SCHEDULE SB (Form 5500)

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

Single-Employer Defined Benefit Plan Actuarial Information

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500 or 5500-SF.**

OMB No. 1210-0110

2022

This Form is Open to Public Inspection

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

▶ **Round off amounts to nearest dollar.**

▶ **Caution:** A penalty of $1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan
HARVARD UNIVERSITY RETIREMENT PLAN

B Three-digit plan number (PN) ▶ 003

C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF
President & Fellows Of Harvard College Harvard Human Resources, Benefi

D Employer Identification Number (EIN)
04-2103580

E Type of plan: [X] Single [ ] Multiple-A [ ] Multiple-B

F Prior year plan size: [ ] 100 or fewer [ ] 101-500 [X] More than 500

Part I Basic Information

1 Enter the valuation date: Month 01 Day 01 Year 2022

2 Assets:

a Market value	2a	1,060,699,517
b Actuarial value	2b	1,033,197,902

3 Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	2,371	536,695,732	536,695,732
b For terminated vested participants	2,336	114,152,362	114,152,362
c For active participants	2,788	152,353,019	154,919,841
d Total	7,495	803,201,113	805,767,935

4 If the plan is in at-risk status, check the box and complete lines (a) and (b) [ ]		
a Funding target disregarding prescribed at-risk assumptions	4a	
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	4b	
5 Effective interest rate	5	5.33%
6 Target normal cost		
a Present value of current plan year accruals	6a	11,395,044
b Expected plan-related expenses	6b	2,000,000
c Total (line 6a + line 6b)	6c	13,395,044

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE

Signature of actuary | Date

Timothy W. Devoe | 2307222
Type or print name of actuary | Most recent enrollment number

Willis Towers Watson US LLC | 617-638-3700
Firm name | Telephone number (including area code)

75 Arlington St, Floor 10
BOSTON MA 02116
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 [ ]

Part II Beginning of Year Carryover and Prefunding Balances

		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	280,497,780	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8)	280,497,780	0
10	Interest on line 9 using prior year's actual return of 4.16 %	11,668,708	0
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year)		8,159,932
	b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of 4.86 %		396,573
	b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return		
	c Total available at beginning of current plan year to add to prefunding balance		8,556,505
	d Portion of (c) to be added to prefunding balance		0
12	Other reductions in balances due to elections or deemed elections	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	292,166,488	0

Part III Funding Percentages

14	Funding target attainment percentage	14	91.96 %
15	Adjusted funding target attainment percentage	15	128.22 %
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	117.85 %
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 (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
04/14/2022	4,100,544	0			
07/14/2022	3,344,049	0			
10/14/2022	3,013,885	0			
01/12/2023	3,013,885	0			
04/13/2023	3,348,761	0			
07/13/2023	3,348,761	0			
09/13/2023	3,348,761	0			
			Totals ► 18(b)	23,518,646	18(c) 0

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	0
	b Contributions made to avoid restrictions adjusted to valuation date	19b	0
	c Contributions allocated toward minimum required contribution for current year adjusted to valuation date	19c	22,333,622

20 Quarterly contributions and liquidity shortfalls:

a Did the plan have a "funding shortfall" for the prior year? ☒ Yes ☐ No

b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner? ☒ Yes ☐ No

c If line 20a is "Yes," see instructions and complete the following table as applicable:

Liquidity shortfall as of end of quarter of this plan year			
(1) 1st	(2) 2nd	(3) 3rd	(4) 4th
0	0	0	0

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:

1st segment:	2nd segment:	3rd segment:	
4.75 %	5.18 %	5.92 %	☐ N/A, full yield curve used

b Applicable month (enter code)	**21b**	4
22 Weighted average retirement age	**22**	64

23 Mortality table(s) (see instructions) ☐ Prescribed - combined ☒ Prescribed - separate ☐ 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. ☒ Yes ☐ No

25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment. ☐ Yes ☒ No

26 Demographic and benefit information

a Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. ☒ Yes ☐ No

b Is the plan required to provide a projection of expected benefit payments? If "Yes," see instructions regarding required attachment ☒ Yes ☐ No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment	**27**	

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 6c)	**31a**	13,395,044
b Excess assets, if applicable, but not greater than line 31a	**31b**	0

32 Amortization installments:	Outstanding Balance	Installment
a Net shortfall amortization installment	0	0
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _________ Day _________ Year _________) and the waived amount	**33**	
34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)	**34**	13,395,044

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	0	0	0

36 Additional cash requirement (line 34 minus line 35)	**36**	13,395,044
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)	**37**	22,333,622

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

a Total (excess, if any, of line 37 over line 36)	**38a**	8,938,578
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	**38b**	0
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 the American Rescue Plan Act of 2021 (See Instructions)

41 If an election was made to use the extended amortization rule for a plan year beginning on or before December 31, 2021, check the box to indicate the first plan year for which the rule applies. ☐ 2019 ☐ 2020 ☐ 2021

Schedule SB, Line 24
Change in Actuarial Assumptions

The pension increase assumption for certain in-payment benefits was updated from 0% for the next 4 years and 0.25% thereafter to 0.25% for all years to 1.50% for 3 years and 0.25% thereafter. This assumption was updated to better reflect future anticipated economic experience.

The salary scale assumption was updated from an average increase rate of 3.50% to an average increase rate of 5.00% for 3 years and 3.50% thereafter. This assumption was updated to better reflect future anticipated economic experience.

