



Western Conference of Teamsters Pension Plan

January 1, 2022 Actuarial Valuation

Prepared by:

Milliman, Inc.

Lead Consultants:

Grant Camp, FSA, EA, MAAA

Joel Stewart, FSA, EA, MAAA

Supporting Actuaries:

Noah Llanda, FSA, EA, MAAA

Ryan Rowland, FSA, EA, MAAA

Marisa Cianci, ASA, EA, MAAA

Actuarial Analysts:

Penny Fletcher

Joe Haines

Milliman, Inc.
19200 Von Karman Avenue, Suite 950
Irvine, CA 92612
Tel +1 714 634 8337
Fax +1 714 634 4458
milliman.com



19200 Von Karman Avenue
Suite 950
Irvine, CA 92612
USA

Tel +1 714 634 8337
Fax +1 714 634 4458

milliman.com

August 26, 2022

Board of Trustees
Western Conference of Teamsters Pension Plan

Dear Trustees:

As requested, we performed an actuarial valuation of the Western Conference of Teamsters Pension Plan as of January 1, 2022, for the Plan Year ending December 31, 2022. Our findings are set forth in this actuary's report.

In preparing this report, we relied, without audit, on information supplied by the administrative office, the Plan's independent auditor and the Plan's attorney. This information includes, but is not limited to, Plan documents and provisions, employee data, and financial information. The financial information was taken from a draft of the audit report and is, hence, subject to finalization. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

For actuarial requirements under ERISA, all costs, liabilities, rates of interest, and other factors under the Plan (except when mandated directly by the Internal Revenue Code and its regulations) have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations) and which, in combination, offer our best estimate of anticipated experience under the Plan. The valuation results were developed using models intended for valuations that use standard actuarial techniques.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations under ERISA are to determine the minimum required, and maximum deductible funding amounts, and the unfunded vested benefit liability for withdrawal liability for an ongoing plan. Actuarial computations under FASB ASC Topic 960 are to fulfill plan accounting requirements. The calculations in this report are based on our understanding of:

- ERISA and the related sections of the tax code.
- IRS minimum funding requirements as amended by subsequent legislation and reflecting all regulations and guidance to date.
- FASB ASC Topic 960.

Determinations for other purposes may be significantly different than the results in this report. Other calculations may be needed for other purposes, such as judging benefit security at termination.

Milliman's work is prepared solely for the internal business use of the Trust and its Trustees and employees (for their use in administering the Trust). Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release; subject to the following exceptions:

- (a) The Trust may provide a copy of Milliman's work, in its entirety to the Trust's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Trust.
- (b) The Trust may distribute certain work products that Milliman and the Trust mutually agree is appropriate for distribution to participating employers, pension participants and other parties as may be required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are actuaries. Milliman's advice is not intended to be a substitute for qualified legal, investment, or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the *Code of Professional Conduct and Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion* in the United States published by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,



Grant Camp, FSA, EA, MAAA
Principal and Consulting Actuary



Joel Stewart, FSA, EA, MAAA
Principal and Consulting Actuary

Table of Contents

	<u>Page</u>
LETTER OF CERTIFICATION	
SECTION 1 – Summary of Valuation Results	1
SECTION 2 – Introduction	12
SECTION 3 – Trust Fund Activity	13
Exhibit 3.1 – Market Value of Assets	14
Exhibit 3.2 – Receipts and Disbursements	16
Exhibit 3.3 – Investment Return	17
Exhibit 3.4 – Actuarial Value of Assets	18
Exhibit 3.5 – Net Cash Flow for Total Fund	20
SECTION 4 – Contribution Requirements and Amortization Period	21
Exhibit 4.1 – Actuarial Balance Sheet	23
Exhibit 4.2 – Analysis of Change in the Unfunded Actuarial Liability	24
Exhibit 4.3 – Normal Cost	25
Exhibit 4.4 – Funding Standard Account as of Prior Year End	26
Exhibit 4.5 – Projected Funding Standard Account for Current Year End	27
Exhibit 4.6 – Maximum Tax-Deductible Contribution	29
Exhibit 4.7 – Amortization Period	31
SECTION 5 – Funded Status	32
Exhibit 5.1 – Statement of Actuarial Present Value of Accumulated Plan Benefits	33
Exhibit 5.2 – Statement of Changes in Actuarial Present Value of Accumulated Plan Benefits	34
Exhibit 5.3 – Unfunded Vested Benefit Liability	35
SECTION 6 – Risk Disclosure, History, and Projections	36
Exhibit 6.1 – Historical Statistics	42
Exhibit 6.2 – Plan Maturity Measures	44
Exhibit 6.3 – Projected Benefit Payments	46
Appendix A – Summary of the Plan	47
Appendix B – Participant Statistics	53
Appendix C – Actuarial Assumptions and Cost Methods	73

Summary of Valuation Results

Milliman Actuarial Valuation

Overview of Results (\$ in thousands)	Actuarial Valuation for Plan Year Beginning	
	January 1, 2021	January 1, 2022

Assets

Market Value of Assets	\$50,117,585	\$56,967,832
Actuarial Value of Assets	\$47,157,638	\$50,943,160
Investment Return (Non-Dedicated assets)		
Market Value of Assets	10.20%	17.65%
Actuarial Value of Assets	9.30%	11.16%

Funded Status

Actuarial Liability	\$50,330,292	\$51,996,745
Market Funded Percentage	99.6%	109.6%
Actuarial (Pension Protection Act) Funded Percentage	93.7%	98.0%

Withdrawal Liability

Present Value of Vested Benefits	\$48,017,586	\$49,498,039
Assets for Withdrawal Liability	\$47,157,638	\$50,943,160
Unfunded Vested Benefit Liability (UVBL)	\$859,948	\$0

Credit Balance and Contribution Requirements

Actuarial Liability	\$50,330,292	\$51,996,745
Actuarial Value of Assets	\$47,157,638	\$50,943,160
Unfunded Actuarial Liability	\$3,172,654	\$1,053,585
Credit Balance at End of Prior Year	\$5,748,493	\$5,777,468
Normal Cost (including expenses) ⁽¹⁾	\$1,759,317	\$1,857,453
Net Amortization Payment	\$850,781	\$657,169
Total Annual Cost (Beginning of Year)	\$2,610,098	\$2,514,622
Anticipated Contributions	\$2,335,000	\$2,500,000
Maximum Deductible Contribution	\$91,147,319	\$96,804,392
Minimum Required Contribution	\$0	\$0
Actual Contributions	\$2,370,820	To Be Determined

⁽¹⁾ The Normal Cost for 2021 and 2022 are based on a 1.6% accrual.

Amortization Period

Actuarial Value of Assets	5.6 years	2.0 years
Market Value of Assets	0.4 years	0.0 years

Participant Data

Retirees & Beneficiaries	237,580	238,727
Vested Inactive Participants	166,360	166,500
Active Participants	<u>222,840</u>	<u>226,780</u>
Total Participants in Valuation	626,780	632,007

Certification Status

Green	Green
-------	-------

A. Purpose of this Report

This report has been prepared for the Western Conference of Teamsters Pension Plan as of January 1, 2022 to:

- Review the Plan's funded status as of January 1, 2022.
- Review the experience for the plan year ending December 31, 2021, including the Plan's trust fund activity and investment return, and changes in plan participant demographics that impact liabilities.
- Calculate the Plan's funding requirements under ERISA for the plan year beginning January 1, 2022.
- Determine the Plan's Amortization Period as of January 1, 2022.
- Determine the Plan's Unfunded Vested Benefit Liability for withdrawal liability purposes as of December 31, 2021, in accordance with the Multiemployer Pension Plan Amendments Act of 1980.
- Determine the actuarial present value of accumulated plan benefits as of December 31, 2021, for purposes of disclosing the Plan's liabilities under FASB ASC Topic 960.

B. Plan Provisions

The valuation reflects the plan provisions in effect on January 1, 2022. There were no changes to the plan provisions during the year that affected the valuation.

C. Actuarial Methods and Assumptions

Changes in Assumptions

Other than the assumptions mandated by the IRS, the following changes were made to the assumptions for this valuation in order to reflect recent and anticipated plan experience:

- The discount rate used for the SBA Dedication was changed from 3.36% for 2021 to 3.17% for 2022, which increased liabilities by approximately \$23.0 million.
- Factors utilized in the calculation of the benefit adjustment payment form option were updated to reflect the mortality and segment rates prescribed by IRS notices 2020-85 and 2021-54 respectively. This update decreased liabilities by approximately \$5.6 million.
- Active participants aged 100 or older as of the valuation date were assumed to have invalid dates of birth and subsequently valued as such (for further details see Appendix B). This change increased liabilities by approximately \$1.2 million.
- The assumed annual administrative expense assumption was increased from \$120 million to \$125 million, payable mid-year, to better reflect anticipated plan experience. This change has no impact on the liabilities of the Plan but increases the net charge to the Funding Standard Account by \$5 million.
- The anticipated annual employer contributions were increased to \$2.500 billion for purposes of projecting the 2022 Funding Standard Account and determining the Amortization Period.

Details on the updated assumptions can be found in Appendix C of this report.

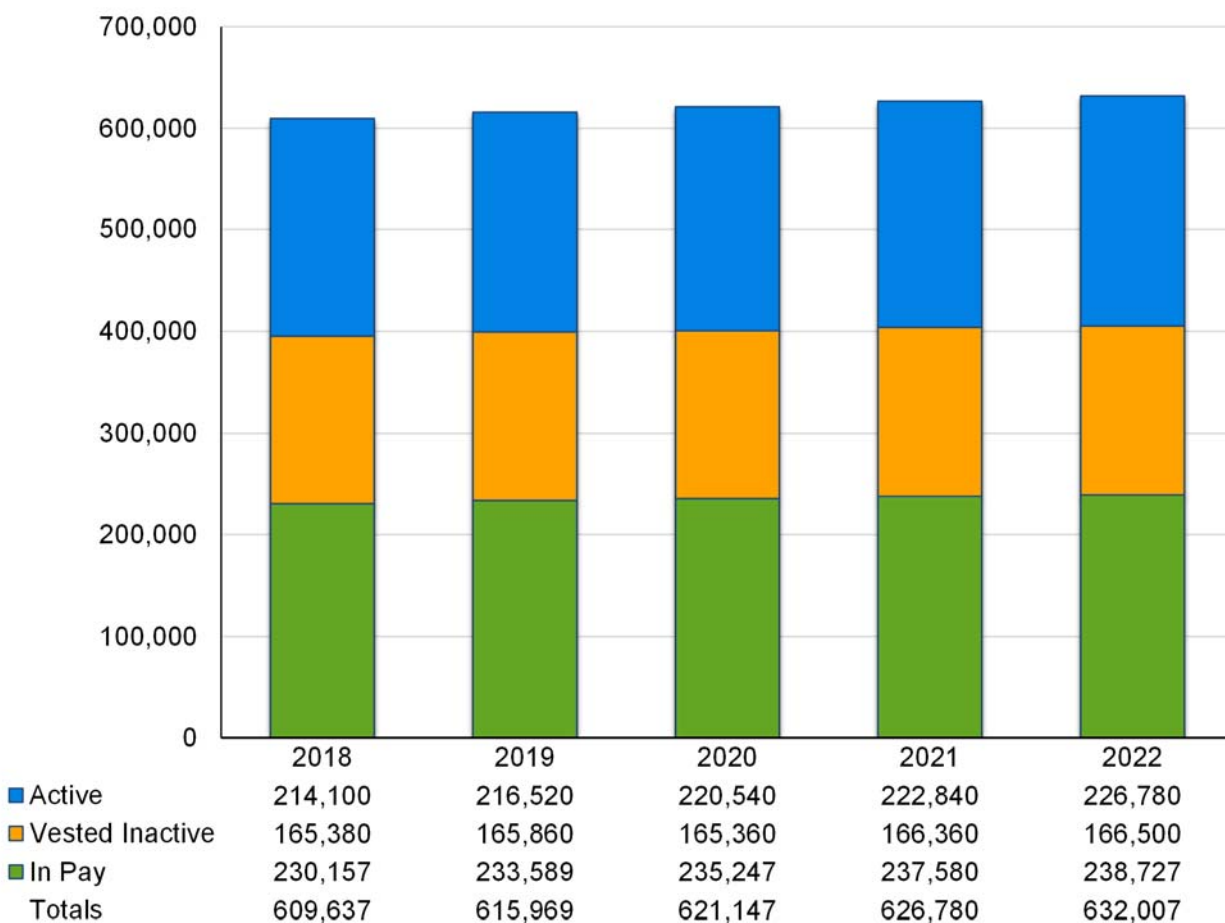
Changes in Actuarial Methods

There were no changes in the actuarial funding method for the January 1, 2022 valuation.

D. Participant Information

Participant Counts

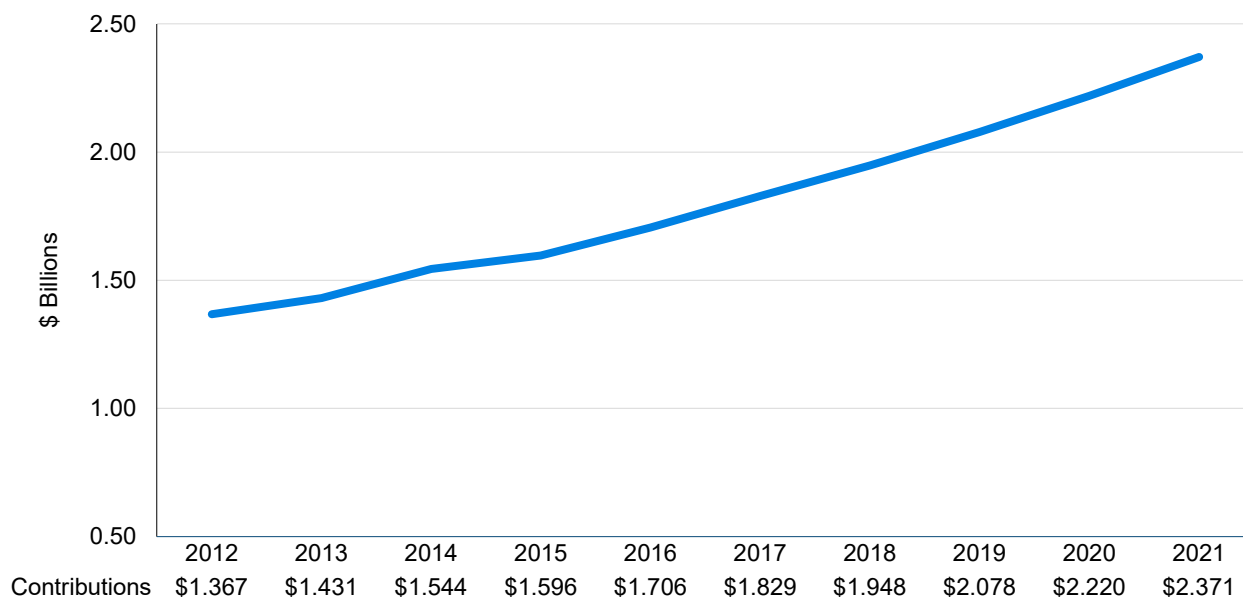
The following chart shows the number of participants included in this valuation, along with comparable information from the last several valuations.



For valuation purposes, an active participant is not retired, terminated or deceased on the valuation date, has satisfied the participation requirements of the Plan, and worked at least 250 hours in the plan year immediately prior to the valuation date, or worked at least one hour in the plan year immediately prior to the valuation date and worked at least 250 hours in the second plan year preceding the valuation date.

Contributions

Contributions for the plan year beginning January 1, 2022, are expected to be \$2.500 billion based on the assumed hours and the contribution rates in effect at January 1, 2022. The graph below shows the Plan's historical level of contributions.



E. Plan Assets

The Plan's market value of assets is the value of net assets available for benefits as shown on the Plan's audit less the withdrawal liability receivable amounts. The Plan's assets are split into dedicated assets and non-dedicated assets.

The dedicated assets are contained in the Strategic Bond Account (SBA). The market value of the FDA and 1982/84 Annuity Account (82/84 Account) are combined with non-dedicated assets for purposes of determining the actuarial value of assets.

The Plan uses an asset smoothing method on the non-dedicated portion of the assets that recognizes market value investment gains and losses over a period of five years.

