as NAV include the Plan's investment in common collective trusts. The value of the Plan's investments in these trusts represents the Plan's ownership interest in the net asset value of the respective trusts. Items classified as NAV do not have a quoted price in an active market place. As a practical expedient, the Plan is permitted under GAAP to estimate the fair value of an investment at the measurement date using the NAV reported by the fund without further adjustment, provided the NAV has been calculated in accordance with or in a manner consistent with GAAP, and provided further that the Plan does not expect to sell the investment at a value other than NAV.

The following presents investments of the Plan as of June 30, 2019 and 2018, respectively, by caption and by level within the valuation hierarchy:

|  | 2019 |  | Total |
| :---: | :---: | :---: | :---: | :---: |

Assets
Investments
Common collective trust funds Index funds
Investments, at fair value

| $\$$ | - | - | $\$$ | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\$$ | - | - | $\frac{\$ 142,613,714}{\$}$ | $\frac{\$ 142,613,714}{\$ 142,613,714}$ |


| 2018 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Level 1 | Level 2 | Level 3 | NAV | Total |

Assets
Investments
Common collective trust funds Index funds $\$ \quad-\quad \$ \quad-\quad \$ \quad-\quad \$ 125,057,443 \quad \$ 125,057,443$

Investments, at fair value

| $\$$ | - |
| :--- | :--- | :--- | :--- |
| $\$$ | - |

# Columbia University Retirement Plan - Local 241, Transport Workers 

 Union of America
## Notes to Financial Statements

June 30, 2019 and 2018

Common collective trust funds represent a pool of assets that are combined under a common investment strategy and are jointly managed by the same entity, in this case, State Street. These are index funds and are valued at NAV. The Plan is eligible to redeem its interests daily. The common collective trust funds do not, as practical expedient, have any redemption restrictions, and these funds have trading terms varying from one to four days.

## 5. Information Certified by the Trustee

The Plan's management requested that a limited scope audit be performed for the Plan's assets held by State Street. State Street serving as the trustee of the Plan's investment assets has certified that the amounts reflected for investment balances, interest and dividends, net appreciation 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 4, and supplemental schedules are complete and accurate.

## 6. Plan Termination

The Plan 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:
a. The Plan shall have no liability or obligation to make any contribution or other payment with respect to any past or future period, except in such manner and amounts as may be specifically provided by ERISA;
b. The Plan provides that the net assets of the Plan shall be allocated among the participants and beneficiaries of the Plan in the order provided for in ERISA; and
c. To the extent unfunded vested benefits exist, ERISA provides that such benefits are payable by the PBGC to participants, up to specified limitations, as described in ERISA.

In the event of termination of the Plan, the assets of the Plan shall be allocated to provide benefits for participants and their beneficiaries in accordance with the priorities set forth in Section 4044 of ERISA and the Pension Benefit Guaranty Corporation's regulations thereunder. The benefit of any Highly Compensated Active Employee or Highly Compensated Former Employee (both within the meaning of section $414(\mathrm{q})$ of the Internal Revenue Code and the Treasury Regulations promulgated thereunder) will be limited to a benefit that is nondiscriminatory under section 401(a)(4) of the Internal Revenue Code, and without limiting the generality of the foregoing if the Secretary of the Treasury (or his delegate) determines that any allocation made pursuant to this section (without regard to this sentence) results in discrimination prohibited by section 401(a)(4) of the Internal Revenue Code, then, if required to prevent the disqualification of the Plan under section 401(a) of the Internal Revenue Code, the assets allocated under subsections $4044(a)(4)(B),(a)(5)$ and $(a)(6)$ of ERISA will be reallocated to the extent necessary to avoid such discrimination.

Whether all participants receive their benefits should the Plan terminate at some future time will depend on the sufficiency, at that time, of the Plan's net assets to provide for accumulated benefit obligations and may also depend on the financial condition of the Plan sponsor and the level of benefits guaranteed by the PBGC.

## 7. Related-Party and Party-in-Interest Transactions

State Street Global Advisors Trust Company holds the Plan's investment assets and acts as investment manager of the Plan's assets. Transactions in such investments qualify as party-ininterest transactions, which are exempt from prohibited transaction rules. During 2019, State Street expenses paid by the Plan were $\$ 195,324$. In addition, the University is a related and party-in-interest as it is the Plan Sponsor and provides certain services to the Plan. Currently, the University does not seek reimbursement for such services.