Schedule SB, Line 22
Description of Weighted Average Retirement Age
as of January 1, 2022

The weighted average retirement age of 64 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:

(1) Age	(2) Exposure	(3) Retirement Rate	(4) Assumed Number Retiring (2) * (3)	(5) Age X Number Retiring (1) * (4)
55	1,000	5.0%	50	2,750
56	950	5.0%	48	2,688
57	902	5.0%	45	2,565
58	857	5.0%	43	2,494
59	814	5.0%	41	2,419
60	773	5.0%	39	2,340
61	734	5.0%	37	2,257
62	697	7.5%	52	3,224
63	645	7.5%	48	3,024
64	597	7.5%	45	2,880
65	552	20.0%	110	7,150
66	442	20.0%	88	5,808
67	354	20.0%	71	4,757
68	283	20.0%	57	3,876
69	226	20.0%	45	3,105
70	181	20.0%	36	2,520
71	145	20.0%	29	2,059
72	116	20.0%	23	1,656
73	93	20.0%	19	1,387
74	74	20.0%	15	1,110
75	59	100.0%	59	4,425
				64,494

Weighted Average Age at Retirement	64,494/1000	64

SCHEDULE SB ATTACHMENTS

Schedule SB – Statement by Enrolled Actuary

Plan Sponsor	President & Fellows of Harvard College
EIN/PN	04-2103580 / 003
Plan Name	Harvard University Retirement Plan
Valuation Date	January 1, 2022
Enrolled Actuary	Timothy W. Devoe
Enrollment Number	23-07222

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, Part V
Statement of Actuarial Assumptions/Methods

Economic Assumptions

Interest rate basis:

- Applicable month — September 2021
- Interest rate basis — Segment Rate from Fourth Month Preceding Valuation Date

Interest rates:

	Reflecting Stabilization	Not Reflecting Stabilization[1]
First segment rate	4.75%	1.07%
Second segment rate	5.18%	2.68%
Third segment rate	5.92%	3.36%
Effective interest rate	5.33%	2.79%

Annual rates of increase

- Compensation: Age graded with an average of 3.50% (5.00% for 2022-2024)

Compensation increase during the year		
Age	**2022-2024**	**2025+**
30	7.50%	6.00%
35	7.00%	5.50%
40	6.50%	5.00%
45	6.00%	4.50%
50	5.50%	4.00%
55	5.00%	3.50%
60	5.00%	3.50%
65	4.00%	2.50%

- Future Social Security wage bases — 4.00%
- Statutory limits on compensation — 2.50%
- Cash balance interest credit — 5.25%

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[1] Rates not reflecting stabilization are used to determine the PBGC FTAP and the PBGC 4010 FS

■ Cash balance conversion	Segment rates used for funding target
■ Individual Investment Account investment return	5.50%
■ Individual Investment Account conversion	Segment rates reflecting stabilization used for funding target
■ Cost of Living adjustment	1.50% for the next three years with an ultimate rate of 0.25%
Plan-related expenses	$2,000,000

As permitted by law, rates reflecting stabilization are used to determine the funding target and target normal cost, and thus the minimum required contribution under IRC §430 for the plan. Because these assumptions are subject to a corridor based on average interest rates over a 25-year period, they may differ from (and currently are higher than) current market interest rates, and may be inconsistent with other economic assumptions used in the valuation.

Rates not reflecting stabilization are used to determine PBGC variable rate premiums if the alternative method is used, and are used to determine the PBGC FTAP and the PBGC 4010 FS.

Demographic Assumptions

Inclusion date: The valuation date coincident with or next following the date on which the employee is hired.

New or rehired employees: It was assumed there will be no new or rehired employees.

Mortality: Separate rates for non-annuitants (based on RP-2014 "Employees" table without collar or amount adjustments, adjusted backward to 2006 with MP-2014, and then projected forward with a static projection as specified in the regulations under §1.430(h)(3)-1 using Scale MP-2020 and annuitants (based on RP-2014 "Healthy Annuitants" table without collar or amount adjustments, adjusted backward to 2006 with MP-2014, and then projected forward with a static projection as specified in the regulations under §1.430(h)(3)-1 using Scale MP-2020).

Termination — **Representative Termination Rates**

1950 Officers: None

Staff Exempt: The rates at which participants are assumed to terminate employment by age and service are shown below:

	Age			
Years of Service	25	35	45	55
0-1	.300	.200	.100	.000
1-2	.300	.200	.100	.000
2-3	.300	.200	.100	.000
3-4	.225	.150	.075	.000
4+	.150	.100	.050	.000

Staff Nonexempt

The rates at which participants are assumed to terminate employment by age and service are shown below:

	Age			
Years of Service	25	35	45	55
0-1	.300	.200	.150	.100
1-2	.300	.200	.150	.100
2-3	.300	.200	.150	.100
3-4	.250	.150	.100	.050
4+	.200	.100	.050	.000

- Hourly

The rates at which participants are assumed to terminate employment by age and service are shown below:

	Age			
Years of Service	25	35	45	55
0-1	.300	.060	.040	.020
1-2	.300	.060	.040	.020
2-3	.210	.045	.030	.015
3-4	.195	.045	.030	.015
4+	.110	.030	.020	.010

Disability

Representative Disability Rates

- Staff and Hourly

Rates varying by age

The rates at which participants become disabled by age are shown below

Attained Age	Rate
25	.100
30	.110
35	.120
40	.150
45	.220
50	.330
55	.580
60	.120
65	.240
70	.000

SCHEDULE SB ATTACHMENTS

Retirement	Rates varying by age, average age 64 For purposes of determining the Funding Target and Target Normal Cost (both disregarding at-risk assumption), the rates at which participants retire by age are shown below.
■ 1950 Officers	June 30th following attainment of age 66 or current age if greater
■ Staff and Hourly	Rates varying by age The rates at which participants retire by age are shown below