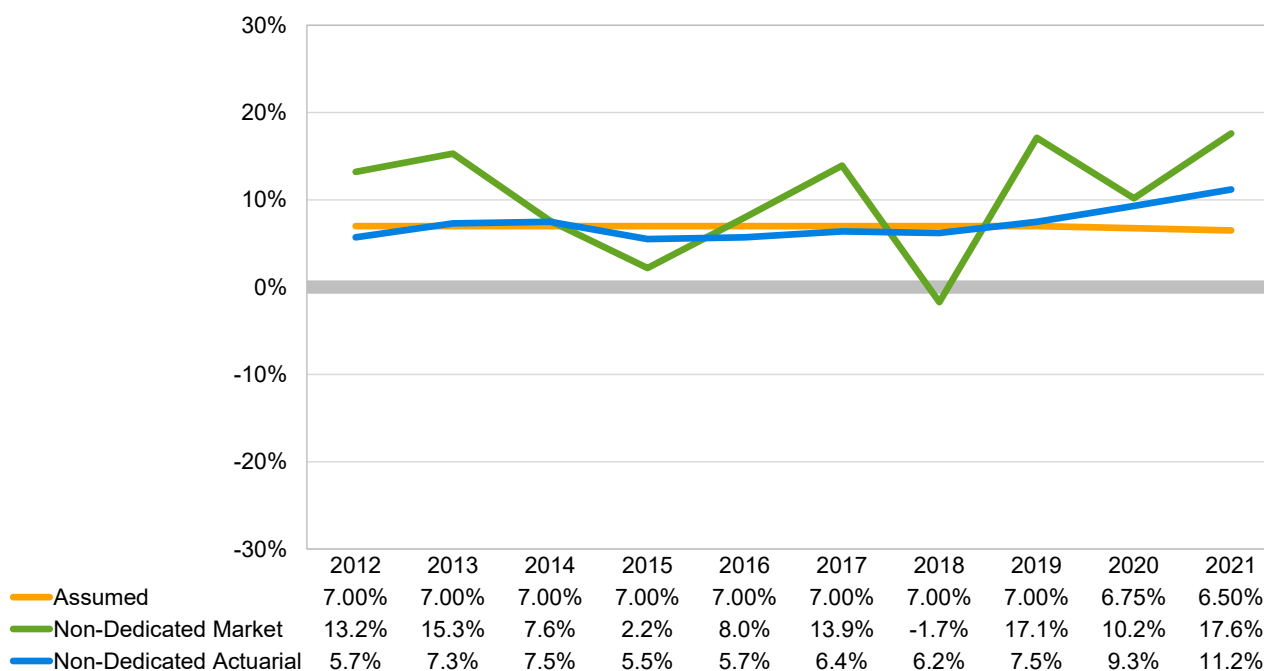
The sum of the amortized cost of the dedicated assets and the smoothed value of non-dedicated assets is called the actuarial value of assets, and is used for determining the PPA funded percentage, the minimum and maximum contributions under ERISA, computation of the Amortization Period, and determination of Unfunded Vested Benefit Liability. The table below shows these values along with the Plan's rate of investment return, net of investment expenses, over the past five years on total plan assets.

Milliman Actuarial Valuation

January 1,	Prior Year Rate of Return on Total Plan Assets		(\$ in thousands)		
	Market	Actuarial	Market Value of Assets	ERISA Actuarial Value of Assets	Assets for Withdrawal Liability
2022	15.45%	9.88%	\$56,967,832	\$50,943,160	\$50,943,160
2021	11.53	10.29	50,117,585	47,157,638	47,157,638
2020	16.45	7.26	45,776,824	43,600,984	43,600,984
2019	(1.76)	5.87	40,174,690	41,549,049	41,549,049
2018	13.08	6.27	41,896,232	40,212,390	40,212,390

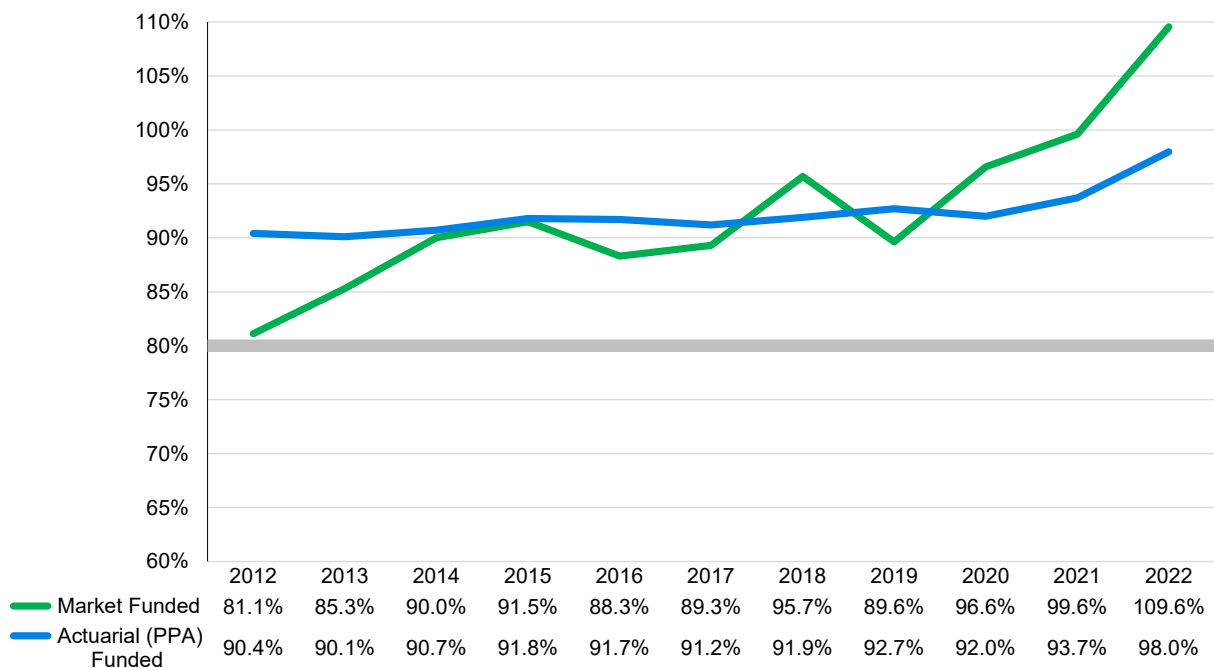
Over the past 10 years, the Plan's total assets have averaged an 9.50% return on a market value basis, net of investment expenses. The Plan's non-dedicated assets have averaged an 10.15% return on a market value basis, net of investment expenses over the same time period. The numerical history can be found on Exhibit 3.3 in this report.

The graph below shows the Plan's annual returns on the non-dedicated assets over the last ten years, compared with the Plan's investment return assumption.



F. Funded Status

An important indicator of the Plan's funded status is the ratio of the Plan's *market value of assets* to the Plan's liability for all benefits earned to date, called the actuarial liability. For purposes of determining the Plan's zone status under the PPA, the Plan's *actuarial value of assets* is compared with this liability measurement. Below is a chart showing a historical comparison of these measurements at the beginning of each plan year.



Below is a table that details the relevant information for the past several valuations.

January 1,	Actuarial Liability (\$ in thousands)				Market Value Funded %	Actuarial Value (PPA) Funded %
	Retirees & Beneficiaries	Vested Inactive	Active	Total		
2022	\$28,771,176	\$5,779,913	\$17,445,656	\$51,996,745	109.6%	98.0%
2021	28,063,030	5,557,271	16,709,991	50,330,292	99.6	93.7
2020	26,787,969	5,211,995	15,393,519	47,393,483	96.6	92.0
2019	25,893,785	4,898,382	14,030,148	44,822,315	89.6	92.7
2018	25,215,056	4,794,963	13,760,528	43,770,547	95.7	91.9

The **Annual Funding Notice** to participants must be distributed within 120 days of the end of the plan year and will include the actuarial (PPA) funded percentage for 2020, 2021, and 2022, as shown above.

G. Contribution Requirements

Actuarial Liability

For computing ERISA minimum and maximum funding requirements, the actuarial cost method takes into account benefits that are earned to date. The resulting liability is called the actuarial liability, and is compared with the actuarial value of assets, as shown below.

January 1,	(\$ in thousands)		
	Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability
2022	\$51,996,745	\$50,943,160	\$1,053,585
2021	50,330,292	47,157,638	3,172,654
2020	47,393,483	43,600,984	3,792,499
2019	44,822,315	41,549,049	3,273,266
2018	43,770,547	40,212,390	3,558,157

Development of Minimum Required Contribution and Credit Balance

The Plan's minimum required contribution consists of two components:

- Gross normal cost, which includes the cost of benefits allocated to the next plan year and non-investment expenses expected to be paid in the next plan year, and
- Amortization payments to the unfunded actuarial liability.

If contributions do not meet these costs, the Plan's credit balance, which was created by contributions in excess of minimum required contributions in past years, may be used to offset the costs. The table below summarizes the Plan's contribution requirements, actual contributions, and credit balance over the last several years.

(\$ in thousands)					
December 31,	Normal Cost ⁽¹⁾	Net Amortization Payment	Annual Cost, Middle of Year	Actual Contribution	Credit Balance, End of Year
2022	\$1,857,453	\$657,169	\$2,595,061	\$2,500,000 ⁽²⁾	6,055,321 ⁽²⁾
2021	1,759,317	850,781	2,693,591	2,370,820	5,777,468
2020	1,459,460	885,460	2,422,769	2,219,837	5,748,493
2019	1,063,629	766,483	1,893,083	2,078,312	5,591,603
2018	1,014,145	726,968	1,801,021	1,948,038	5,057,235

⁽¹⁾ Accrual rate for hours worked: 2021 and 2022 - 1.6%, 2020 - 1.5%, 2019 and prior - 1.2%

⁽²⁾ Expected based on hours assumption for valuation.

H. Amortization Period

The Plan's amortization period is a measure of the long-term financial solvency of the Plan. The amortization period is the number of years necessary for a level excess of anticipated employer contributions over the normal cost to pay off the unfunded actuarial liability or funding shortfall. The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets. The funding shortfall is the difference between the actuarial liability and the market value of assets.

ERISA Minimum Funding Standards require plans to amortize changes in the unfunded actuarial liability (i.e. annual experience gains and losses, changes in assumptions and most plan amendments) over a 15-year period. The average amortization period at any point in time under ERISA without special relief provisions is generally between 10 to 15 years. Therefore, based on the unfunded actuarial liability, an amortization period of less than 10 years is desired.

Amortization Period (\$ in thousands)		
	January 1, 2021	January 1, 2022
Unfunded Actuarial Liability (UAL)	\$ 3,172,654	\$ 1,053,585
Expected Employer Contributions	2,335,000	2,500,000
Initial Expense Assumption	120,000	125,000
Normal Cost (payable monthly)	1,700,066	1,796,591
Excess Contributions in first year ⁽¹⁾	514,934	578,409
Excess Contributions in future years ⁽²⁾	\$ 939,950	\$ 1,027,557
Years to Amortize UAL	5.6	2.0
Funding Shortfall on a Market Value basis	\$ 212,707	\$ 0
Years to Amortize Funding Shortfall on a Market Value basis	0.4	0.0

⁽¹⁾ First three years for 2021 and first two years for 2022

⁽²⁾ Excess contribution based on accrual rates of 1.6% in 2021-2023 and 1.2% thereafter

I. Unfunded Vested Benefit Liability

Withdrawing employers are assessed a portion of the Plan’s unfunded vested benefit liability for withdrawal liability, which is determined by subtracting the Plan’s assets (calculated in Exhibit 3.4) from the liability for all *vested* benefits earned to date. The assets for withdrawal liability are identical to the actuarial value of assets since December 31, 2017. The table below summarizes this information for the past several years.

(\$ in thousands)			
December 31,	Present Value of Vested Benefits	Assets For Withdrawal Liability	Unfunded Vested Benefit Liability
2021	\$49,498,039	\$50,943,160	\$0
2020	48,017,586	47,157,638	859,948
2019	45,274,964	43,600,984	1,673,980
2018	42,821,266	41,549,049	1,272,217
2017	41,839,296	40,212,390	1,626,906

J. Zone Status

Zone Status

The following chart shows the Plan’s Zone Status that has been reported in the Actuarial Certification since PPA became effective beginning in 2008. The Plan has been certified as neither endangered nor critical (i.e. “Green”) in every year since 2008, including the most recent certification for January 1, 2022.

Plan Year Beginning January 1,	Zone Status
2008 - 2022	Green

K. Plan Experience

Initial Observations

We note the following comparisons from last year’s valuation:

- Employer contributions in 2021 (exclusive of withdrawal liability payments) increased by 6.8% to \$2.364 billion in 2021 from \$2.213 billion in 2020.
- Benefit payments increased by 3.0% to \$3.08 billion in 2021 from \$2.99 billion in 2020.
- Operating expenses in 2021 amounted to 5.1% of total employer contributions compared to 5.3% of total contributions in 2020.
- The net assets available for plan benefits on a market value basis increased by approximately \$6.9 billion during 2021, compared with an increase of approximately \$4.3 billion during the previous year.

Impact of Plan Experience during Prior Plan Year

Actuarial gains are produced from more favorable experience than assumed in the previous valuation while actuarial losses are produced from experience less favorable than assumed. The most important of these gains and losses are shown below and described in the paragraphs that follow.

Investment Return

The estimated investment return on the total market value of assets was approximately 15.45% for 2021. The corresponding returns for 2020 and 2019 were 11.53% and 16.45% respectively.

The estimated market value investment return for 2021 on non-dedicated assets was about 17.65%, resulting in an approximate \$5.18 billion gain compared to the assumed net investment return for 2021 of 6.50%.

In the same year, the net investment return on the actuarial value of non-dedicated assets was approximately 11.16%, resulting in an approximate \$2.06 billion gain. The investment return on the actuarial value of non-dedicated assets is different from the investment return on the market value of non-dedicated assets because of the smoothing of investment gains and losses.

The investment return on the actuarial value of total assets was estimated to be 9.88%. This resulted in an actuarial gain of about \$1.68 billion.

Demographic Experience

The gains and losses due to all non-investment experience during 2021 (excluding data updates) decreased the Plan's actuarial liability by approximately \$163 million, or about 0.3% of total liability. Data updates resulted in a loss of approximately \$26 million. The commentary below identifies the major components of the demographic gains and losses experienced during 2021.

Contribution Rates and Hours Expectations

Various bargaining parties negotiated increases in contribution rates which, due to the Plan's benefit formula, increased benefits earned during 2021. We estimated that the increase in the Plan's liabilities was about \$21 million due to these factors.

The increase in liability due to higher contribution rates was offset by higher contributions to the Trust and in aggregate, the unfunded actuarial liability is reduced due to contributions exceeding the value of the additional benefits.

New Entrants

Actual new entrants also displayed different demographic characteristics than expected and earned larger benefits than expected under the new entrant assumption. We estimate the increase in liability due to new entrants to be approximately \$36 million.

Other Demographic Losses

The Plan experienced a demographic loss this year due to increases in active participant benefits that were not attributable to increased contributions during the year. These increases are likely due to accrual of past service benefits, changes in PEER level, and other data revisions. In addition, there was a demographic loss due to increases in benefits for participants in pay status. These increases are likely due to working retirees accruing additional benefits.

Demographic Gains

Sources of demographic gains include fewer participants retiring from active status, more terminations of active participants, and fewer active participants becoming disabled compared with the current assumptions. These gains are consistent with the Plan's experience in recent years. Additionally, there was a gain on mortality of approximately \$131 million for retired participants and beneficiaries due to more deaths than anticipated under our assumptions.

Comments

The overall \$163 million demographic gain is small, relative to the overall size of the Plan. Based on our annual review of the demographic experience of the Plan, we believe the assumptions are individually reasonable and in combination, offer our best estimate of anticipated experience under the Plan.

Sensitivity of Results

The results presented in this report are dependent upon the actuarial assumptions being realized in the future. To the extent that actual Plan experience differs from the assumptions, future actuarial costs will differ from those presented in this report. For example, actuarial gains and losses emerge in plan years where actual contribution amounts differ from those anticipated by our assumptions. Section 6 has additional information on the risks faced by the Plan.