## 8. Federal Income Tax Status

The Internal Revenue Service has determined and informed the Plan by letter dated November 6, 2014 that the Plan and related trust are designed in accordance with applicable sections of the Internal Revenue Code ("IRC"). The Plan has been amended since receiving the determination letter. However, the Plan Administrator believes that the Plan and related trust are designed and are currently being operated in compliance with the applicable requirements of the IRC. Accounting principles generally accepted in the United States of America required 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 June 30, 2019, 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 2016.

## 9. Subsequent Events

On December 18, 2019, the University contributed $\$ 7,036,375$ to the Plan. The Plan has elected to attribute this contribution to the plan year ended June 30, 2019 as allowed under the IRS regulations for Schedule SB of Form 5500, which reconciles the financial statements to the Form 5500 , Schedule H. Subsequent events have been evaluated through April 30, 2020, the date the financial statements were issued.

In December 2019, an outbreak of a novel strain of coronavirus (COVID-19) emerged globally. Global financial markets have experienced and may continue to experience significant volatility resulting from the spread of COVID-19. The extent of the impact of COVID-19 on the plan's net assets available for benefits, contributions, and benefit obligations will depend on future developments, including the duration and continued spread of the outbreak.

## Supplemental Schedules

## Columbia University Retirement Plan - Local 241, Transport Workers Union of America Schedule H, line 4i-Schedule of Assets (Held at End of Year)

| (a) (b) | (c) |  | (d) |  | (e) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Identity of Issue, Borrower, Lessor or Similar Party | Description of Investment, Including Maturity Date, Rate of Interest, Collateral, Par, or Maturity Value |  | Cost |  | Current Value |
| * State Street Global Advisors Trust Company |  |  |  |  |  |
| 20+ Year U.S. Treasury STRIPS Indx | Common collective trust | \$ | 12,210,169 | \$ | 14,290,759 |
| Daily MSCI EAFE Indx | Common collective trust |  | 10,802,514 |  | 12,959,268 |
| Daily MSCI Emg Mkts Indx | Common collective trust |  | 6,161,706 |  | 7,123,651 |
| Global Defensive Equity | Common collective trust |  | 10,565,574 |  | 11,397,622 |
| Long U.S. Credit Indx | Common collective trust |  | 30,464,907 |  | 42,814,076 |
| Long U.S. Treasury Indx | Common collective trust |  | 8,181,860 |  | 9,982,117 |
| Russell 1000 (R) Indx | Common collective trust |  | 16,507,589 |  | 18,710,521 |
| Russell 2000 (R) Indx | Common collective trust |  | 4,095,175 |  | 4,329,172 |
| U.S. High Yield Custom BB/B EX144A Indx | Common collective trust |  | 10,776,097 |  | 14,054,278 |
| U.S. REIT Indx | Common collective trust |  | 2,479,268 |  | 2,789,464 |
| U.S. TIPS Indx | Common collective trust |  | 3,967,751 |  | 4,162,786 |
|  |  | \$ | 116,212,609 | \$ | 142,613,714 |

* Party-in-interest.

The above information was derived from data certified accurate and complete by State Street Global Advisors Trust Company, trustee.

## Columbia University Retirement Plan - Local 241, Transport Workers Union of America

Schedule H, line 4j-Schedule of Reportable Transactions
Year Ended June 30, 2019

| Identify of Party Involved | Description of Asset | Number of Transactions | $\begin{aligned} & \text { Purchase } \\ & \text { Price } \end{aligned}$ | Selling Price | Lease Rental | Expense Incurred With Transaction | Cost of Asset | Current Value of Asset on Transaction Date | $\begin{aligned} & \text { Net Gain of } \\ & \text { (Loss) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State Street Global Advisors Trust Company | Long U.S. Credit Indx NL. Fund (CME3NON) (CME3NON) | 6 | 4,398,784 |  |  |  |  | 4,398,784 |  |
| State Street Global Advisors Trust Company | Long U.S. Credit Indx NL. Fund (CME3NON) (CME3NON) | 9 |  | 4,960,000 |  |  | 3,905,005 |  | 1,054,995 |
| State Street Global Advisors Trust Company | Russell 1000 (R) Indx NL. Fund (CMCQ) (CMCQ) | 5 | 4,560,000 |  |  |  |  | 4,560,000 |  |
| State Street Global Advisors Trust Company | Russell 1000 (R) Indx NL. Fund (CMCQ) (CMCQ) | 18 |  | 4,065,590 |  |  | 3,785,011 |  | 280,579 |

Note: The items listed above represent a series of transactions, which are in excess of $5 \%$ of the fair value of plan assets at July $1,2018$.

The above information was derived from data certified accurate and complete by State Street Global Advisors Trust Company, trustee.


[^0]:    Statement by Enrolled Actuary
    
    