Attained Age	Rate
55-61	.050
62-64	.075
65-74	.200
75+	1.000

Benefit commencement date:

■ Preretirement death benefit	The date of death of the active participant
■ Deferred vested benefit	Immediate upon termination
■ Disability benefit	Upon normal retirement date
■ Retirement benefit	Upon termination of employment

Form of payment

- 1950 Officers
  - Retirements: 100% elect reduced 50% joint and survivor annuity
  - Vested Terminations: 100% elect lump sum
- Staff and Hourly
  - Retirements: 100% elect reduced 50% joint and survivor annuity with five-year certain period
  - Vested Terminations: 100% lump sum, except for the Maintenance Trade Council participants who are assumed to elect a life annuity

Lump sums were valued using the substitution of annuity form under IRS Regulation 1.430(d)-1(f)(4) with application of generational mortality.

Percent married	100% of males; 100% 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	Assumed plan compensation for the year beginning on the valuation date was determined using plan compensation for plan year ending December 31, 2021 adjusted by one year of expected salary increases.
At-risk assumptions	Not applicable for the current plan year
Timing of benefit payments	Annuity payments are payable monthly at the beginning of the month and lump sum payments are payable on date of decrement.

Methods

Valuation date	First day of plan year
Funding target	Present value of accrued benefits as required by regulations under IRC §430. The participant's Individual Investment Account (DC account) is projected to decrement age using the Individual Investment Account investment return assumption and assuming no future contributions.
Target normal cost	Present value of benefits expected to accrue during the plan year plus plan-related expenses expected to be paid from plan assets during the plan year as required by regulations under IRC §430. The participant's Individual Investment Account (DC account) is projected to decrement age using the Individual Investment Account investment return assumption and assuming no future contributions.
Decrement Timing	The approach used is called rounded middle of year (rounded MOY) decrement timing. Most events are assumed to occur at the middle of year during which the eligibility condition will be met or the start/end date will occur. For death and disability decrements, the rate applied is based on the participant's rounded age (nearest integer age) at the beginning of the year, to align with the methodology generally used to create those rate tables. For retirement and withdrawal decrements: the age is generally the participant's rounded age at the middle of the year.
Actuarial value of assets for determining minimum required contribution	Average of the fair market value of assets on the valuation date and 12 and 24 months preceding the valuation date, adjusted for contributions, benefits, administrative expenses and expected earnings of 4.50% (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 prior 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 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 based on discussions with Harvard University regarding the likelihood that these benefits will be paid. Willis Towers Watson has reviewed the plan provisions with Harvard University and, based on that review, is not aware of any significant benefits required to be valued that were not.

Sources of Data and Other Information

The plan sponsor through its third party administrator, furnished participant data as of January 1, 2022. Information on assets, contributions and plan provisions was supplied by the plan sponsor. 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. The assumptions were made for missing or apparently inconsistent data elements as documented on March 2, 2022 in "2022 Harvard Pension Data Questions_TIAA" under separate cover. We are not aware of any errors or omissions in the data that would have a significant effect on the results of our calculations.

Assumptions Rationale - Significant Economic Assumptions

Discount rate	The basis chosen was selected by the plan sponsor from among choices prescribed by law, all of which are based on observed market data over certain periods of time.
Lump sum conversion rate	As required by IRC §430, lump sum benefits are valued using “annuity substitution”, so that the interest rates assumed are effectively the same as described above for the discount rate. We believe this approach does not significantly conflict with what would be reasonable because it reflects the interest rate sensitivity of future plan cash flows.
Annuity conversion rate for hybrid plans	As required by IRC §430, annuity benefits are valued by converting accounts to annuities using the current IRC §430 interest rates, so that the interest rates assumed are effectively the same as described above for the discount rate.

Individual Investment Account investment return	The assumption is based on participant account balance allocations and long-term return expectations for each asset class.
Individual Investment Account conversion	The assumption is based on long-term expectations for the underlying basis using historical bond yields and future expectations.
Plan-related expenses	As required by regulations, plan-related expenses are calculated by estimating the expenses to be paid from the trust during the coming year (including expected PBGC premiums and actuarial, accounting, legal, administration and trustee fees to be paid for the trust).

The rationale for the selection of each non-prescribed significant economic assumption except for those listed above is described in the Supplement to Financial Statement Disclosure Report provided July 2022.

Assumptions Rationale - Significant Demographic Assumptions

Mortality	Assumptions used for funding purposes are as prescribed by IRC §430(h).

The rationale for the selection of each non-prescribed significant demographic assumption except for those listed above is described in the Supplement to Financial Statement Disclosure Report provided July 2022.

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 §430, or were selected by the plan sponsor from a range of methods permitted by IRC §430.

Changes 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 to the current valuation date as required by IRC §430. The pension increase assumption for certain in-payment benefits was updated from 0% for the next 4 years and 0.25% thereafter to 0.25% for all years to 1.50% for 3 years and 0.25% thereafter. This assumption was updated to better reflect future anticipated economic experience. The salary scale assumption was updated from an average increase rate of 3.50% to an average increase rate of 5.00% for 3 years and 3.50% thereafter. This assumption was updated to better reflect future anticipated economic experience.