SECTION 2 Introduction

The purpose of this actuarial valuation of the Western Conference of Teamsters Pension Plan is to review last year's activity, compute this year's cost, and test the Plan's funded status. Specifically:

- In Section 3, we summarize the Plan's trust fund activity and measure its investment return.
- In Section 4, we evaluate the Plan's contribution requirements, determine the appropriate charges and credits to the ERISA minimum Funding Standard Account for the plan year ending December 31, 2021, and estimate the credit balance at the end of this year. We also calculate the maximum tax-deductible contribution for the plan year ending December 31, 2022, and the Amortization Period as of January 1, 2022.
- In Section 5, we determine the Plan's funded status by comparing the market value of assets with the actuarial present value of accumulated plan benefits, computed in accordance with FASB ASC Topic 960. We also summarize the Plan's Present Value of Vested Benefits in Exhibit 5.3 and calculate the Plan's Unfunded Vested Benefit Liability for withdrawal liability purposes.
- In Section 6, we identify and assess the risks that may be significant to the Plan. We also disclose various historical measures of the Plan, and projected the next 20 years of benefit payments on a closed group basis.

The appendices present a summary of the Plan, participant statistics (active, retired, inactive vested), a description of the unit credit actuarial cost method, and a summary of our actuarial assumptions.

SECTION 3 Trust Fund Activity

In this section, we show the present status of the Plan's trust fund, trust activity over the past year, and historical investment return.

Exhibit 3.1 lists the types of assets held and their market value.

Exhibit 3.2 summarizes the fund's receipts and disbursements during the past year.

Exhibit 3.3 summarizes the fund's investment return, net of investment-related expenses. The exhibit displays annual rates of return at market value on all assets and non-dedicated assets for each of the last 20 years.

Exhibit 3.4 develops the actuarial value of assets as of December 31, 2021. This asset value is the same as that used to determine employer liability upon withdrawal from the Plan during 2022. This exhibit also presents the recognition of investment gains and losses on a market value basis over actuarial expectation.

Exhibit 3.5 presents the progress of the fund balance for the past 20 years in terms of employer contributions, benefit payments, operating expenses, and net investment income.

Exhibit 3.1

Market Value of Assets (December 31, 2021)

<u>ASSETS</u>	<u>2021</u>
INVESTMENTS - at fair value	<u>\$ 55,830,816,307</u>
Securities on loan	
Equity securities	108,616,698
Insurance company contracts	<u>2,005,384,052</u>
	2,114,000,750
Fair value of collateral held for securities on loan	<u>2,032,745,724</u>
Total investments	59,977,562,781
RECEIVABLES	
Due from broker for securities sold	45,336,760
Contributions due from employers - net	186,600,000
Withdrawal liability receivable - net ¹	0
Accrued investment income	47,978,684
Forward foreign currency contracts	0
Swaps receivable from counterparties	<u>0</u>
Total receivables	279,915,444
OTHER ASSETS	7,618,788
CASH	<u>11,686,213</u>
Total assets	<u>60,276,783,226</u>
LIABILITIES AND NET ASSETS	
LIABILITIES	
Liability to return collateral held for securities on loan	2,161,493,359
Securities sold, not yet purchased	1,066,559,454
Due to broker for securities purchased	46,991,422
Accounts payable and accrued expenses	27,533,186
Forward foreign currency contracts	0
Swaps payable to counterparties	<u>6,373,807</u>
Total liabilities	3,308,951,228
NET ASSETS AVAILABLE FOR BENEFITS	<u>\$ 56,967,831,998</u>

¹ For valuation purposes, receivable Withdrawal liability payments are excluded from assets.

**Exhibit 3.1
(Continued)**

(\$ in thousands)		
	Year Ending December 31, 2020	Year Ending December 31, 2021
a. Strategic Bond Account	\$ 3,334,878	\$ 2,577,103
b. All Remaining Assets	<u>46,782,707</u>	<u>54,390,729</u>
c. Net Assets Available for Plan Benefits	\$ 50,117,585	\$ 56,967,832

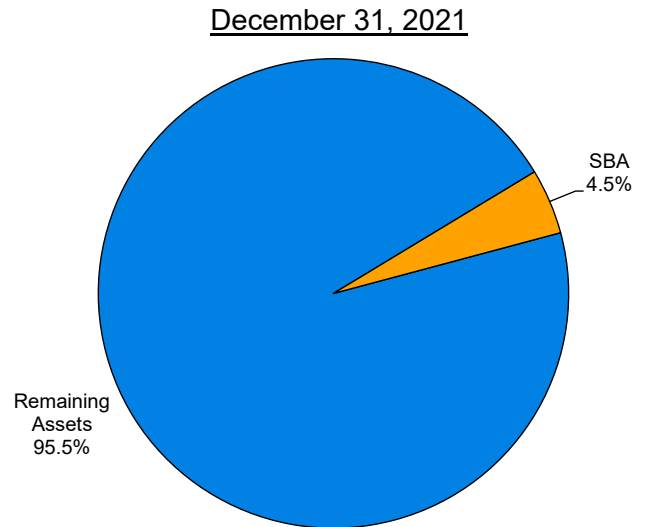
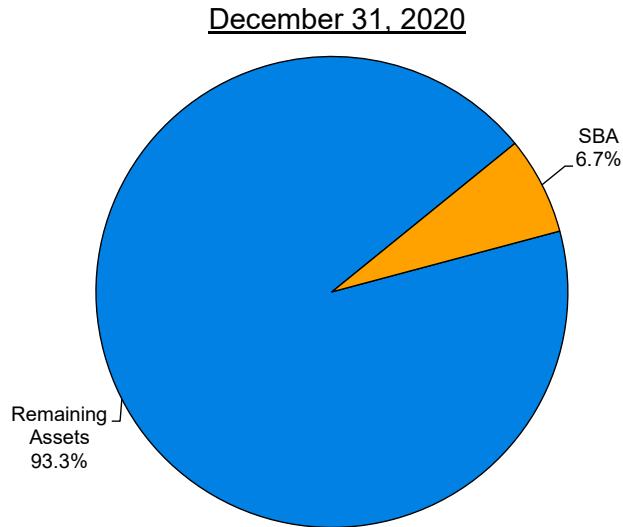


Exhibit 3.2

Receipts and Disbursements (Year Ended December 31, 2021)

	<u>2021</u>
ADDITIONS	
Investment income	
Interest, dividends and other investment income	\$ 1,263,448,045
Net appreciation/(depreciation) in fair value of investments	6,996,366,199
Net appreciation/(depreciation) in fair value of collateral held for securities on loan	<u>(6,624,170)</u>
	8,253,190,074
Less investment expenses	<u>(563,324,212)</u>
Investment income - net	7,689,865,862
Employer contributions	2,363,968,127
Employer withdrawal liability income ¹	6,851,878
Other income	<u>1,363,532</u>
Total additions	10,062,049,399
DEDUCTIONS	
Pension benefits	3,079,704,643
Administrative expenses	121,625,246
Income tax expense	<u>18,526,412</u>
Total deductions	3,219,856,301
NET CHANGE	6,842,193,098
TRANSFER OF ASSETS TO UNRELATED PLAN	0
NET ASSETS AVAILABLE FOR BENEFITS	
Beginning of year	<u>50,117,584,555</u>
Adjustment to beginning of year assets	8,054,145
End of year	<u>\$ 56,967,831,998</u>

¹ Includes \$4,344,177 adjustment to withdrawal liability payments held as receivable as of the end of the prior plan year.

Exhibit 3.3

Investment Return

Market Value of Assets Annual Rate of Investment Return					
Annual Rate for One-Year Period			Average Annual Rate for Period Ending December 31, 2021		
Plan Year Ending December 31,	All Assets	Non- Dedicated Assets	Period	All Assets	Non-Dedicated Assets
2021	15.45%	17.65%	1	15.45%	17.65%
2020	11.53%	10.20%	2	13.47%	13.86%
2019	16.45%	17.06%	3	14.46%	14.92%
2018	-1.76%	-1.74%	4	10.17%	10.51%
2017	13.08%	13.90%	5	10.75%	11.18%
2016	7.84%	7.95%	6	10.26%	10.63%
2015	1.78%	2.22%	7	9.00%	9.39%
2014	7.56%	7.56%	8	8.82%	9.16%
2013	12.59%	15.25%	9	9.23%	9.82%
2012	11.93%	13.15%	10	9.50%	10.15%
2011	6.26%	5.35%	11	9.20%	9.70%
2010	13.53%	14.87%	12	9.56%	10.13%
2009	10.96%	12.60%	13	9.66%	10.31%
2008	-20.58%	-25.23%	14	7.17%	7.29%
2007	5.41%	5.67%	15	7.05%	7.18%
2006	10.61%	12.98%	16	7.27%	7.54%
2005	6.05%	6.55%	17	7.20%	7.48%
2004	9.49%	10.22%	18	7.32%	7.63%
2003	16.33%	20.76%	19	7.78%	8.28%
2002	-2.29%	-7.56%	20	7.25%	7.43%

All rates reflect total investment return, net of investment-related expenses.

Exhibit 3.4

Actuarial Value of Assets (January 1, 2022)

Non-Dedicated Asset Reconciliation (\$ in thousands)

Year	(1) Market Value of Assets beginning of year	(2) Contributions*	(3) Non- Dedicated Benefit Payments	(4) Operating Expenses	(5) Other Transactions	(6) Cash Flow (2)-(3)- (4)+(5)	(7) Actual Investment Income	(8) Market Value of Assets End of Year (1)+(6)+(7)
2021	\$46,782,707	\$2,370,820	\$2,844,205	\$121,625	\$0	(\$595,010)	\$8,203,032	\$54,390,729
2020	43,056,314	2,219,837	2,737,947	116,860	0	(634,970)	4,361,363	46,782,707
2019	37,399,792	2,078,312	2,635,035	108,827	0	(665,550)	6,322,072	43,056,314
2018	38,780,595	1,948,038	2,553,877	108,215	0	(714,054)	(666,749)	37,399,792

Development of the Actuarial Value of Assets (\$ in thousands)

Year	Market Investment Rate of Return	Market Investment Return	Expected Investment Return	Difference between Actual and Expected
2021	17.65%	\$8,203,032	\$3,021,843	\$5,181,189
2020	10.20	4,361,363	2,885,221	1,476,142
2019	17.06	6,322,072	2,595,085	3,726,987
2018	(1.74)	(666,749)	2,689,650	(3,356,399)

Market Value of Non-Dedicated Assets on January 1, 2022	\$	54,390,729
Subtract 80% of \$5,181,189 gain		(4,144,951)
Subtract 60% of \$1,476,142 gain		(885,685)
Subtract 40% of \$3,726,987 gain		(1,490,795)
Add 20% of \$3,356,399 loss		<u>671,280</u>
Actuarial Value of Non-Dedicated Assets on January 1, 2022	\$	48,540,578
Preliminary Non-Dedicated Actuarial Value as a Percentage of Market Value		89.2%
Actuarial Value of Non-Dedicated Assets (limited to 80%-120% of Market Value)	\$	48,540,578
Actuarial Value of Dedicated Funds: SBA (see Appendix C)		2,402,582
Actuarial Value of Assets on January 1, 2022	\$	50,943,160

* Includes actual withdrawal liability payments made during the plan year.

**Exhibit 3.4
(Continued)**

Operation of the Actuarial Asset Valuation Method for Non-Dedicated Assets (\$ in thousands)

Investment Gain / (Loss) Recognized as of January 1, 2022										
Year	Investment Gain / (Loss) Market over Actuarially Expected					Investment Gain / (Loss) Recognized in Current Year	Investment Gain / (Loss) Recognized in Future Years			
		2017	2018	2019	2020		2021	2022	2023	2024
2017	\$2,371,530	\$474,306	\$474,306	\$474,306	\$474,306	\$474,306				
2018	(\$3,356,399)		(\$671,280)	(\$671,280)	(\$671,280)	(\$671,280)	(\$671,280)			
2019	\$3,726,987			\$745,397	\$745,397	\$745,397	\$745,397	\$745,397		
2020	\$1,476,142				\$295,228	\$295,228	\$295,228	\$295,228	\$295,228	
2021	\$5,181,189					\$1,036,238	\$1,036,238	\$1,036,238	\$1,036,238	\$1,036,238
Net Gains / (Losses) Recognized by Year						\$1,879,890	\$1,405,584	\$2,076,864	\$1,331,466	\$1,036,238
Interest on Prior Year Gains / (Losses)						\$165,675	\$380,260	\$288,897	\$153,901	\$67,356
Additional Gains / (Losses) Recognized in Current year because of 80% - 120% Corridor						\$0				
Total Gain / (Loss) Recognized by year						\$2,045,565	\$1,785,844	\$2,365,761	\$1,485,367	\$1,103,593
Total Gains / (Losses) Deferred and to be Recognized in Future Years						\$5,850,151	\$4,444,568	\$2,367,704	\$1,036,238	\$0

Exhibit 3.5

Net Cash Flow for Total Fund

(\$ in thousands)

December 31,	Contributions	Operating Expenses	Benefit Payments	Net Cash Flow	Net Investment Income	Net Cash Flow + Investment Income
2002	\$1,030,563	\$57,454	\$1,557,808	\$(584,699)	\$(550,761)	\$(1,135,460)
2003	1,068,717	59,761	1,649,918	(640,962)	3,741,095	3,100,133
2004	1,117,378	59,232	1,746,603	(688,457)	2,466,296	1,777,839
2005	1,199,154	64,061	1,838,524	(703,431)	1,679,009	975,578
2006	1,258,898	71,638	1,919,384	(732,124)	3,045,672	2,313,548
2007	1,320,358	73,833	1,996,396	(749,871)	1,677,254	927,383
2008	1,350,530	80,375	2,059,601	(789,446)	(6,570,632)	(7,360,078)
2009	1,264,683	87,502	2,154,335	(977,154)	2,683,399	1,706,245
2010	1,276,476	84,716	2,232,529	(1,040,769)	3,537,349	2,496,580
2011	1,322,549	83,757	2,305,404	(1,066,612)	1,792,951	726,339
2012	1,367,269	83,759	2,367,600	(1,084,090)	3,502,770	2,418,680
2013	1,431,091	87,541	2,458,053	(1,114,503)	3,974,410	2,859,907
2014	1,544,129	88,635	2,530,265	(1,074,771)	2,620,954	1,546,183
2015	1,596,395	93,897	2,598,766	(1,096,268)	645,209	(451,059)
2016	1,705,556	98,841	2,676,620	(1,069,905)	2,802,657	1,732,752
2017	1,828,897	101,978	2,756,869	(1,029,950)	4,905,291	3,875,341
2018	1,948,038	108,215	2,833,944	(994,121)	(727,420)	(1,721,541)
2019	2,078,312	108,827	2,900,499	(931,014)	6,533,148	5,602,134
2020	2,219,837	116,860	2,988,567	(885,590)	5,226,350	4,340,760
2021	2,370,820	121,625	3,079,705	(830,510)	7,680,757	6,850,247
Total						
as of 12/31/21	\$30,299,650	\$1,732,507	\$46,651,390	(\$18,084,247)	\$50,665,758	\$32,581,511

SECTION 4

Contribution Requirements and Amortization Period

In this section, we calculate the projected ERISA minimum Funding Standard Account and the maximum tax-deductible limit under the Internal Revenue Code. Under the law, an Enrolled Actuary must calculate costs using an approved actuarial cost method and actuarial assumptions which, in combination, are the actuary's best estimate of future Plan experience. We also determine the Plan's Amortization Period which provides the Trustees an additional indication of the Plan's ability to pay all benefits expected to be paid for by the Plan. Our actuarial cost method and assumptions are fully explained in Appendix C: the following discussion explains only the highlights of our cost method.

The actuarial liability is made up of liabilities for benefits being paid to current retirees and their beneficiaries and of liabilities that are projected to be paid to future retirees for service rendered to the date of the actuarial valuation. The chart below illustrates the allocation of the actuarial liability among these categories of participants.

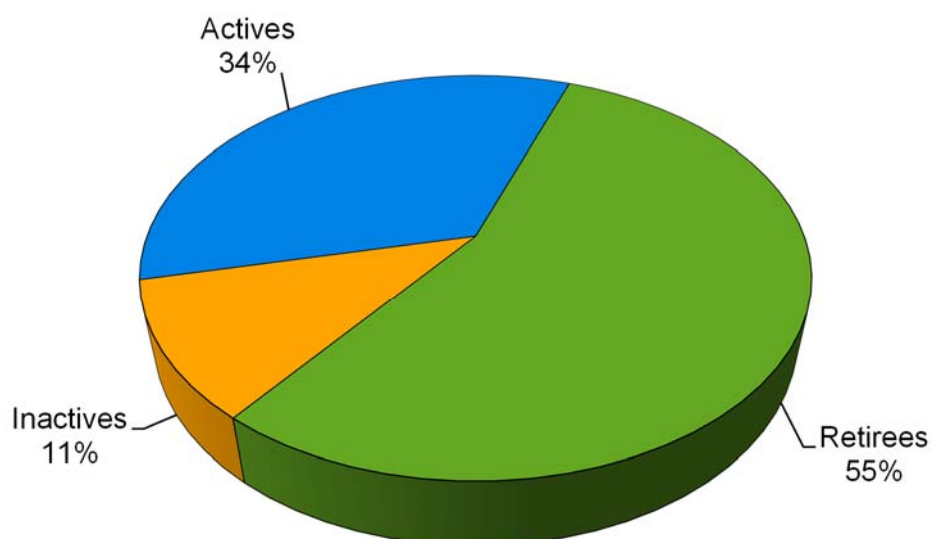


Exhibit 4.1 contains information on the actuarial balance sheet. Plan requirements consist of the actuarial liability on January 1, 2022. As illustrated above, 66% of the Plan's liabilities are for benefits to be paid to participants for whom contributions are no longer being made to the Plan.

Exhibit 4.2 details the changes in the value of the Plan's unfunded actuarial liability from January 1, 2021, to January 1, 2022. Unfunded actuarial (accrued) liability changes during the year result from benefit accruals, contributions to the Plan, and actuarial gains and losses, which arise from actual experience different from expected. Changes to Plan provisions, actuarial assumptions, or the Plan's funding method can also impact the unfunded actuarial liability.

This year's normal cost is shown in Exhibit 4.3. The normal cost is the annual cost of benefits allocated to a plan year by the cost method and includes an allowance for non-investment expenses expected during the plan year. The Normal Cost in this report reflects a 1.6% accrual rate for hours worked during 2022.

ERISA Minimum Funding Requirements

Exhibit 4.4 details the entries to the Plan's Funding Standard Account for the plan year ending December 31, 2021.

Exhibit 4.5 projects the Plan's Funding Standard Account through December 31, 2022 and provides detail on the amortization charges and credits. A positive credit balance is produced by cumulative contributions sufficient to pay normal costs and to amortize the unfunded actuarial liability faster than required.

Maximum Deductible Contribution

Exhibit 4.6 calculates the maximum deductible contribution for the 2022 plan year. The anticipated contributions are less than the maximum deductible contribution and are therefore expected to be fully deductible.

Amortization Period

Exhibit 4.7 displays the calculation of the period to amortize the Plan's unfunded actuarial liability using the actuarial value of assets and the market value of assets.

Exhibit 4.1

**Actuarial Balance Sheet
(January 1, 2022)**

**Requirements
(\$ in thousands)**

Actuarial Liability		
Retired Participants		\$ 28,771,176
Vested Inactive Participants		5,779,913
Active Participants		
Retirement	\$ 15,451,402	
Vested Withdrawal	1,183,260	
Death	274,924	
Disability	<u>536,070</u>	<u>17,445,656</u>
Total Actuarial Liability		\$ 51,996,745

**Resources
(\$ in thousands)**

Actuarial Value of Assets		\$ 50,943,160
Unfunded Actuarial Liability		<u>1,053,585</u>
Total		\$ 51,996,745

Exhibit 4.2

Analysis of Change in the Unfunded Actuarial Liability (January 1, 2022)

Expected Unfunded Actuarial Liability on January 1, 2022	(\$ in thousands)
Unfunded Actuarial Liability as of January 1, 2021	\$ 3,172,654
Normal Cost, Including Expenses	1,759,317
Interest on the above items	350,183
Contributions	(2,370,820)
Interest on Contributions	<u>(64,257)</u>
Expected Unfunded Actuarial Liability as of January 1, 2022	\$ 2,847,077
Changes	
Assumption changes	\$ (4,474)
Discount rate change on dedicated funds	22,983
Method Change	0
Data Updates	26,117
Demographic (Gain)/Loss	(162,968)
Expense (Gain)/Loss	1,981
Asset (Gain)/Loss	<u>(1,677,131)</u>
Total	<u>(1,793,492)</u>
Unfunded Actuarial Liability on January 1, 2022	\$ 1,053,585

Exhibit 4.3

Normal Cost (January 1, 2022)

Unit Credit Normal Cost (\$ in thousands)

Retirement	\$	1,392,580	
Vested Withdrawal		217,400	
Death		22,892	
Disability		<u>59,220</u>	\$ 1,692,092 ⁽¹⁾

New Entrant Adjustment 44,533

Expenses (\$125,000,000 Payable Monthly) 120,828

Total Normal Cost (Beginning of Year) \$ 1,857,453

⁽¹⁾Based on 1.6% accrual rate for expected hours worked during 2022

Exhibit 4.4

Funding Standard Account (Year Ending December 31, 2021)

Charges to Funding Standard Account	(\$ in thousands)
Prior Year Fund Deficiency, if any	\$ 0
Normal Cost for Year	1,759,317
Amortization Charges	850,781
Interest on Fund Deficiency, Normal Cost, and Amortization Charges	<u>169,656</u>
Total Charges	\$ 2,779,754
Credits to Funding Standard Account	
Prior Year Credit Balance, if any	\$ 5,748,493
Employer Contributions	2,370,820
Amortization Credits	0
Interest on Credit Balance, Amortization Credits, and Contributions	<u>437,909</u>
Total Credits	\$ 8,557,222
Balance	
Credit Balance, if any	\$ 5,777,468

Exhibit 4.5

Projected Funding Standard Account (Year Ending December 31, 2022)

Charges to Funding Standard Account	(\$ in thousands)
Prior Year Fund Deficiency, if any	\$ 0
Normal Cost for Year	1,857,453
Amortization Charges*	657,169
Interest on Fund Deficiency, Normal Cost, and Amortization Charges	<u>163,450</u>
Total Charges	\$ 2,678,072
Credits to Funding Standard Account	
Prior Year Credit Balance, if any	\$ 5,777,468
Expected Employer Contributions	2,500,000
Amortization Credits*	0
Interest on Credit Balance, Amortization Credits, and Contributions	<u>455,925</u>
Total Credits	\$ 8,733,393
Balance	
Projected Credit Balance, if any	\$ 6,055,321
Minimum Required Contribution	\$ 0

* See table on the following page for detail.

Amortization Bases

The following table shows the various entries used to establish the year-by-year charges and credits with respect to the Funding Standard Account.

Before Combined/Offset

(\$ in thousands)					
	Year Established	Original Balance	01/01/2022 Balance	Years Remaining	Amortization Payment
Charges					
2008 Net Investment Loss	2009	\$4,407,752	\$3,383,718	16.000	\$325,274
2008 Net Investment Loss	2010	\$588,120	\$456,716	16.000	\$43,904
2008 Net Investment Loss	2011	\$671,272	\$527,820	16.000	\$50,739
2008 Net Investment Loss	2012	\$467,560	\$372,647	16.000	\$35,822
2008 Net Investment Loss	2013	\$875,912	\$708,427	16.000	\$68,101
2008 Net Investment Loss	2014	\$1,635,968	\$1,344,404	16.000	\$129,236
Prior Combined/Offset Base	2021	\$1,888,981	\$1,801,208	12.897	\$197,710
Assumption Change	2022	\$18,509	\$18,509	15.000	\$1,848
<i>Total Charges</i>			\$8,613,449		\$852,634
Credits					
Experience Gain	2022	\$1,782,396	\$1,782,396	15.000	\$177,993
<i>Total Credits</i>			\$1,782,396		\$177,993
Net Charges/(Credits)			\$6,831,053		\$674,641

Combined/Offset

(\$ in thousands)					
	Year Established	Original Balance	01/01/2022 Balance	Years Remaining	Amortization Payment
Charges					
2008 Net Investment Loss	2009	\$4,407,752	\$3,383,718	16.000	\$325,274
2008 Net Investment Loss	2010	\$588,120	\$456,716	16.000	\$43,904
2008 Net Investment Loss	2011	\$671,272	\$527,820	16.000	\$50,739
2008 Net Investment Loss	2012	\$467,560	\$372,647	16.000	\$35,822
2008 Net Investment Loss	2013	\$875,912	\$708,427	16.000	\$68,101
2008 Net Investment Loss	2014	\$1,635,968	\$1,344,404	16.000	\$129,236
Combined Offset Base	2022	\$37,321	\$37,321	12.915	\$4,093
<i>Total Charges</i>			\$6,831,053		\$657,169
Credits					
		\$0	\$0		\$0
<i>Total Credits</i>		\$0	\$0		\$0
Net Charges/(Credits)			\$6,831,053		\$657,169

Exhibit 4.6

Maximum Tax-Deductible Contribution (Plan Year Ending December 31, 2022) (\$ in thousands)

**1. Ten Year Amortization Limitation:
(IRC Section 404(a)(1)(A)(iii))**

Normal Cost	\$	1,857,453		
Amortization of Unfunded Actuarial Liability	+	137,614		
Interest	+	<u>129,679</u>	\$	2,124,746

**2. Full Funding Limitation:
(IRC Section 412(c)(7)(A)(i))**

Actuarial Liability at Beginning of Year	\$	51,996,745		
Unit Credit Normal Cost, including expenses, at Beginning of Year	+	1,857,453		
Test Value of Assets, at Beginning of Year	-	50,943,160		
Interest	+	<u>189,218</u>	\$	3,100,256

3. Unfunded Current Liability

90% of Current Liability, at End of Year	\$	94,949,397		
Actuarial Value of Assets Projected to End of Year	-	<u>51,026,279</u>	\$	43,923,118

**4. Unfunded Current Liability Limitation:
(IRC Section 404(a)(1)(D))**

140% of Current Liability at Year End	\$	147,699,062		
Actuarial Value of Assets at Year End	-	<u>50,894,670</u>		
Unfunded Current Liability			\$	96,804,392

**5. Maximum Tax-Deductible Contribution
Lesser of (1) or (2), but not less than (3) or (4)**

\$ 96,804,392

There are alternative calculations of the Maximum Deductible Contribution under IRC Section 404 that may produce a different amount than illustrated above. Please consult your tax advisors regarding the deductibility of cash contributions.

Exhibit 4.6 (Continued)

The current liability defined under IRC Section 404(a)(1)(D) is developed in the following table. Current liability is determined using a 1.91% interest assumption and mortality as specified by the IRS. The 1.91% interest assumption is within the required corridor of the weighted average of 30-Year Treasury Bond Rates published by the IRS.

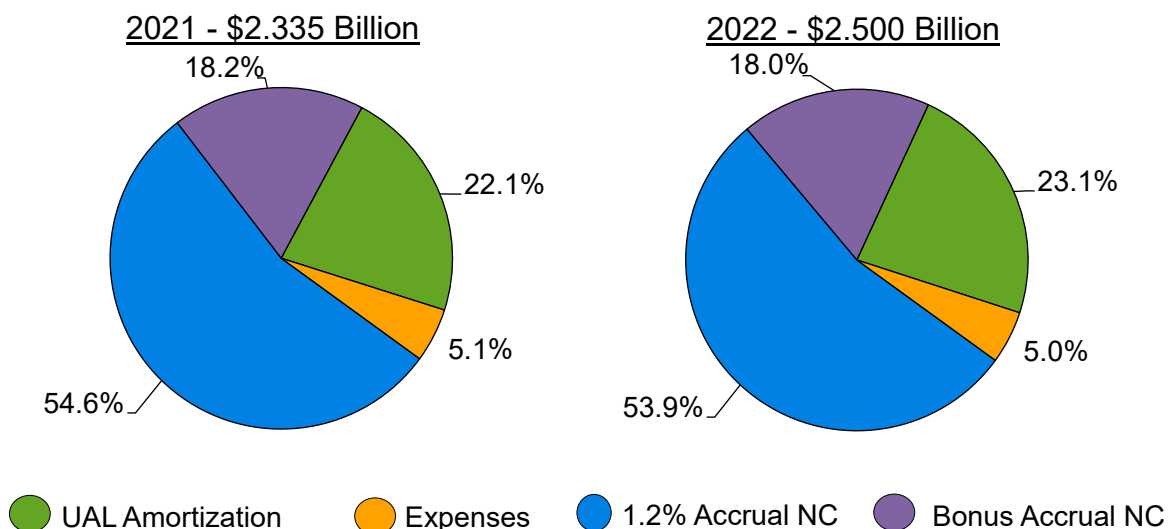
	(\$ in thousands)
Current Liability, Beginning of Year	
Retirees	\$ 44,673,622
Vested Inactive Participants	13,548,699
Active Participants	<u>43,362,076</u>
Total	\$ 101,584,397
Changes Expected During 2022 Plan Year	
Accrual of Benefits	\$ 5,036,332
Expected Benefit Payments	- 3,128,123
Interest	<u>+ 2,006,724</u>
Total	\$ 3,914,933
Current Liability, End of Year	\$ 105,499,330

Exhibit 4.7 Amortization Period

Exhibit 4.7 shows the amortization periods as of the current and prior valuation dates.

(\$ in thousands)		
	January 1, 2021	January 1, 2022
a. Estimated Employer Contributions	\$2,335,000	\$2,500,000
b. Initial Expense Assumption	\$120,000	\$125,000
c. Normal Cost (payable monthly)		
1. Long-Term at 1.2% Accrual Rate	\$1,275,050	\$1,347,443
2. Temporary Increase in Accrual Rate	\$425,016	\$449,148
d. Estimated First Year Employer Contribution to Amortize Unfunded Actuarial Liability (a.-b.-c.)	\$514,934	\$578,409
e. Unfunded Actuarial Liability	\$3,172,654	\$1,053,585
f. Amortization Period	5.6 years	2.0 years
g. Funding Shortfall on a Market Value basis	\$212,707	\$0
h. Estimated Period to Amortize the Unfunded Actuarial Liability using Market Value of Assets	0.4 years	0.0 years

Estimated Employer Contributions



The bonus accrual shown above is the impact of increasing the accrual rate to 1.60% for hours worked in 2021 and 2022.

SECTION 5 Funded Status

In this section, we provide the Plan's funded status by comparing the Fund's Market Value of Assets with the Actuarial Present Value of Accumulated Plan Benefits and the Plan's Present Value of Vested Benefits under FASB ASC Topic 960. As shown on Exhibit 5.1, the Market Value of the Plan's Assets is less than the Present Value of Accumulated Plan Benefits as of December 31, 2021. Exhibit 5.2 shows the change in the Present Value of Accumulated Plan Benefits from December 31, 2020 to December 31, 2021.

Exhibit 5.3 shows the Plan's Unfunded Vested Benefits Liability for purposes of determining withdrawal liability. As of December 31, 2021, the Assets for Withdrawal Liability are greater than the Present Value of Vested Benefits. This determination will impact withdrawal liability calculations for employers withdrawing from the Plan during the 2022 plan year.

Exhibit 5.1

Statement of Actuarial Present Value of Accumulated Plan Benefits

	FASB ASC Topic 960 (\$ in thousands)	
	December 31, 2020	December 31, 2021
Vested Benefits		
Retirees & Beneficiaries	\$ 28,059,121	\$ 28,767,608
Vested Inactive Participants	5,557,251	5,779,536
Active Participants	14,401,214	14,950,895
Total	\$ 48,017,586	\$ 49,498,039
Non-Vested Benefits		
Active and Other Non-Vested Benefits	2,312,706	2,498,706
Total	\$ 2,312,706	\$ 2,498,706
Actuarial Present Value of Accumulated Plan Benefits	\$ 50,330,292	\$ 51,996,745
Assets		
Market Value of Assets (MVA)	\$ 50,117,585	\$ 56,967,832
Actuarial Value of Assets (AVA)	\$ 47,157,638	\$ 50,943,160
Funding Ratios		
Ratio of MVA to Present Value of Vested Benefits	104.4%	115.1%
Ratio of MVA to Present Value of Accumulated Plan Benefits	99.6%	109.6%
PPA Funding Ratio		
Ratio of AVA to Present Value of Accumulated Plan Benefits	93.7%	98.0%

Exhibit 5.2

Statement of Changes in Actuarial Present Value of Accumulated Plan Benefits

	(\$ in thousands)
Value as of December 31, 2020	\$ 50,330,292
Changes	
Benefits Accumulated	1,643,322
Data Updates	26,117
Actuarial (Gain)/Loss	(162,968)
Interest	3,221,178
Benefit Payments	(3,079,705)
Assumption Changes	18,509
Net Change	\$ 1,666,453
 Value as of December 31, 2021	 \$ 51,996,745

Exhibit 5.3

Unfunded Vested Benefit Liability

	(\$ in thousands)	
	<u>December 31, 2020</u>	<u>December 31, 2021</u>
Actuarial Present Value of Vested Benefits		
Active Participants	\$ 14,401,214	\$ 14,950,895
Vested Inactive Participants	5,557,251	5,779,536
Retirees & Beneficiaries	<u>28,059,121</u>	<u>28,767,608</u>
Total	\$ 48,017,586	\$ 49,498,039
Assets for Withdrawal Liability	\$ <u>47,157,638</u>	\$ <u>50,943,160</u>
Unfunded Vested Benefit Liability	\$ 859,948	\$ 0
Excess of the Assets for Withdrawal Liability over the Vested Benefit Liability	NA	\$ 1,445,121
Percentage Funded	98.2%	102.9%

SECTION 6

Risk Disclosure, History, and Projections

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these differences when making decisions that may affect the future financial health of the Plan.