Change in methods since prior valuation	None

Model Descriptions and Disclosures in accordance with ASOP No. 56

Quantify	Quantify is the Willis Towers Watson centrally developed, tested and maintained Global actuarial valuation system. It is used to perform valuations of clients' benefit plans. Quantify provides the ability to process data, calculate benefits and value benefit liabilities, develop results using applicable standards, and generate client reports. Quantify parameters provide significant flexibility to model populations and plan designs. Various demographic, economic and benefit related assumptions exist for users to model multiple demographic and economic situations. Plan liabilities are calculated based on standard actuarial techniques, developing actuarially reasonable results using the population and parameters entered. The calculation and presentation of liabilities in Quantify relies on the assumptions used and the reasonability of the assumptions selected. Quantify incorporates standard liability methodologies that are intended to reasonably reflect a variety of economic or demographic conditions. The model itself does not evaluate any assumptions entered for reasonableness, consistency or probability of occurrence. Quantify is designed specifically for these purposes, and we know of no material limitations that would prevent the system from being suitable for these intended purposes. The actuaries signing this report have relied on the actuaries who develop, test and maintain this system, and have also performed a limited review of results to ensure that system parameters have been set appropriately and plan provisions coded correctly.
Quantify FR	Quantify Financial Reporting (FR) is intended to calculate funding results, accounting results and produce the associated client reports under selected accounting standards. The calculations and reports are based on various user specified inputs including liability results and asset values.

Quantify FR develops valuation results for various accounting and funding purposes using standard actuarial techniques.

Bond:Link

U.S. BOND:Link is a methodology to assist with the selection of discount rates used in liability and cost measurements related to employee benefit plans. Discount rates are derived by identifying a theoretical settlement portfolio of high-quality corporate bonds sufficient to provide for a plan's projected benefit payments. The single interest rate is then determined that results in a discounted value of the plan's benefit payments that equals the market value of the selected bond portfolio.

Updated BOND:Link models are developed monthly as of the last day of the month. The construction of a BOND:Link model relies on bond data collected as of the measurement date Parameters provide the user the ability to control aspects of the model. The model output allows the user to see the effect of those parameters.

Information regarding quoted bond prices, yields and other bond related data is from Bloomberg Finance L.P.

Expected Return Estimator

The Expected Return Estimator is used to help inform the choice of an expected return assumption (e.g., as one data point to consider) for returns on the assets of the trust for purposes of the expected return on assets used in smoothing investment return, as described under Assumed return for asset smoothing under Rationale for Economic Assumptions above.

The tool depends on the capital market assumptions chosen at the starting date of the simulation. These assumptions reflect currently prevailing capital market conditions, assumed future conditions ("normative conditions"), and the transition from the current conditions to the normative ones.

The assumed normative conditions incorporate a blend of historical capital market data and future expectations. The sources consulted in the determination of normative levels include practitioners in our global actuarial and investment consulting practices, plan sponsors, investment managers, economists, and academics.

	The model includes 22 asset classes, and may not have an appropriate classification for every type of asset a plan may hold, or the allocation provided to us by the client may be oversimplified or inaccurate.
Published Demographic Tables	Certain demographic tables described above are standard published tables or are based on standard published tables from models developed by organizations with the requisite expertise

Schedule SB, Part V
Summary of Plan Provisions

1950 Officers

Plan Provisions	
Effective Date	July 1, 1950.
Covered Employees	Officers of Harvard University who participated in the 1950 Plan prior to June 30, 1973.
Participation Date	All covered employees are now participants.
Definitions	
Vesting	All covered employees are now fully vested.
Pension service	All service from hire in a covered office position.
Plan compensation	
■ Contributions	Base salary excluding overtime as defined in article 2.15 of the plan document.
■ Supplement	Plan compensation for contributions excluding special compensation for summer school, research projects, etc.
Average compensation	
■ Supplement	Average of the last 6 years of plan compensation.
Normal retirement date (NRD)	The June 30th on or following the attainment of age 66.
Employee Options	Current contributions are directed as follows for participants under the following options: ■ Option A – Credited to an individual account maintained by the University which earns 4.5% per year. Not available to participants hired after July 1, 1970. ■ Option B – Contributed to annuity contracts issued by TIAA/CREF according to the distribution split specified by the participant. ■ Option C – 5% of plan compensation is directed to annuities issued by TIAA/CREF. The excess contributions are directed to an individual account maintained by the University.
Employer Contributions	10% of plan compensation up to the Social Security wage base plus 15% of plan compensation in excess of the wage base.
Employee Contributions	None

Monthly pension benefit

▪ Contributions	Amount of benefit provided by contributions made to TIAA/CREF or Option A or C account balances.
▪ Supplement	2% of average compensation for each of the first 25 years of pension service and ½% for each of the next 20 years of pension service. If the minimum pension exceeds the amount of the basic pension derived from contributions to TIAA/CREF and credits to the account balance, a supplemental pension is paid provided that the supplemental pension cannot result in total pension payments in excess of 60% of average compensation. The basic pension is equal to the lesser of the single life annuity for the actual DC balance account and the hypothetical DC balance as though invested in TIAA. Conversion of the account balance to a single life annuity currently uses TIAA annuity purchase contract rates which are based on Annuity 2000 unisex mortality set back 2.25 years. Conversion basis is determined at earlier of actual or Normal Retirement Date.

Eligibility for Benefits

Normal retirement	Retirement on NRD.
Early retirement	Retirement before NRD and on or after both attaining age 60 and completing ten years of service.
Postponed retirement	Retirement after NRD.
Vested termination	Termination for reasons other than death or retirement after becoming a participant.
Disability	Permanent and total disability prior to NRD, and participant is receiving a Social Security disability benefit.
Preretirement death benefit	Death while eligible for normal, early, postponed, or deferred vested retirement benefits.