Actuarial Standard of Practice No. 51 (ASOP 51) addresses these issues by providing actuaries with guidance for assessing and disclosing the risk associated with measuring pension liabilities and the determination of pension plan contributions. Specifically, it directs the actuary to:

- Identify risks that may be significant to the Plan.
- Assess the risks identified as significant to the Plan.
- Disclose plan maturity measures and historical information that are significant to understanding the Plan's risks.

Below is a summary of the significant risks that could impact the plan. **Exhibit 6.1** displays historical statistics. **Exhibit 6.2** displays plan maturity measures. **Exhibit 6.3** provides a projection of benefit payments on a closed group basis.

Investment Risk

Definition: Investment risk is the potential that investment returns will be different than expected.

Identification: To the extent that actual investment returns differ from the assumed investment return, the Plan's future assets, funding contributions, and funded status may differ significantly from those presented in this valuation. Because the Plan's liabilities do not change as a result of the Plan's investment returns (this mismatch is sometimes referred to as asset / liability mismatch risk), investment returns less than expected can result in significantly different funded status in the future than expected. This is best illustrated through funding projections.

Assessment: Approximately 3.5% of the plan's liabilities are matched by a dedicated bond portfolio and are substantially insulated from investment risk. The annualized return for the plan's non-dedicated assets has been 10.15% over the last 10 years, and 7.43% over the last 20 years. The 20-year return reflects the -25.2% net investment return in 2008. Exhibit 3.3 provides more detail on the actual annual return on all assets and the non-dedicated assets.

Interest Rate Risk

Definition: Interest rate risk is the potential that interest rates will be different than expected.

Identification: The non-dedicated pension liabilities have been calculated by using the interest rate described in Appendix C, currently 6.50%. If interest rates in future valuations differ from this valuation, future pension liabilities, funding contributions, and the Plan's funded status may differ significantly from those presented in this valuation. As a general rule, using a lower interest rate will result in a higher pension liability, and vice versa. One aspect that can be used to estimate the impact of different interest rates is a plan's duration.

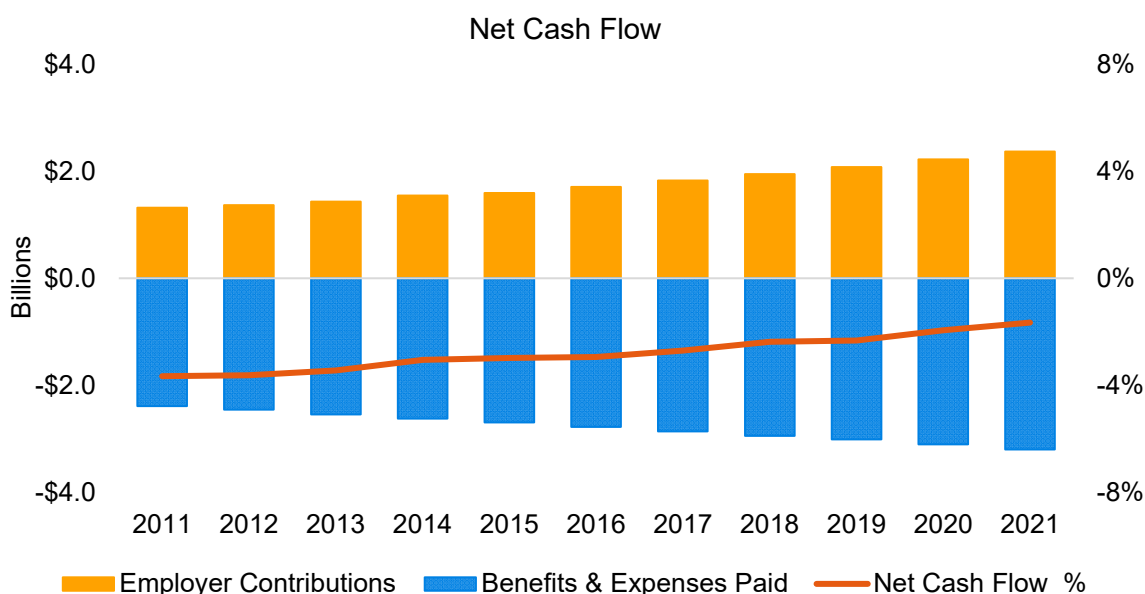
Assessment: If the interest rate changes by 1%, the estimated percentage change in pension liability is a plan's duration in years. The approximate duration of the plan's non-dedicated pension liability is 12 years as of the current valuation date. As such, if the interest rate changes by 1%, the estimated change in non-dedicated pension liability is about 12%.

Liquidity Risk

Definition: Liquidity risk is the potential that assets must be liquidated at a loss earlier than planned in order to pay for the plan’s benefits and operating costs. This risk is meaningfully heightened for plans with significant negative cash flow, in which contributions are substantially less than annual benefit payments plus expenses.

Identification: The plan has negative annual cash flow because the sum of benefit payments plus operating expenses is larger than contributions. The plan also has an allocation to illiquid assets such as real estate and private equity. As a result, there is a risk that assets may need to be liquidated at a loss before planned in order to pay benefits and expenses.

Assessment: *Negative Cash-flow.* The plan’s negative cash-flow has improved from -3.7% during 2011 to -1.7% during 2021 as a percent of the beginning of year market value of assets. As such, the investment return required to cover the negative cash-flow has declined over this time period. If we exclude the assets and benefit payments associated with the dedicated bond portfolios, the negative cash-flow was -2.1% during 2011 and -1.3% during 2021. The benefit payments associated with the dedicated bond portfolios are guaranteed by Prudential and therefore not subject to liquidity risk.



Illiquid Assets. The Plan’s investment consultant regularly conducts liquidity tests to maintain a sufficient level of liquid assets to make benefit payments.

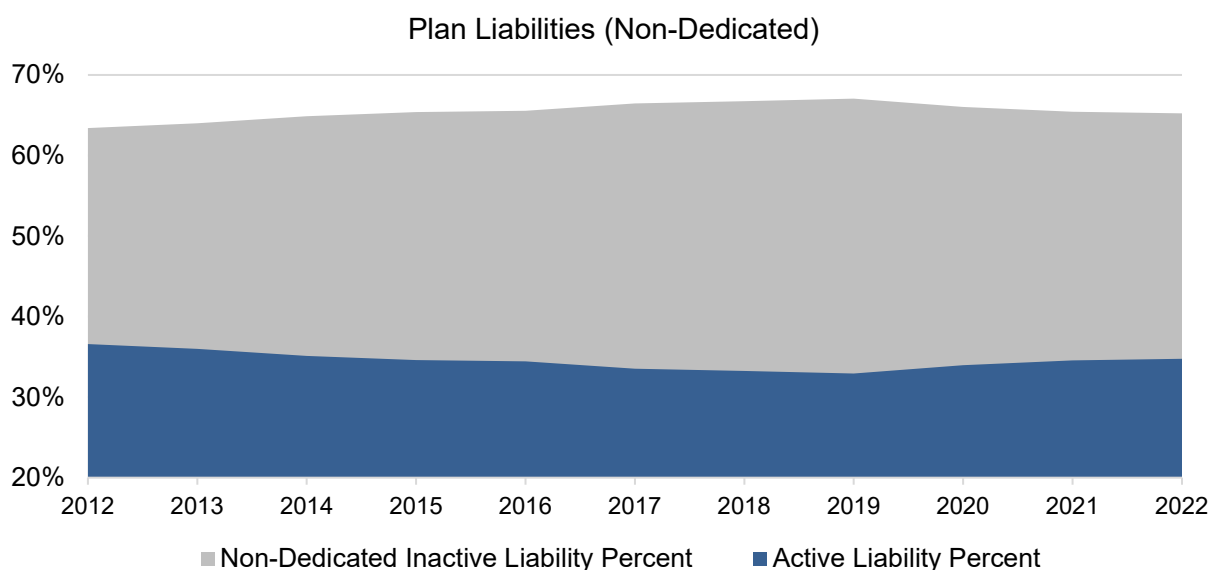
Maturity Risk

Definition: Maturity risk is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time.

Identification: The plan is subject to maturity risk because as plan assets and liabilities continue to grow, the impact of any gains or losses on the assets or liabilities also becomes larger.

Assessment: A portion of retiree liability is covered by a dedicated bond portfolio, mitigating some maturity risk. The ratio of the Plan’s non-dedicated inactive liability to total non-dedicated liability rose from 63% at January 1, 2012 to 65% at January 1, 2022.

As of the valuation date, non-dedicated assets are equal to about 53 times the expected annual contributions net of expenses and Normal Cost, based on a 1.2% accrual rate, indicating a one-year non-dedicated asset loss of 10% would be equal to about 5.3 times the expected annual net contributions.



Contribution Risk

Definition: Contribution risk is the possibility that actual future contributions are lower than expected future contributions.

Identification: Future annual contributions are assumed to continue at the same level as the previous year for the Pension Protection Act of 2006 (PPA) actuarial certification. To the extent that actual contributions differ from assumed contributions the Plan’s future funded percentage and PPA zone status may be different.

Assessment: Actual annual contributions have increased from about \$1.4 billion in 2012 to about \$2.4 billion in 2021. Actual annual contributions have exceeded the assumed level of contributions in each plan year after 2010. One employer contributed about 53% of total contributions to the plan in 2021.

Retirement Risk

Definition: Retirement risk is the potential for participants to retire and receive subsidized benefits more valuable than expected.

Identification: The plan has unreduced (PEER) early retirement benefits. If participants retire at earlier ages than anticipated by the actuarial assumptions, it is expected that additional funding will be required.

Assessment: The actual to expected ratio of retirements for active participants who are eligible for unreduced PEER early retirement benefits during the period from January 1, 2013 through December 31, 2021 was 84% indicating that the number of active participants recently electing unreduced early retirement benefits has been less than expected.

Other Demographic Risks

Definition: Other demographic risks include the potential that mortality or other demographic experience will be different than expected.

Identification: The liabilities reported herein have been calculated by assuming that participants will follow patterns of demographic experience (e.g., mortality, withdrawal, disability, retirement, form of payment election, etc.) as described in Appendix C. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, funding contributions, and funded status may differ significantly from those presented in this valuation.

Assessment: Based on the most recent annual experience study, the aggregate actual to expected experience is shown below. A ratio of 100% means actual experience matched expected experience.

Demographic Assumption	Aggregate Actual to Expected Experience Ratio
Mortality	107%
Retirement	84%
Termination	107%

The experience of some demographic groups pose a greater risk to the plan than other groups. For example, termination experience for seasonal members has less impact on plan costs than the termination experience for non-seasonal member. The smaller the group the lower the risk exposure, all other things equal.

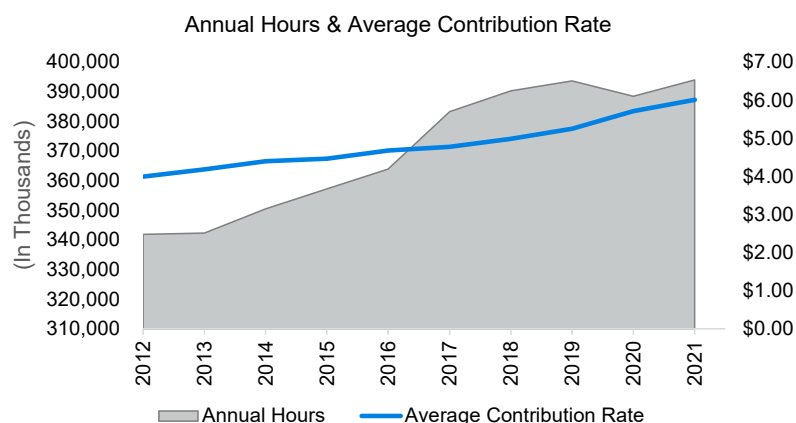
Covered Employment Risk

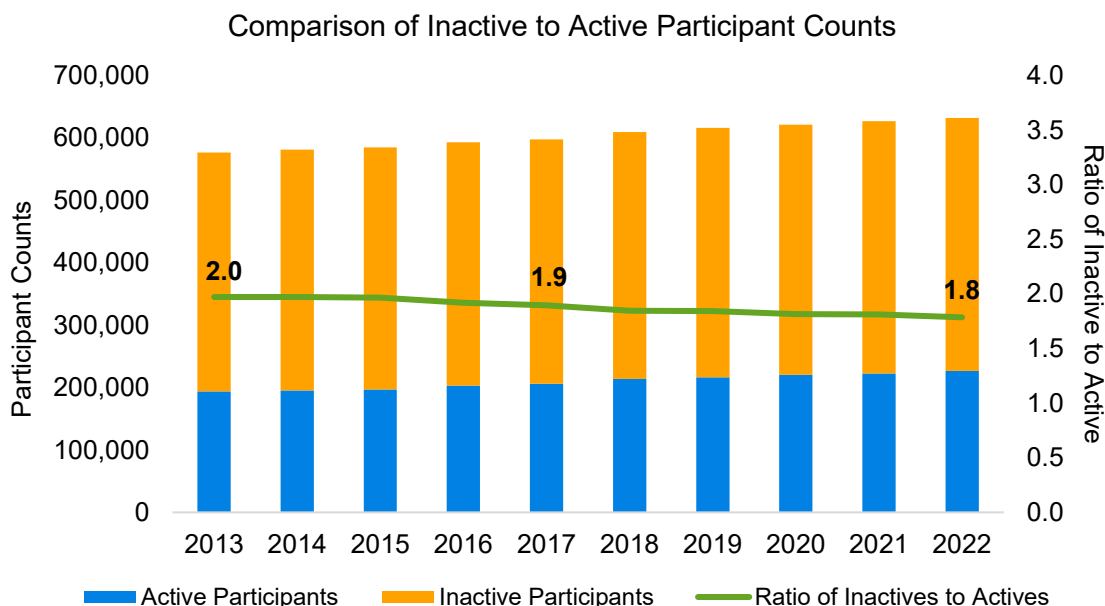
Definition: Covered employment risk is the potential that future covered employment is lower than expected due to a declining workforce in a company or industry, or a temporary workforce reduction due to market forces.

Identification: A significant reduction in the Plan’s contribution base can potentially threaten its ability to recover from another market downturn. A decline in the active population may require higher contributions to be paid on fewer active participants. Reduced contributions will also demand higher investment returns to make up for the contribution shortfall.

Assessment: The Plan’s contributory hours peaked at about 414 million hours in 2007 and have fluctuated since that time to about 342 million hours in 2013 and then to about 394 million hours for the most recent plan year. During the last 10 years, the average total contribution rate has changed from \$3.99 in 2012 to \$6.01 in 2021.

The Plan’s number of active participants has also fluctuated from 201,740 in 2011, to 194,080 in 2013 and then to 226,780 for the most recent plan year. There are currently 1.8 inactive participants for every active, and slightly over 1 retiree for every active.





Generally through 2011, annual hours and the number of active participants decreased; and there was a concurrent increase in the inactive to active ratio. However, these metrics have improved generally since 2011, returning to near 2008 levels. Further, the bargaining parties have negotiated higher contribution rates over this time period while the plan has been in the green zone.

Business Risk

Definition: Business risk is the potential that a company suffers a financial setback which impairs its ability to make contributions or withdrawal liability payments to the Plan.

Identification: If contributions cannot be recovered, it will shift the weight of maintaining/improving the Plan’s funded status upon the remaining employers of the Plan.

Assessment: The plan is sponsored by over 1,300 employers across more than 50 industries in 29 states. One employer contributed about 53% of total contributions to the plan in 2021. No significant employer has withdrawn from the plan since 2011, and new bargaining units have negotiated into the plan throughout the country.

PBGC premium risk

Definition: PBGC premium risk is the potential that Pension Benefit Guaranty Corporation (PBGC) premiums (\$32 per participant for 2022 for multiemployer plans increasing to \$52 per participant by 2031) increase significantly. Any additional significant increases in premiums will divert needed contributions away from restoring or maintaining the plan’s funded status and may require benefit changes or increases to employer contributions.

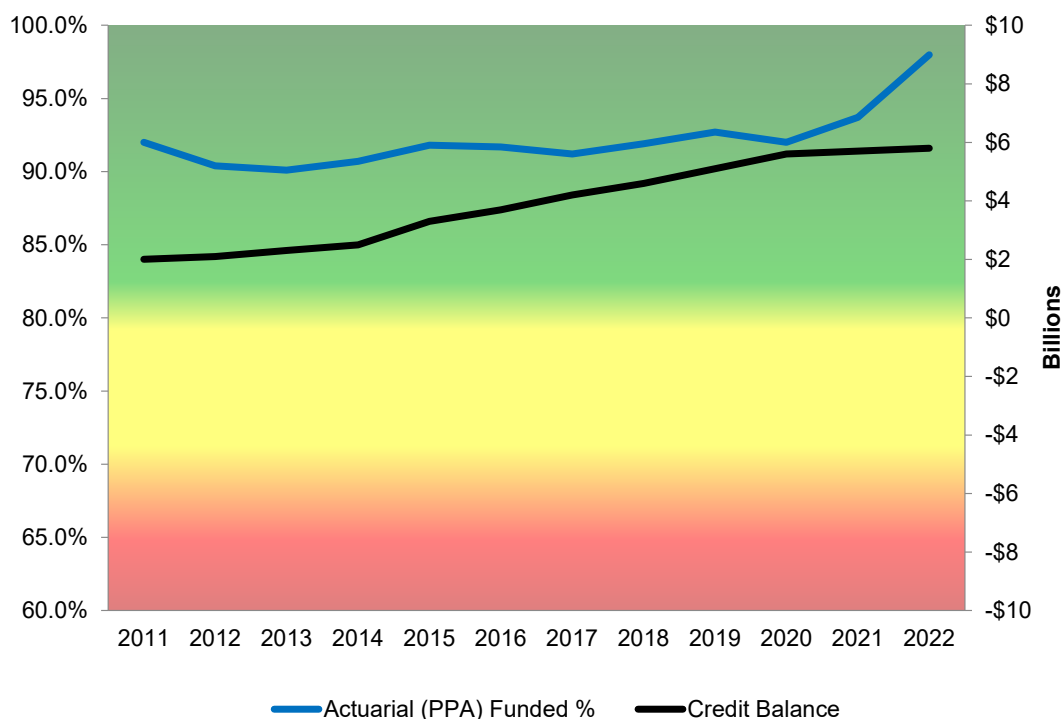
Identification and Assessment: All multiemployer plans are subject to the risk that PBGC premiums will increase beyond what has already been announced. Although the enactment of the American Rescue Plan Act of 2021 is expected to significantly extend the PBGC’s solvency and limits future premium increases, future lawmakers could increase premiums further.

Zone Status Risk

Definition: Zone status risk is the potential that the Plan will deteriorate to a zone status such that the Trustees would need to take action to improve the Plan’s funded status through the development of a recovery plan that increases contributions, reduces benefits, or both.

Identification: The type of benefit reductions and/or contribution rate increases would depend on the zone status. Specifically, yellow zone plans are generally limited to reducing benefits, rights, and features on future accruals only. Red zone plans can reduce features on all accrued benefits (such as early retirement subsidies), but cannot reduce benefits to those in pay status. Deep red zone plans (critical and declining status) have the same tools as red zone plans, but can also apply to the Treasury to reduce benefits to participants and beneficiaries in pay status. Contribution rate increases can be sought by the Trustees if a plan is not in the green zone, and can be agreed to by the bargaining parties with regard to zone status.

Assessment: The plan has been in the green zone since 2008.



The plan’s PPA funded percentage for the 2022 actuarial certification was 98.1% before reflecting demographic experience, audited financial statements, and actuarial assumptions other than the assumed rate of return to discount liabilities. The PPA funded percentage is 98.0% after reflecting updated demographic information, updated plan assets, and other actuarial assumptions. The Plan’s approximate \$5.8 billion credit balance as of December 31, 2021 is about 2.3 times expected annual contributions. Both measurements are expected to increase into the future if all assumptions are met.

Exhibit 6.1

**Historical Statistics
(\$ in thousands)**

	<u>January 1, 2022</u>	<u>January 1, 2021</u>	<u>January 1, 2020</u>	<u>January 1, 2019</u>	<u>January 1, 2018</u>
<u>Actuarial Present Value of Accumulated Plan Benefits</u>					
Vested Benefits					
Retirees	\$ 28,767,608	\$ 28,059,121	\$ 26,783,764	\$ 25,888,473	\$ 25,209,307
Inactives	5,779,536	5,557,251	5,211,976	4,898,348	4,794,926
Actives	<u>14,950,895</u>	<u>14,401,214</u>	<u>13,279,224</u>	<u>12,034,445</u>	<u>11,835,063</u>
Total	\$ 49,498,039	\$ 48,017,586	\$ 45,274,964	\$ 42,821,266	\$ 41,839,296
Non-Vested Benefits	\$ 2,498,706	\$ 2,312,706	\$ 2,118,519	\$ 2,001,049	\$ 1,931,251
Accumulated Plan Benefits	\$ 51,996,745	\$ 50,330,292	\$ 47,393,483	\$ 44,822,315	\$ 43,770,547
Normal Cost (Benefits Only)	\$ 1,736,625	\$ 1,643,322	\$ 1,351,334	\$ 956,603	\$ 912,904
<u>Assets</u>					
Market Value of Fund	\$ 56,967,832	\$ 50,117,585	\$ 45,776,824	\$ 40,174,690	\$ 41,896,232
Market Value Return in Prior Year	15.45%	11.53%	16.45%	(1.76)%	13.08%
Actuarial Value for Funding	\$ 50,943,160	\$ 47,157,638	\$ 43,600,984	\$ 41,549,049	\$ 40,212,390
Credit Balance at End of Prior Year	\$ 5,777,468	\$ 5,748,493	\$ 5,591,603	\$ 5,057,235	\$ 4,593,954
PPA Funded Percentage	98.0%	93.7%	92.0%	92.7%	91.9%
<u>Actuarial (Gains) / Losses for prior year</u>					
Assumption, Discount, and Method	\$ 18,509	\$ 1,278,403	\$ 1,268,344	\$ (18,437)	\$ 66,731
Experience	(105,265)	176,877	213,073	28,631	150,987
Investment	<u>(1,677,131)</u>	<u>(1,606,433)</u>	<u>(190,813)</u>	<u>375,404</u>	<u>208,550</u>
Total	\$ (1,763,887)	\$ (151,153)	\$ 1,290,604	\$ 385,598	\$ 426,268
<u>Actuarial Assumptions</u>					
Interest Assumption	6.50%	6.50%	6.75%	7.00%	7.00%
Expected Contributions	\$ 2,500,000	\$ 2,335,000	\$ 2,115,000	\$ 1,955,000	\$ 1,857,000
Actual Contributions	TBD	\$ 2,370,820	\$ 2,219,837	\$ 2,078,312	\$ 1,948,038

Exhibit 6.1 (Continued)

**Historical Statistics
(\$ in thousands)**

	<u>January 1, 2017</u>	<u>January 1, 2016</u>	<u>January 1, 2015</u>	<u>January 1, 2014</u>	<u>January 1, 2013</u>
<u>Actuarial Present Value of Accumulated Plan Benefits</u>					
Vested Benefits					
Retirees	\$ 24,516,762	\$ 23,282,149	\$ 22,789,078	\$ 22,103,238	\$ 20,973,585
Inactives	4,626,756	4,591,771	4,494,421	4,422,913	4,464,195
Actives	<u>11,576,703</u>	<u>11,360,257</u>	<u>11,053,869</u>	<u>10,754,230</u>	<u>10,671,106</u>
Total	\$ 40,720,221	\$ 39,234,177	\$ 38,337,368	\$ 37,280,381	\$ 36,108,886
Non-Vested Benefits	\$ 1,846,548	\$ 1,840,022	\$ 1,830,243	\$ 1,835,647	\$ 1,756,561
Accumulated Plan Benefits	\$ 42,566,769	\$ 41,074,199	\$ 40,167,611	\$ 39,116,028	\$ 37,865,447
Normal Cost (Benefits only)	\$ 862,380	\$ 796,789	\$ 755,663	\$ 714,573	\$ 711,206
<u>Assets</u>					
Market Value of Fund	\$ 38,020,891	\$ 36,288,138	\$ 36,739,196	\$ 35,193,014	\$ 32,309,867
Market Value Return in Prior Year	7.84%	1.78%	7.56%	12.59%	1.93%
Actuarial Value for Funding	\$ 38,840,852	\$ 37,692,694	\$ 36,878,833	\$ 34,478,550	\$ 34,132,485
Credit Balance at End of Prior Year	\$ 4,177,724	\$ 3,727,967	\$ 3,304,054	\$ 2,466,164	\$ 2,277,520
PPA Funded Percentage	91.2%	91.7%	91.8%	90.7%	90.1%
<u>Actuarial (Gains) / Losses for prior year*</u>					
Assumption, Discount, and Method	\$ 513,564	\$ 60,201	\$ 220,371	\$ 227,644	Not Available
Experience	77,558	(28,716)	28,829	257,484	Not Available
Investment	<u>319,678</u>	<u>(546,445)</u>	<u>(117,358)</u>	<u>(190,186)</u>	<u>Not Available</u>
Total	\$ 910,800	\$ 595,930	\$ 131,842	\$ 294,942	Not Available
<u>Actuarial Assumptions</u>					
Interest Assumption	7.00%	7.00%	7.00%	7.00%	7.00%
Expected Contributions	\$ 1,735,000	\$ 1,617,000	\$ 1,500,000	\$ 1,401,000	\$ 1,375,000
Actual Contributions	\$ 1,828,897	\$ 1,705,556	\$ 1,596,395	\$ 1,544,129	\$ 1,431,091

*Actuarial Gains / Losses prior to 2014 are not available as valuation was performed by the prior actuary.

Exhibit 6.2

Plan Maturity Measures (\$ in thousands)

	<u>January 1, 2022</u>	<u>January 1, 2021</u>	<u>January 1, 2020</u>	<u>January 1, 2019</u>	<u>January 1, 2018</u>
<u>Actuarial Present Value of Accumulated Plan Benefits (Non-Dedicated)</u>					
Retirees	\$ 26,940,117	\$ 26,082,091	\$ 24,710,948	\$ 23,665,758	\$ 22,830,973
Inactives	5,779,913	5,557,271	5,211,995	4,898,382	4,794,963
Actives	<u>17,445,656</u>	<u>16,709,991</u>	<u>15,393,519</u>	<u>14,030,148</u>	<u>13,760,528</u>
Total Non-Dedicated Liability	\$ 50,165,686	\$ 48,349,353	\$ 45,316,462	\$ 42,594,288	\$ 41,386,464
Inactive Liability Percent	65%	65%	66%	67%	67%
Active Liability Percent	35%	35%	34%	33%	33%
<u>Participant Statistics</u>					
Retired Participants and Beneficiaries					
Number of Retirees and Beneficiaries	238,727	237,580	235,247	233,589	230,157
Total Annual Benefits (prior year)	\$ 3,079,705	\$ 2,988,567	\$ 2,900,499	\$ 2,833,944	\$ 2,756,869
Active Participants					
Number of Participants	226,780	222,840	220,540	216,520	214,100
Average Age	42.5	42.7	42.9	43.1	43.1
Average Credited Service	10.8	11.0	11.2	11.2	11.4
Total Annual Hours (in thousands)	TBD	393,929	388,432	393,583	390,281
Average Contribution Rate	TBD	\$ 6.01	\$ 5.71	\$ 5.25	\$ 4.98
Vested Inactive Participants					
Number of Participants	166,500	166,360	165,360	165,860	165,380
Ratio of Inactives to Actives	1.8	1.8	1.8	1.8	1.8
<u>Net Cash Flow</u>					
Employer Contributions	TBD	\$ 2,370,820	\$ 2,219,837	\$ 2,078,312	\$ 1,948,038
Benefit Payments	TBD	(3,079,705)	(2,988,567)	(2,900,499)	(2,833,944)
Operating Expenses	<u>TBD</u>	<u>(121,625)</u>	<u>(116,860)</u>	<u>(108,827)</u>	<u>(108,215)</u>
Net Cash Flow	TBD	\$ (830,510)	\$ (885,590)	\$ (934,014)	\$ (994,121)
Net Cash Flow as a percent of BOY Market Value of Fund	TBD	(1.7%)	(1.9%)	(2.3%)	(2.4%)
Ratio of Benefit Payments to Contributions	TBD	1.3	1.3	1.4	1.5

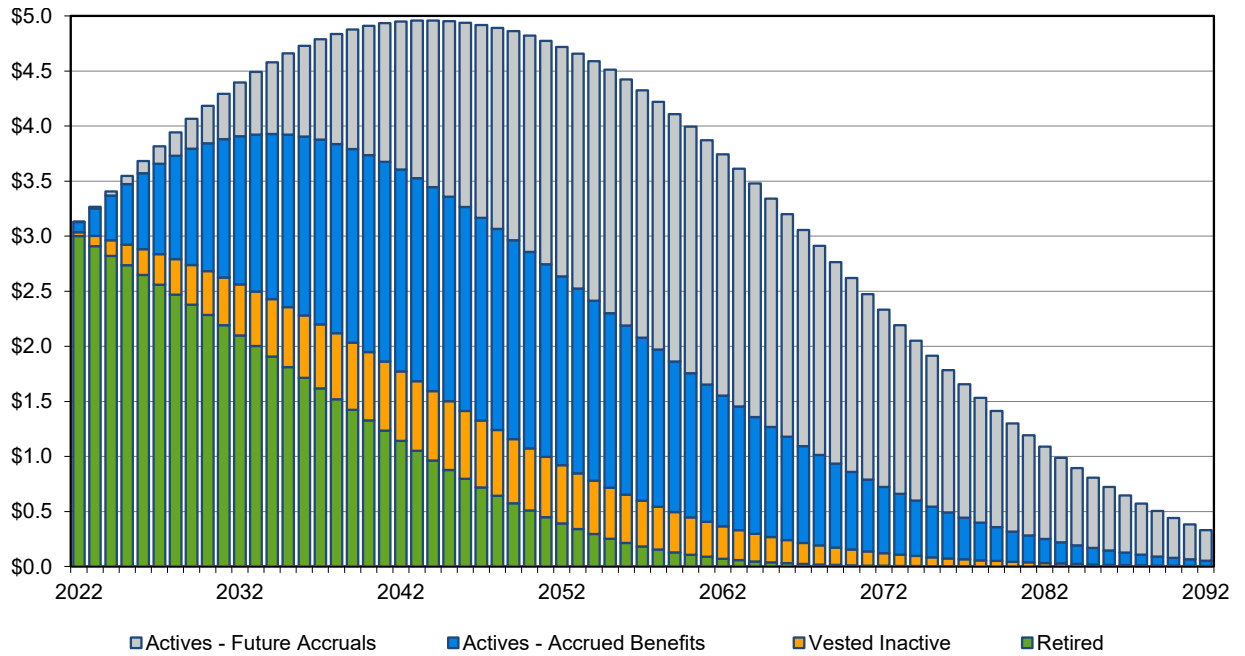
Exhibit 6.2 (Continued)