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, actuarially reduced for early commencement.
Postponed retirement	
▪ Contributions	Monthly pension benefit determined as of actual retirement date.
▪ Supplement	Greater of Supplement determined as of actual retirement date and Supplement determined as of NRD with an actuarial increase for deferred commencement.
Vested termination	All participants are fully and immediately vested in the contracts purchased from TIAA/CREF and in the credits to accounts maintained under Options A and C of the Plan. Participants who complete 10 years of credited service qualify for the supplemental benefits.

Disablement	If a participant becomes disabled, contributions continue to be made and at normal retirement the participant's supplemental benefit is determined as if he had been continuously employed at his last rate of compensation prior to disability.
Preretirement death	
■ Contributions	The account held under Option A or C is paid to a beneficiary as a lump sum or as an actuarially equivalent annuity. TIAA/CREF contracts will pass to the participant's named beneficiary.
■ Supplement	If a participant is eligible for retirement and dies prior to the commencement of retirement benefits, a supplemental benefit will be paid to a beneficiary in an amount equal to the difference between the total retirement income the participant would have received had he retired with a 100% joint and survivor annuity payable to himself and his named beneficiary less the amount of single-life annuity the beneficiary can receive from TIAA/CREF contracts and from the account held under Options A and C.

Other Plan Provisions

Forms of payment	The normal form of pension for participants who are not married at retirement is a single life annuity. For married participants, the normal form of pension is a reduced joint and survivor pension under which payments equal to 50% of the participant's pension will continue to be paid for the remaining lifetime of the surviving spouse. The reduced joint and survivor annuity is actuarially equivalent in value to a single-life pension using the same basis as conversion to monthly annuities. There are other forms of payment available: lump sum, 50%, 75%, or 100% J&S with no, 10, 15 or 20 year guarantee, Single life annuity with no, 10, 15 or 20 year guarantee, etc.
Pension Increases	None
Plan participants' contributions	None
Maximum on benefits and pay	All benefits and pay for any calendar year may not exceed the maximum limitation 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.

Future Plan Changes

No future plan changes were recognized in determining pension cost. 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.

Staff and Hourly

Plan Provisions	
Effective Date	June 30, 1973.
Covered Employees	Regular staff and hourly employees scheduled to work at least 17½ hours per week or 1,000 hours in a plan year.
Participation Date	Attained age 21 and 1 year of service. The plan was closed to new non-union Staff employees after June 30, 2001 and was closed to new union Staff employees after June 30, 2002. The plan remains open to new participants who are hourly employees and are members of unions other than Harvard Union of Clerical and Technical Workers and Area Trades Council.

Definitions	
Grandfathered Benefit Eligibility	A participant is eligible to accrue a Grandfathered Benefit if he is a non-union employee as of June 30, 1995 or a union employee as of June 30, 1996.
Vesting	For participants eligible to accrue a Grandfathered Benefit and for participants in the Staff plan as of July 1, 1995, full vesting upon meeting the participation requirements. All others, full vesting upon completing three years of vesting service.
Pension service	All service from date of hire.
Plan compensation	Base salary excluding overtime as defined in article 2.15 of the plan document.
Average compensation	Average of the highest consecutive 60 months of plan compensation received in the last 120 months of employment.
Normal retirement date (NRD)	The last day of the month following age 65.
Breakpoint Level	The plan specified integration level based on 1989 covered compensation levels increased 3% each year.
Applicable Interest Rate	The average of the monthly one-year T-bill rates for the prior plan year. The minimum rate is 5% and the maximum rate is 10%.
Actuarial Equivalence	For the Cash Balance benefit or the Individual Investment Account, Actuarial Equivalence is based on the “applicable mortality table” referred to in section 417(e)(3)(B) of the Code and the interest rates referred to in section 417(e)(3)(C). For the Portable Benefit portion of the Grandfathered benefit calculation Actuarial Equivalence is based on the UP84 Mortality Table and 5% interest For conversion of one form of annuity payment to another, actuarial equivalence is based on GAM 1983 and 7%.

Grandfathered Benefit

1.35% of average compensation up to the specified break point level plus 2% of average compensation over the break point times years of service up to 35, plus .5% of average compensation times years of service between 35 and 45.

A participant's retirement benefit shall not be less than a minimum pension benefit equal to $27 per month per year of service up to 35 years, plus $13.50 per month for each year of service in excess of 35 years.

Participants who contributed to the prior plan are entitled to either a refund of their contributions with interest or an additional annual benefit equal to $20 times the number of years that they made contributions to the plan.

Any participant who retires or terminates employment will be eligible to receive the actuarial equivalent of a minimum lump sum value equal to 6% of average compensation multiplied by the number of years subsequent to the completion of two years of eligibility service, or completing one year of eligibility service and attaining age 30 (“portable benefit”).

Cash Balance Benefit

The monthly benefit which is the Actuarial Equivalent of the Cash Balance at benefit commencement. Actuarial Equivalence is based on the “applicable mortality table” referred to in section 417(e)(3)(B) of the Code and the interest rates referred to in section 417(e)(3)(C), as specified for the second full calendar month preceding the first day of the Plan Year in which the Annuity Starting Date occurs. The Cash Balance is the sum of (a), (b) and (c):

(a) Initial Cash Balance as of July 1, 1995 (or July 1, 1996) – the greater of the “portable benefit” or the lump sum value of the current accrued pension benefit as of July 1, 1995 (or July 1, 1996).

(b) Monthly Compensation Credits – determined as a percent of plan compensation where the credit percent is based on age and credited service as of the last day of the month as follows:

Sum of Age and Credited Service (in months)	Compensation Credit Percentage of Plan compensation
< 480	3.0%
at least 480 but < 600	4.0%
at least 600 but < 720	5.0%
> 720	6.5%

Effective July 1, 2001, non-union Staff employees will not receive Compensation Credits. Effective July 1, 2002, only Hourly Employees who are members of unions other than Harvard Union of Clerical and Technical Workers and Area Trades Council will receive Compensation Credits.