**Plan Maturity Measures
(\$ in thousands)**

	<u>January 1, 2017</u>	<u>January 1, 2016</u>	<u>January 1, 2015</u>	<u>January 1, 2014</u>	<u>January 1, 2013</u>
<u>Actuarial Present Value of Accumulated Plan Benefits (Non-Dedicated)</u>					
Retirees	\$ 21,949,890	\$ 20,500,665	\$ 19,826,947	\$ 18,823,924	\$ 17,612,119
Inactives	4,626,762	4,591,771	4,494,421	4,422,913	4,465,074
Actives	<u>13,417,126</u>	<u>13,193,114</u>	<u>12,876,462</u>	<u>12,581,733</u>	<u>12,419,003</u>
Total Non-Dedicated Liability	\$ 39,993,808	\$ 38,285,550	\$ 37,197,830	\$ 35,828,570	\$ 34,496,196
Inactive Liability Percent	66%	66%	65%	65%	64%
Active Liability Percent	34%	34%	35%	35%	36%
<u>Participant Statistics</u>					
Retired Participants and Beneficiaries					
Number of Retirees and Beneficiaries	226,870	223,971	221,502	217,924	213,780
Total Annual Benefits (prior year)	\$ 2,676,620	\$ 2,598,766	\$ 2,530,265	\$ 2,458,053	\$ 2,367,600
Active Participants					
Number of Participants	206,340	202,940	197,120	195,620	194,080
Average Age	43.3	43.3	43.4	43.7	43.6
Average Credited Service	11.9	12.0	12.4	12.4	12.3
Total Annual Hours (in thousands)	383,230	363,909	357,200	350,458	342,241
Average Contribution Rate	\$ 4.77	\$ 4.68	\$ 4.46	\$ 4.40	\$ 4.18
Vested Inactive Participants					
Number of Participants	164,640	165,920	166,440	167,940	169,020
Ratio of Inactives to Actives	1.9	1.9	2.0	2.0	2.0
<u>Net Cash Flow</u>					
Employer Contributions	\$ 1,828,897	\$ 1,705,556	\$ 1,596,395	\$ 1,544,129	\$ 1,431,091
Benefit Payments	(2,756,869)	(2,676,620)	(2,598,766)	(2,530,265)	(2,458,053)
Operating Expenses	<u>(101,978)</u>	<u>(98,841)</u>	<u>(93,897)</u>	<u>(88,636)</u>	<u>(87,541)</u>
Net Cash Flow	\$ (1,029,950)	\$ (1,069,905)	\$ (1,096,268)	\$ (1,074,772)	\$ (1,114,503)
Net Cash Flow as a percent of BOY Market Value of Fund	(2.7%)	(2.9%)	(3.0%)	(3.1%)	(3.4%)
Ratio of Benefit Payments to Contributions	1.5	1.6	1.6	1.6	1.7

Exhibit 6.3

Projected Benefit Payments (\$ in billions)



Detail of Total Projected Payments for Next 20 Years (\$ in thousands)

Plan Year	Estimated Payout of Retirement Benefits	Plan Year	Estimated Payout of Retirement Benefits
2022	\$3,130,652	2032	\$4,394,736
2023	\$3,267,054	2033	\$4,490,908
2024	\$3,405,357	2034	\$4,579,525
2025	\$3,546,043	2035	\$4,659,816
2026	\$3,683,111	2036	\$4,728,415
2027	\$3,815,716	2037	\$4,787,556
2028	\$3,943,326	2038	\$4,837,222
2029	\$4,066,372	2039	\$4,878,089
2030	\$4,183,468	2040	\$4,909,901
2031	\$4,292,757	2041	\$4,934,664

This is a closed group projection of benefit payments based on plan participants as of the valuation date and does not include projected payments due to future new entrants.

Appendix A

Summary of the Plan

1. Active Participation

Non-Seasonal employees for whom contributions are required to be made to the Trust under the terms of a pension agreement become “Active Participants” on the day on which they first accumulate 750 covered hours in the current and immediately preceding calendar years. Seasonal employees become “Active Participants” if they satisfy one-half of the covered hour requirement of Non-Seasonal employees.

2. Monthly Pension at Normal Retirement

The monthly pension earned for service prior to 1987 is determined based on the 1986 Plan provisions as outlined in the Actuarial Report as of January 1, 1986. The final five-year average contribution rate used for this determination recognizes contribution rates applicable to all 500 hour years through 1991.

For service after 1986, monthly pension benefits are earned as follows:

Calendar Year	Contribution Percentage	
	First 20 Years	After 20 Years
1987-1991	2.00%	2.65%
1992-1996	2.30%	3.05%
1997-1999	2.46%	3.26%
2000-2002	2.70%	3.58%
1/2003-6/2003	2.20%	2.92%
7/2003-2006	1.20%	1.20%
2007	1.65%	1.65%
2008	2.00%	2.65%
2009-2019	1.20%	1.20%
2020	1.50%	1.50%
2021-2023	1.60%	1.60%
2024+	1.20%	1.20%

3. Past Service Credits

A participant is granted credit for the number of years and months of specified types of unbroken employment rendered prior to his or her first covered hour, subject to limits specified in the Plan.

4. Vesting Service

A Plan member earns a vesting service year for each year after 1975 during which he or she is credited with at least 500 covered hours (250 covered hours for Seasonal Plan members). For service before 1976, a Plan member is credited with a vesting service year for each year of continuous coverage under the Plan.

5. Normal Retirement Age

A participant reaches Normal Retirement Age upon the later of age 65 or an Active participant's age on the second anniversary of his or her first covered hour.

6. Normal Pension Form

The normal form of pension for unmarried participants is a Life Only Pension. In general, married participants who do not elect otherwise receive a reduced Employee and Spouse Pension. This reduced amount is an "actuarial equivalent" of the Life Only Pension. Participants who retired under the Employee and Spouse Pension Option will have their pension restored to the amount payable under the Normal Form if the spouse dies first. In the event that the participant dies first, the amount of spouse pension is 66 2/3% of the retiree's pension for those who retired after 1991 with recent coverage; otherwise the amount of spouse pension is 50% of the retiree's pension. In both instances, the actuarial reduction factor for the Employee and Spouse Pension amount is calculated as though the spouse pension benefit would be 50% of the reduced Employee and Spouse Pension.

7. Other Pension Forms

An Optional Employee and Spouse Pension providing a 75% spouse pension is available. Participants retiring under age 65 may elect a Benefit Adjustment Option with or without the regular or Optional Employee and Spouse Pension.

8. Early Retirement Eligibility Date

In general, this date is the first day of the month coincident with or immediately following the later of the participant's 55th birthday or the date the individual becomes a vested participant. However, a participant with recent coverage may retire at any age if he or she meets the Rule of 84 (or Rule of 82 or Rule of 80) under the Program for Enhanced Early Retirement (PEER program); that is, the sum of his or her attained age plus years of contributory service is equal to or greater than 84 (or 82 or 80).

9. Monthly Pension at Early Retirement for a Participant with Recent Coverage

If a participant meets the Rule of 84 and has recent coverage, the monthly pension benefit is reduced by the sum of 0.45% for each of the first 60 months that the early retirement date precedes his or her 62nd birthday plus 0.33% for each month that the early retirement date precedes his or her 57th birthday.

If a participant has recent coverage but does not meet the Rule of 84, his or her monthly pension benefit is reduced by the sum of 0.60% for each of the first 60 months that the early retirement date precedes his or her 62nd birthday plus 0.40% for each month that the early retirement date precedes his or her 57th birthday.

A participant has recent coverage if they have at least 1,500 covered hours in the 60-month period ending just before their earliest retirement date or their pension effective date.

10. Monthly Pension at Early Retirement for a Participant with Current PEER Coverage

If a participant meets the Rule of 84 (or Rule of 82 or Rule of 80), is a member of a bargaining unit which has negotiated PEER 84 (or PEER 82 or PEER 80) contribution surcharges, and has current PEER coverage, the early retirement benefit equals 100% of the earned pension benefits. A participant has current PEER coverage at his or her retirement effective date if the applicable PEER contributions have been paid for at least 1,000 covered hours in the 24-month period immediately preceding his or her retirement effective date.

Note: If a participant is in a category of early retirement where benefits are subsidized (as described in paragraph 1 of Item 9 or in Item 10) and accumulates 25 years of service under the Plan while so covered, then his or her subsidized early retirement benefits are “locked-in” and cannot be forfeited.

11. Disability Benefit

Upon a vested participant’s total and permanent disability before age 65, the monthly benefit is the greater of (a) 85% of the earned monthly pension benefit or (b) the early retirement pension otherwise payable, provided the vested participant has met the specified recent coverage requirement on the disability onset date.

12. Vested Benefit Upon Termination of Employment

Upon termination of employment, a participant is vested in his or her accrued pension, based on past and future service credits, if he or she has completed at least 5 years of vesting service, one of which was completed during or after 1991.

A terminated vested participant may elect early commencement of the earned retirement benefit at any time on or after the Early Retirement Eligibility Date. If the participant does not have recent coverage and has not “locked-in” rights to unreduced pension benefits by having completed 25 years of Plan service before termination, the benefit is reduced by the sum of 0.60% per month for each of the first 60 months that the early retirement date precedes the participant’s 65th birthday plus 0.40% per month for each month that such early retirement date precedes the participant’s 60th birthday.

Vested participants who are not covered by the current Plan provisions may be subject to additional limitations on their benefits.

13. Extra Check

An annual “Extra Check” is payable to: (i.) pre-1985 retirees in the amount of \$540 and to (ii.) their eligible survivors in the amount of \$450.

14. Death Benefits

Upon the death of a participant or pensioner who has met the specified recent coverage requirement, a temporary monthly pension is payable to the surviving children under conditions specified in the Plan.

A pre-retirement benefit to the surviving spouse is payable upon the death of a vested participant. If a married participant had recent coverage at the time of death, the spouse receives an immediate benefit based on the participant's earned benefit. The earned benefit is reduced to reflect early retirement, as specified in the Plan, and the appropriate Employee and Spouse Pension factor. 66 2/3% of the resulting amount is then payable immediately to the spouse. If the participant does not have recent coverage, the benefit is calculated as described above, but a 50% factor is applied in lieu of the 66 2/3% factor, and, if the participant was not eligible to retire on the date of death, commencement of the pension is deferred until the time the participant would have been first eligible to retire.

A single sum death benefit equal to 50% of contributions, subject to a maximum of \$10,000, is payable upon the death of an Active or Terminated participant who has completed at least 5 years of vesting service. In addition, for unmarried vested participants who satisfy the recent coverage requirements and would otherwise be eligible to retire, a death benefit of 48 times the participant's accrued pension, reduced to reflect early retirement as specified in the Plan, is payable as a lump sum amount.

Upon the death of a pensioner with a retirement date before January 1, 1992, a single sum benefit of 12 times the monthly normal form pension (Life Only annuity), subject to a maximum of \$10,000 is payable. Beginning with retirements in 1992, beneficiaries of retirees with recent coverage who elect a Life Only or Benefit Adjustment Option (without the Spouse Pension) receive a 4-Year Certain death benefit payment equal to 48 times the pensioner's Life Only benefit minus the total monthly payments already received by the pensioner.

If a pensioner retires after January 1, 1992, he or she may elect an Optional Lump Sum Death Benefit equal to 12 times the monthly normal form pension (Life Only annuity). The Optional Lump Sum Death Benefit is paid for by reducing the pensioner's monthly payment.

15. Transition Provisions

Certain minimum benefits are provided to participants who were covered by prior versions of the Plan.

PLAN AMENDMENT HISTORY

The following is a summary of the Plan changes since 2000 that impact the valuation.

Effective Date	Description of Change
1/1/2021	Effective for hours worked in calendar years 2021, 2022, and 2023 only, the percentage used to calculate Plan participant benefits was increased from 1.20% to 1.60%. The percentages for years 2024 and later remain at 1.20%.
1/1/2020	Effective for hours worked in calendar year 2020 only, the percentage used to calculate Plan participant benefits was increased from 1.20% to 1.50%.
1/1/2011	Annual “Extra Checks” to pre-1985 retirees and their eligible survivors were made a permanent part of the Plan.
1/1/2009	A 75% Optional Employee and Spouse Pension was added. Also, a \$40 million reserve for extra check payments was established.
1/1/2008	Effective for calendar year 2008 only, the percentages used to calculate Plan participant benefits have been increased from 1.20% to 2.00% for participants who have not completed 20 years of service, and from 1.20% to 2.65% for participants who have completed at least 20 years of service. The percentages for years 2009 and later remain at 1.20%.
1/1/2007	Effective for calendar year 2007 only, the percentage used to calculate Plan participant benefits was increased from 1.20% to 1.65%. The percentages for years 2008 and later remain at 1.20%.
7/1/2003	Effective July 1, 2003, the percentage used to calculate Plan participant benefits has been reduced to 1.20% for the second half of 2003 and all subsequent years.
1/1/2000	<p>Effective for calendar years 2000, 2001 and 2002, the percentage used to calculate Plan participant benefits has been increased. An Active participant will earn a monthly pension benefit of 2.70% instead of 2.16% for contributions credited in this period if he/she has not completed 20 year of service. If such participant has completed at least 20 years of contributory service, he/she will earn a monthly pension benefit of 3.58% instead of 2.86% during this same period.</p> <p>Effective for calendar years 2003, 2004 and 2005, the percentage used to calculate Plan participant benefits has been increased. An Active participant will earn a monthly pension benefit of 2.20% instead of 2.00% for contributions credited in this period, if he/she has not completed 20 years of service. If such participant has completed at least 20 years of contributory service, he/she will earn a monthly pension benefit of 2.92% instead of 2.65% during this same period.</p> <p>Effective with calendar year 2000, all Disability Pensioner benefits have been increased to 85% of his/her Normal Retirement Benefit unless said Disability Pensioner’s benefits are already payable in a greater amount. Spouses of certain deceased Disability Pensioners have had their benefits appropriately adjusted, as applicable. The same 85% “floor” monthly pension benefit shall be paid to all Disability Pensioners and, as applicable, to their spouses for Plan participants who become Disabled Pensioners after calendar year 1999.</p> <p>Effective with calendar year 2000, the maximum Child Survivor Benefits have been increased to \$1,000 and such increased benefits shall be payable, in general, upon the death of a person who was an Active Participant on 1/1/1987 or thereafter and who otherwise satisfied the applicable recency of employment requirements at the time of death.</p> <p>Effective with calendar year 2000, PEER eligible participants with 25 years of contributory service “lock-in” PEER coverage by working at least 1,000 covered hours during any consecutive 24 month period that ends on or after completion of 25 years of contributory service.</p>

Appendix B

Participant Statistics

The sources of WCT Plan participant data for our actuarial calculations are: (a) extracts from Prudential Investments' Annuitant Benefit Consolidation (ABC) System file, (b) extracts from the T2 Participant Data File (PDF) maintained by Northwest Administrators and Prudential Investments, and (c) extracts from the Western States Food data base supplied by Northwest Administrators.

The following paragraphs describe how the data were prepared for valuation purposes and present statistical characteristics of the data base.

1. Data Base for Non-Retired Plan Participants

Northwest Administrators sent us a December 31, 2021, valuation data file that included T2 extract records for all non-retired plan participants who have not incurred a permanent break in service, and all claims and deaths for the last ten years.

From this file containing 579,687 records, we selected the 5% sample valuation file⁽¹⁾ for all active participants, (both vested and non-vested), and for all vested inactive participants. A participant was considered Active as of January 1, 2022 if they were not included on the ABC file as retired as of the valuation date, and if they earned at least 250 covered hours during 2021, or earned at least 1 covered hour in 2021 and at least 250 covered hours in 2020.

11,002 Non-Seasonal Active 5% sample records representing 220,040 participants were included in the valuation. For this purpose, Active participant records with non-seasonal industry codes or with 1,000 or more covered hours in each of the last two years were considered Non-Seasonal.

337 Seasonal Active 5% sample records representing 6,740 participants were included in the valuation. Active participants with a seasonal industry code and less than 1,000 covered hours in one or both of the last two years were considered Seasonal.

8,325 Vested Inactive 5% sample records representing 166,500 participants were included in the valuation.

560,023 T2 extract records were not used for the valuation. These records primarily represent non-5% sample participant records, pre-valuation date claims, and non-vested inactives.

⁽¹⁾ Participant record identification numbers ending in "00", "05", "10", "15" or "20"

2. Statistical Information

Highlights of the data characteristics for Active Plan participants on January 1, 2022 are shown below, together with corresponding information from the January 1, 2021 and January 1, 2020 Actuarial Reports.

- For actuarial valuation purposes, the Active participant population was 220,540 as of January 1, 2020, 222,840 as of January 1 2021, and 226,780 as of January 1, 2022. The aggregate proportion of Active participants covered under PEER is 82.6% (including Non-Seasonal and Seasonal employees) on January 1, 2022. All information summarized below was based on 5% sample data.

NUMBER OF ACTIVE PLAN PARTICIPANTS			
Industry	As of 1/1/2020	As of 1/1/2021	As of 1/1/2022
All Actives			
Non-Seasonal	212,400	215,260	220,040
Seasonal	8,140	7,580	6,740
Total	220,540	222,840	226,780
PEER Units			
Non-Seasonal PEER 80	63,860	67,780	69,460
Non-Seasonal PEER 82	5,020	5,180	5,020
Non-Seasonal PEER 84	105,560	104,940	106,900
Seasonal PEER 80	5,800	5,020	4,760
Seasonal PEER 82	320	280	180
Seasonal PEER 84	1,220	1,120	900
Total PEER Participants	181,780	184,320	187,220
Non-PEER Units			
Non-Seasonal	37,960	37,360	38,660
Seasonal	800	1,160	900
Total Non-PEER Participants	38,760	38,520	39,560

- The average attained age of Active Plan participants included in the valuation is 42.3 years for Non-Seasonal participants and 47.4 years for Seasonal participants. The corresponding ages as of January 1, 2021 were 42.5 years for Non-Seasonal employees and 47.7 years for Seasonal employees. The average attained ages for all Active participants for the last three years, including the separate PEER units, are summarized below.