(c) Monthly Interest Credits – equal to the monthly equivalent of plan the Applicable Interest Rate multiplied by the balance, after any Compensation Credits are made for the month, of the participant’s Cash Balance account as of the last day of the month.

Individual Investment Account	For a non-union pre-July 1, 1995 participant or a union pre-July 1, 1996 participant, the Individual Investment Account is credited each month with 3.5% of the participant's compensation for that month.

Effective July 1, 2001, for non-union Staff employees and July 1, 2002, for union Staff employees accounts shall be credited each month with an amount up to 415 limits based on age and compensation as follows:

	Credit Percent for Compensation	
Age	Up to Social Security Wage Base	Above Social Security Wage Base up to 401(a)(17) limits
< 40	5.0%	10.0%
40 and over	10.0%	15.0%

Each account is also adjusted for income, expense, gain and loss generated by the investment options selected for the account.

Monthly Pension Benefit

The benefit for a non-union pre-July 1, 1995 participant or a union pre-July 1, 1996 participant is the greater of:

(a) the participant's Cash Balance Benefit; or

(b) the Grandfathered Benefit offset by the Actuarial Equivalent of the participant's Individual Investment Account.

The benefit for all other participants will be the Cash Balance Benefit.

Eligibility for Benefits

Normal retirement	Retirement on NRD.
Early retirement	Retirement before NRD and on or after both attaining age 55 and completing ten years of retirement eligible service.
Postponed retirement	Retirement after NRD.
Vested termination	Termination for reasons other than death or retirement after becoming a participant.
Disability	Permanent and total disability prior to NRD, and participant is receiving a Social Security disability benefit.
Preretirement death benefit	Death while eligible for normal, early, postponed, or deferred vested retirement benefits.

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. The Grandfathered Benefit is reduced by 4% per year for each year commencement of payment precedes age 65.
Postponed retirement	Monthly pension benefit determined as of actual retirement date.
Vested termination	Monthly Pension Benefit where the Grandfathered Benefit is determined as of termination date, actuarially reduced for early commencement and the Cash Balance Benefit is the amount determined as of date of benefit commencement. Terminating employees may elect to take their benefit as a lump sum.
Disablement	Employees who completed 20 years of service prior to April 1973 may qualify for a disability benefit if they become disabled before normal retirement age. The benefit is an annual income equal to 1/3 of annual pay at disability. Disability benefits are payable until the earliest of the participant's death, recovery, retirement or the June 30th coincident with or next following his 66th birthday. No retirement benefits are payable while a participant is receiving disability benefits under this plan or a University sponsored disability plan. At retirement, a retirement benefit is paid as if the participant had remained employed during the period of disability. Other participants who become disabled continue to participate in the plan as if employed at their last salary rate until NRD.
Preretirement death	Benefit determined as the single lump sum the participant could have received if the participant retired or otherwise ceased employment immediately prior to his or her death and had not died, or an annuity which is the actuarial equivalent of the lump sum payment.
Postretirement death	$2,000 for grandfathered participants who retire with 10 years of credited service at retirement.

Other Plan Provisions

Forms of payment	The normal form of pension for participants who are not married at retirement is a single life annuity with 60 monthly payments guaranteed. For married participants, the normal form of pension is a reduced joint and survivor pension with 60 monthly guaranteed payments under which payments equal to 50% of the participant's pension will continue to be paid for the remaining lifetime of the surviving spouse. The reduced joint and survivor annuity is actuarially equivalent in value to a single-life pension with 60 payments guaranteed using the 1983 Group Annuity Mortality table and 7% interest. There are other forms of payment available: lump sum, 50%, 75%, or 100% J&S with 5, 10 or 15-year guarantee, Single life annuity with 10 or 15-year guarantee.

Pension Increases	Starting April 1, 1991 annual cost-of-living adjustments will be made to all monthly retirement benefits which commence prior to the preceding October 1st. This cost of living adjustment will be equal to one-half of the excess of the CPI over 3% with a maximum adjustment of 3.5%. This adjustment is only applicable to Monthly Pension Benefits which are governed by the Grandfathered Benefit and arise from normal or early retirements (deferred vesteds do not get cost-of-living increases).
Plan participants' contributions	None
Maximum on benefits and pay	All benefits and pay for any calendar year may not exceed the maximum limitation for that year as defined in the Internal Revenue Code. The plan provides for increasing the dollar limits automatically as such changes become effective.

Future Plan Changes

No future plan changes were recognized in determining pension cost. 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 valuation year.

Schedule SB, Line 26a

Schedule of All Active Participant Data as of January 1, 2022

Number and average cash balance limited by IRC §401(a)(17) distributed by attained age and attained years of credited service

	Attained Years of Credited Service[1]										
Attained Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 25	0	8	0	0	0	0	0	0	0	0	8
25-29	0	27	7	1	0	0	0	0	0	0	35
		3,264									3,943
30-34	2	36	37	8	3	0	0	0	0	0	86
		3,047	6,703								6,159
35-39	3	21	36	12	11	0	0	0	0	0	83
		4,219	9,391								12,064
40-44	5	27	33	29	25	59	0	0	0	0	178
		4,538	10,904	19,528	42,017	11,076					15,491
45-49	0	32	54	22	41	180	35	1	0	0	365
		4,765	12,858	20,171	31,602	11,084	16,759				14,258
50-54	2	27	51	41	62	209	141	65	3	0	601
		5,683	14,156	25,402	38,223	11,936	27,738	62,995			25,074
55-59	2	31	37	24	51	196	127	135	53	3	659
		6,077	18,151	26,338	47,505	16,398	31,367	69,408	117,864		41,303
60-64	0	18	22	20	35	125	100	89	72	19	500
			24,528	32,522	48,047	24,978	42,091	92,656	135,424		63,814
65-69	2	1	15	10	18	38	43	28	19	20	194
						26,594	47,985	77,944		184,419	73,069
70 & over	1	2	8	7	5	14	13	9	9	11	79
											98,087
Total	17	230	300	174	251	821	459	327	156	53	2,788
		4,899	14,568	25,986	43,398	15,515	33,937	76,280	135,876	195,057	37,937

[1] Age and service for purposes of determining category are based on exact (not rounded) values.

Plan Name: Harvard University Retirement Plan
EIN / PN: 04-2103580 / 003
Plan Sponsor: President & Fellows of Harvard College
Valuation Date: January 1, 2022

Schedule SB, Line 26a

Schedule of Active Participant Non-Frozen Data as of January 1, 2022

Number and average plan compensation limited by IRC §401(a)(17) distributed by attained age and attained years of credited service

	Attained Years of Credited Service[2]										
Attained Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 25	0	8	0	0	0	0	0	0	0	0	8
25-29	0	23	5	1	0	0	0	0	0	0	29
		51,587									49,665
30-34	2	31	28	8	2	0	0	0	0	0	71
		49,538	45,750								47,495
35-39	3	21	29	12	10	0	0	0	0	0	75
		56,932	51,054								53,074
40-44	5	25	30	22	19	9	0	0	0	0	110
		48,979	49,775	52,528							53,310
45-49	0	31	52	18	28	17	18	1	0	0	165
		47,344	48,775		55,418						57,732
50-54	2	23	47	31	42	17	104	63	3	0	332
		41,505	47,718	51,082	60,418		111,275	95,034			78,945
55-59	2	28	34	16	44	24	82	125	53	3	411
		57,716	49,265		50,320	58,582	114,310	107,360	96,007		87,333
60-64	0	16	20	15	28	32	74	83	70	19	357
			61,617		61,111	64,674	96,558	112,114	109,082		91,236
65-69	2	1	13	8	15	10	31	26	18	20	144
							106,538	90,551		102,989	95,025
70 & over	1	1	6	4	4	1	9	9	9	11	55
											98,877
Total	17	208	264	135	192	110	318	307	153	53	1,757
		50,517	51,994	53,034	59,776	62,258	107,107	104,463	107,753	94,436	78,716

[2] Age and service for purposes of determining category are based on exact (not rounded) values.

Plan Name: Harvard University Retirement Plan
EIN / PN: 04-2103580 / 003
Plan Sponsor: President & Fellows of Harvard College
Valuation Date: January 1, 2022

Schedule SB, Line 26a

Schedule of Active Participant Frozen Data as of January 1, 2022

Number distributed by attained age and attained years of credited service

	Attained Years of Credited Service[3]										
Attained Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Over	Total
Under 25	0	0	0	0	0	0	0	0	0	0	0
25-29	0	4	2	0	0	0	0	0	0	0	6
30-34	0	5	9	0	1	0	0	0	0	0	15
35-39	0	0	7	0	1	0	0	0	0	0	8
40-44	0	2	3	7	6	50	0	0	0	0	68
45-49	0	1	2	4	13	163	17	0	0	0	200
50-54	0	4	4	10	20	192	37	2	0	0	269
55-59	0	3	3	8	7	172	45	10	0	0	248
60-64	0	2	2	5	7	93	26	6	2	0	143
65-69	0	0	2	2	3	28	12	2	1	0	50
70 & over	0	1	2	3	1	13	4	0	0	0	24
Total	0	22	36	39	59	711	141	20	3	0	1,031

[3] Age and service for purposes of determining category are based on exact (not rounded) values.

SCHEDULE SB ATTACHMENTS

Schedule SB, Line 26b
Schedule of Projection of Expected Benefit Payments

Plan Year	Active Participants	Terminated Vested Participants	Retired Participants and Beneficiaries Receiving Payments	Total
2022	2,477,382	10,202,753	53,494,110	66,174,245
2023	4,553,583	8,833,819	50,655,574	64,042,976
2024	5,907,190	9,213,685	50,148,406	65,269,281
2025	7,181,464	9,605,660	49,285,131	66,072,255
2026	8,342,140	10,100,628	47,706,217	66,148,985
2027	9,250,750	10,510,649	46,045,673	65,807,072
2028	9,941,298	10,826,869	44,382,052	65,150,219
2029	10,662,913	11,135,362	42,629,447	64,427,722
2030	11,275,815	11,341,053	40,840,253	63,457,121
2031	11,793,931	11,523,972	38,988,804	62,306,707
2032	12,227,983	8,173,343	37,088,232	57,489,558
2033	12,572,488	4,712,326	35,189,248	52,474,062
2034	12,838,279	4,738,451	33,248,486	50,825,216
2035	13,007,344	4,760,484	31,254,903	49,022,731
2036	13,083,142	4,756,128	29,110,336	46,949,606
2037	13,087,605	4,714,181	26,949,204	44,750,990
2038	13,029,505	4,620,470	24,888,452	42,538,427
2039	12,909,376	4,492,836	22,824,644	40,226,856
2040	12,733,193	4,338,095	20,774,666	37,845,954
2041	12,499,181	4,172,854	18,757,172	35,429,207
2042	12,193,347	3,996,958	16,791,825	32,982,130
2043	11,816,865	3,811,792	14,898,067	30,526,724
2044	11,408,946	3,617,207	13,094,072	28,120,225
2045	10,973,924	3,414,173	11,396,030	25,784,127
2046	10,492,339	3,203,151	9,817,498	23,512,988
2047	9,975,705	2,985,611	8,368,912	21,330,228
2048	9,437,805	2,763,306	7,057,327	19,258,438
2049	8,877,097	2,538,283	5,886,204	17,301,584
2050	8,304,189	2,312,836	4,855,182	15,472,207
2051	7,725,874	2,089,456	3,960,322	13,775,652
2052	7,139,910	1,870,755	3,194,613	12,205,278
2053	6,565,848	1,659,297	2,548,678	10,773,823
2054	6,011,177	1,457,431	2,011,499	9,480,107
2055	5,468,703	1,267,241	1,571,087	8,307,031
2056	4,949,884	1,090,439	1,215,072	7,255,395
2057	4,462,762	928,279	931,243	6,322,284
2058	4,002,874	781,561	707,987	5,492,422
2059	3,573,097	650,636	534,627	4,758,360
2060	3,171,365	535,385	401,610	4,108,360
2061	2,801,690	435,307	300,629	3,537,626
2062	2,467,699	349,580	224,670	3,041,949
2063	2,166,948	277,143	167,958	2,612,049
2064	1,896,968	216,797	125,844	2,239,609
2065	1,655,864	167,249	94,671	1,917,784

Plan Name: Harvard University Retirement Plan
EIN / PN: 04-2103580 / 003
Plan Sponsor: President & Fellows of Harvard College
Valuation Date: January 1, 2022

2066	1,442,108	127,164	71,612	1,640,884
2067	1,253,594	95,222	54,525	1,403,341
2068	1,087,899	70,163	41,809	1,199,871
2069	942,401	50,816	32,283	1,025,500
2070	814,899	36,135	25,091	876,125
2071	703,284	25,198	19,611	748,093

Form 5500	Annual Return/Report of Employee Benefit Plan	OMB Nos. 1210-0110 1210-0089
Department of the Treasury Internal Revenue Service Department of Labor Employee Benefits Security Administration Pension Benefit Guaranty Corporation	This form is required to be filed for employee benefit plans under sections 104 and 4065 of the Employee Retirement Income Security Act of 1974 (ERISA) and sections 6057(b) and 6058(a) of the Internal Revenue Code (the Code). ▸ **Complete all entries in accordance with the instructions to the Form 5500.**	**2022** **This Form is Open to Public Inspection**

Part I Annual Report Identification Information

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

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

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

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

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

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

Part II Basic Plan Information—enter all requested information

1a Name of plan HARVARD UNIVERSITY RETIREMENT PLAN	**1b** Three-digit plan number (PN) ▸ 003 **1c** Effective date of plan 06/30/1973
2a Plan sponsor's name (employer, if for a single-employer plan) Mailing address (include room, apt., suite no. and street, or P.O. Box) City or town, state or province, country, and ZIP or foreign postal code (if foreign, see instructions) President & Fellows Of Harvard College Harvard Human Resources, Benefi 114 Mt Auburn St Room 433 Cambridge MA 02138	**2b** Employer Identification Number (EIN) 04-2103580 **2c** Plan Sponsor's telephone number 617-496-1542 **2d** Business code (see instructions) 611000

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

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

SIGN HERE			LYNN CORDARO
	Signature of plan administrator	Date	Enter name of individual signing as plan administrator
SIGN HERE			LYNN CORDARO
	Signature of employer/plan sponsor	Date	Enter name of individual signing as employer or plan sponsor
SIGN HERE			
	Signature of DFE	Date	Enter name of individual signing as DFE

3a Plan administrator's name and address [X] Same as Plan Sponsor		**3b** Administrator's EIN	
		3c Administrator's telephone number	
4 If the name and/or EIN of the plan sponsor or the plan name has changed since the last return/report filed for this plan, enter the plan sponsor's name, EIN, the plan name and the plan number from the last return/report:		**4b** EIN	
a Sponsor's name		**4d** PN	
c Plan Name			
5 Total number of participants at the beginning of the plan year		**5**	9,287
6 Number of participants as of the end of the plan year unless otherwise stated (welfare plans complete only lines **6a(1), 6a(2), 6b, 6c,** and **6d**).			
a(1) Total number of active participants at the beginning of the plan year		**6a(1)**	2,837
a(2) Total number of active participants at the end of the plan year		**6a(2)**	2,775
b Retired or separated participants receiving benefits		**6b**	3,076
c Other retired or separated participants entitled to future benefits		**6c**	2,655
d Subtotal. Add lines **6a(2)**, **6b**, and **6c**.		**6d**	8,506
e Deceased participants whose beneficiaries are receiving or are entitled to receive benefits.		**6e**	564
f Total. Add lines **6d** and **6e**.		**6f**	9,070
g Number of participants with account balances as of the end of the plan year (only defined contribution plans complete this item)		**6g**	9,070
h Number of participants who terminated employment during the plan year with accrued benefits that were less than 100% vested		**6h**	42
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:
1C 1F 2C 2A 1A 2F 2G 3H 2R 2T

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

9a Plan funding arrangement (check all that apply)
- (1) [X] Insurance
- (2) [ ] Code section 412(e)(3) insurance contracts
- (3) [X] Trust
- (4) [ ] General assets of the sponsor

9b Plan benefit arrangement (check all that apply)
- (1) [X] Insurance
- (2) [ ] Code section 412(e)(3) insurance contracts
- (3) [X] Trust
- (4) [ ] General assets of the sponsor

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

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

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

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

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

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

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

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

Receipt Confirmation Code______________________