AVERAGE ATTAINED AGES FOR ACTIVE PLAN PARTICIPANTS			
Industry	As of 1/1/2020	As of 1/1/2021	As of 1/1/2022
All Actives			
Non-Seasonal	42.7	42.5	42.3
Seasonal	48.6	47.7	47.4
PEER Units			
Non-Seasonal PEER 80	43.7	43.1	42.9
Non-Seasonal PEER 82	45.0	44.8	45.1
Non-Seasonal PEER 84	41.0	40.9	40.6
Seasonal PEER 80	49.5	49.1	48.8
Seasonal PEER 82	44.4	42.1	42.7
Seasonal PEER 84	46.1	50.2	46.4
Non-PEER Units			
Non-Seasonal	45.5	45.7	45.7
Seasonal	47.2	40.5	42.0

- The average number of years of contributory service for Active Plan participants is 10.8 years for Non-Seasonal participants and 10.9 years for Seasonal participants. As of January 1, 2021, the corresponding average number of years of contributory service was 11.0 years for Non-Seasonal employees and 11.2 years for Seasonal employees. The average number of years of contributory service for Active participants during the last three years is compared below.

AVERAGE CONTRIBUTORY SERVICE YEARS FOR ACTIVE PLAN PARTICIPANTS			
Industry	As of 1/1/2020	As of 1/1/2021	As of 1/1/2022
All Actives			
Non-Seasonal	11.1	11.0	10.8
Seasonal	12.1	11.2	10.9
PEER Units			
Non-Seasonal PEER 80	15.1	14.3	14.0
Non-Seasonal PEER 82	13.4	13.2	13.4
Non-Seasonal PEER 84	10.1	10.1	9.8
Seasonal PEER 80	13.2	12.9	12.0
Seasonal PEER 82	8.4	9.2	10.8
Seasonal PEER 84	7.6	7.6	7.9
Non-PEER Units			
Non-Seasonal	7.0	7.4	7.3
Seasonal	12.1	7.7	8.5

- The end of year average basic hourly contribution rate for Non-Seasonal Actives included in the valuation was \$5.46 as of December 31, 2020 and \$5.78 as of December 31, 2021. The average basic hourly contribution rate for Seasonal Actives included in this valuation was \$1.18 as of December 31, 2020 and \$1.25 as of December 31, 2021. This information is displayed for Active participants, including separate data for PEER units, in the following table.

AVERAGE BASIC HOURLY CONTRIBUTION RATES FOR ACTIVE PLAN PARTICIPANTS			
Industry	As of 12/31/2019	As of 12/31/2020	As of 12/31/2021
All Actives			
Non-Seasonal	\$4.99	\$5.46	\$5.78
Seasonal	\$1.23	\$1.18	\$1.25
PEER Units			
Non-Seasonal PEER 80	\$6.89	\$7.60	\$8.06
Non-Seasonal PEER 82	\$5.43	\$5.60	\$5.74
Non-Seasonal PEER 84	\$5.01	\$5.39	\$5.74
Seasonal PEER 80	\$1.44	\$1.43	\$1.44
Seasonal PEER 82	\$0.11	\$0.11	\$0.11
Seasonal PEER 84	\$0.40	\$0.45	\$0.41
Non-PEER Units			
Non-Seasonal	\$1.66	\$1.75	\$1.78
Seasonal	\$1.44	\$1.05	\$1.32

- Benefit accruals are based on the basic hourly contributions.
- The average basic contribution rates increased by 5.9% for non-seasonal active participants and increased by 5.9% for seasonal active participants during 2021.

3. Comparison of Sample Data Characteristics with Full Population Data Characteristics

A comparison of key information from the full population and 5% reports is performed by the actuary to support our assumption that the sample records adequately represent the total population. This key information includes but is not limited to:

- Participant Counts
- Contribution Rates as of the measurement date
- Accrued Benefit as of the measurement date
- Percentage of Males/Females in the data
- Average age as of the measurement date

4. Procedures to Account for Data with Missing or Invalid Birthdates or Gender Codes

Records with missing or invalid birthdates were accounted for by creating valuation input records with imputed dates of birth. Invalid birthdates include active participants that are age 100 or older as of the valuation date. Since the average entry age has been approximately 31 in recent years, we assigned dates of birth 31 years prior to the first covered hour date. All remaining fields were taken from the T2 records provided by the administrative office.

Records with missing gender codes were assumed to represent males in the Non-Seasonal group and females in the Seasonal group. We have concluded that this assumption is reasonable based on the population characteristics illustrated in this section.

There were 213 non-retired valuation records, representing 4,260 participants with missing or invalid dates of birth. There were 3,725 Non-Seasonal non-retired sample valuation records with missing or invalid gender codes representing 74,500 participants that are assumed to be males and 130 Seasonal non-retired sample valuation records with missing or invalid gender codes representing 2,600 participants that are assumed to be female.

5. Healthy Retirees, Disabled Retirees, and Healthy Beneficiaries

We based our actuarial calculations for retired lives on extracts from the ABC retired file provided by Prudential Investments. This file contains records for all Pensioners and Beneficiaries.

We received 305,741 records from Prudential. Of these, 15,190 were disregarded as non-liability records (13,786 deaths, 182 expirations, 43 over the age of 100 with benefits due and unpaid, and 1,179 others, such as cancellations, post-valuation date retirements, etc.), resulting in 290,551 valuation records. These represent all benefits for approximately 238,727 pensioners and beneficiaries. Approximately 78.2% of these records are for Healthy Retirees, 6.7% are for Disabled Pensioners, and 15.1% are for Healthy Beneficiaries. There were no missing birthdates in these records.

TABLES OF STATISTICAL DATA

In the process of completing the actuarial valuation, we have compiled a considerable amount of statistical information that may prove useful in understanding the operation of the Plan. This information is illustrated in the following tables:

- **TABLE 2022-1 Active Participant Data Summary**
Participant counts, average hours and average basic contribution rates are provided for Active participants. The table provides breakdowns of the data by one dollar rate bands through \$11.00, and for rates over \$11.00.
- **TABLES 2022-2N and 2S Distribution of Non-Seasonal and Seasonal Active Participants in PEER and Non-PEER Units by Basic Contribution Rate**
These tables show the distribution of Non-Seasonal and Seasonal Actives in PEER and Non-PEER units by their basic hourly contribution rates.
- **TABLES 2022-3N, 3S and 3VI Distributions of Non-Seasonal and Seasonal Active Participants by Attained Age and Contributory Service, and of Vested Inactive Participants by Attained Age.**
The first two tables show how Non-Seasonal and Seasonal active life participants are distributed by attained age and length of service. The third table shows how PEER and Non-PEER vested inactive participants are distributed by attained age, and shows average monthly accrued benefits by age band.
- **TABLE 2022-4 Data Build-Through Report/Participant Reconciliation**
This table exhibits data reconciliation by status for Active and Vested Terminated participants.
- **TABLE 2022-5 Recent History of New Pensioners**
Table 2022-5 shows counts, average monthly pensions, and average ages for Healthy Pensioners, Disabled Pensioners and Beneficiaries and Healthy Beneficiaries who were new to the December 31, 2021, retiree data file. The data for Healthy Pensioners is shown by option election.
- **TABLE 2022-6 Historical Statistics by Year of Retirement for Healthy Pensioners**
For this table, all records representing Healthy Pensioners were analyzed by year of retirement.
- **TABLE 2022-7 through 2022-9 Age/Longevity of Healthy Pensioners, Healthy Beneficiaries, and Disabled Pensioners**
These tables show the distribution of Pensioners and Beneficiaries by attained age group and number of years since retirement or pension commencement, as applicable.

TABLE 2022-1			
Active Participant Data Summary			
Contribution Rates	5% Sample		
	No. of Participants (Times 20)	Avg. 2021 Hrs. per Participant	Avg. 2021 Basic Contrib. Rate
Seasonals - Food Processing			
All Contribution Rates	6,740	636	\$1.25
Regulars - Food Processing			
All Contribution Rates	6,800	1,868	\$2.19
Non-Seasonals - Non-Food Processing			
\$1.00 and under	12,720	1,558	\$0.42
Over \$1.00 but not more than \$2.00	36,860	1,604	\$1.41
Over \$2.00 but not more than \$3.00	17,320	1,707	\$2.45
Over \$3.00 but not more than \$4.00	21,140	1,783	\$3.55
Over \$4.00 but not more than \$5.00	20,080	1,801	\$4.48
Over \$5.00 but not more than \$6.00	17,220	1,827	\$5.43
Over \$6.00 but not more than \$7.00	9,140	1,890	\$6.46
Over \$7.00 but not more than \$8.00	2,900	1,858	\$7.48
Over \$8.00 but not more than \$9.00	2,860	1,917	\$8.45
Over \$9.00 but not more than \$10.00	9,680	1,119	\$9.72
Over \$10.00 but not more than \$11.00	24,500	1,213	\$10.32
Over \$11.00	38,820	1,799	\$11.48
Total Non-Seasonals - Non-Food Processing	213,240	1,652	\$5.89

TABLE 2022-2N			
Distribution of Non-Seasonal Active Participants in PEER and Non-PEER Units by Contribution Rate			
End of Year Basic Contribution Rate	Number of PEER Actives	Number of Non-PEER Actives	Total Number of Actives
\$1.00 and under	4,000	9,260	13,260
Over \$1.00 but not more than \$2.00	21,920	17,600	39,520
Over \$2.00 but not more than \$3.00	15,740	4,480	20,220
Over \$3.00 but not more than \$4.00	17,100	4,520	21,620
Over \$4.00 but not more than \$5.00	18,960	1,300	20,260
Over \$5.00 but not more than \$6.00	16,400	820	17,220
Over \$6.00 but not more than \$7.00	8,880	260	9,140
Over \$7.00 but not more than \$8.00	2,900	40	2,940
Over \$8.00 but not more than \$9.00	2,780	80	2,860
Over \$9.00 but not more than \$10.00	9,440	240	9,680
Over \$10.00 but not more than \$11.00	24,480	20	24,500
Over \$11.00	38,780	40	38,820
Total for All Rates	181,380	38,660	220,040

PEER Eligibility Statistics (Non-Seasonal Actives)			
PEER Unit	Number of Actives	Percentage of Non-Seasonal Actives by PEER Unit	Prior Year's Percentage of Non-Seasonal Actives by PEER Unit
Non-PEER	38,660	17.5%	17.3%
PEER 84	106,900	48.6%	48.8%
PEER 82	5,020	2.3%	2.4%
PEER 80	69,460	31.6%	31.5%

TABLE 2022-2S Distribution of Seasonal Active Participants in PEER and Non-PEER Units by Contribution Rate			
End of Year Contribution Rate	Number of PEER Actives	Number of Non-PEER Actives	Total Number of Actives
\$0.50 and under	1,340	220	1,560
Over \$0.50 but not more than \$1.00	80	0	80
Over \$1.00 but not more than \$1.50	0	20	20
Over \$1.50 but not more than \$2.00	4,280	620	4,900
Total for Rates \$2.00 and under	5,700	860	6,560
Over \$2.00 but not more than \$2.50	20	0	20
Over \$2.50 but not more than \$3.00	120	40	160
Over \$3.00 but not more than \$3.50	0	0	0
Over \$3.50 but not more than \$4.00	0	0	0
Total for Rates over \$2.00 but not more than \$4.00	140	40	180
Total for Rates over \$4.00	0	0	0
Total for All Rates	5,840	900	6,740

PEER Eligibility Statistics (Seasonal Actives)			
PEER Unit	Number of Actives	Percentage of Seasonal Actives by PEER Unit	Prior Year's Percentage of Seasonal Actives by PEER Unit
Non-PEER	900	13.3%	15.3%
PEER 84	900	13.4%	14.8%
PEER 82	180	2.7%	3.7%
PEER 80	4,760	70.6%	66.2%

TABLE 2022-3N								
Distribution of Non-Seasonal Active Participants by Attained Age and Contributory Service								
Age Last Birthday	Years of Contributory Service							Total
	Less than 5	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 and Over	
Under 20	1,940	0	0	0	0	0	0	1,940
20 - 24	16,180	1,400	0	0	0	0	0	17,580
25 - 29	15,260	7,440	360	0	0	0	0	23,060
30 - 34	15,100	8,580	3,580	1,180	0	0	0	28,440
35 - 39	9,560	6,780	3,580	4,680	960	0	0	25,560
40 - 44	6,340	5,280	3,600	4,960	3,800	460	0	24,440
45 - 49	5,580	5,220	2,500	4,700	4,220	3,260	520	26,000
50 - 54	4,580	4,360	2,760	4,360	4,220	3,620	3,200	27,100
55 - 59	3,680	3,360	2,260	3,720	3,980	2,820	4,420	24,240
60 - 64	2,480	2,760	1,860	2,660	2,580	1,180	4,060	17,580
65 - 69	760	860	560	400	400	140	360	3,480
70 and Over	220	220	40	40	20	0	80	620
Total	81,680	46,260	21,100	26,700	20,180	11,480	12,640	220,040

TABLE 2022-3S								
Distribution of Seasonal Active Participants by Attained Age and Contributory Service								
Age Last Birthday	Years of Contributory Service							Total
	Less than 5	5 – 9	10 – 14	15 - 19	20 – 24	25 - 29	30 and Over	
Under 20	140	0	0	0	0	0	0	140
20 - 24	260	20	0	0	0	0	0	280
25 - 29	360	60	0	0	0	0	0	420
30 - 34	640	80	40	0	0	0	0	760
35 - 39	180	160	40	80	0	0	0	460
40 - 44	260	80	20	20	80	0	0	460
45 - 49	220	160	140	60	140	20	20	760
50 - 54	200	200	80	140	160	60	20	860
55 - 59	200	120	100	200	260	140	180	1,200
60 - 64	80	160	140	160	140	120	100	900
65 - 69	80	40	60	20	60	20	100	380
70 and Over	80	20	20	0	0	0	0	120
Total	2,700	1,100	640	680	840	360	420	6,740

TABLE 2022-3VI				
Distribution of Vested Inactive Participants by Attained Age				
Ages	Number PEER	Average Monthly Benefit	Number Non PEER	Average Monthly Benefit
20 - 24	0	\$0	40	\$546
25 - 29	0	\$0	2,060	\$364
30 - 34	0	\$0	6,200	\$384
35 - 39	0	\$0	11,600	\$421
40 - 44	0	\$0	15,500	\$505
45 - 49	120	\$1,829	20,600	\$533
50 - 54	320	\$1,710	31,120	\$530
55 - 59	400	\$1,901	35,300	\$531
60 - 64	660	\$1,895	28,120	\$494
65 - 69	320	\$1,665	10,440	\$346
70 and over	60	\$1,241	3,640	\$185
Total	1,880	\$1,801	164,620	\$488

TABLE 2022-4	
Participant Reconciliation	
Active Participants 1/1/2021	222,840
New Participants	
Non-Vested	30,540
Vested	660
Rehires	1,600
Terminations	
Non-Vested	(15,440)
Vested	(7,900)
Retirements	(5,300)
Deaths	(220)
Data Adjustments	0
Active Participants 1/1/2022	226,780
Vested Terminations 1/1/2021	
New Vested Terminations	8,160
Rehires	(1,600)
Retirements	(4,880)
Deaths	(480)
Data Adjustments	(1,060)
Vested Terminations 1/1/2022	166,500

TABLE 2022-5						
Recent History of New Pensioners						
Option Elections, Average Monthly Pensions and Average Ages						
(Based on Number of Participants)						
Option	1/1/2021			1/1/2022		
	Count	Average Monthly Pension	Average Age As of January 1 2021	Count	Average Monthly Pension	Average Age As of January 1 2022
Life Only	3,261	\$972	65.1	3,137	\$1,055	64.9
Benefit Adjustment	2,104	\$1,775	59.7	2,090	\$1,931	59.7
Employee and Spouse	2,462	\$1,195	65.1	2,335	\$1,232	65.1
Employee and Spouse with Benefit Adjustment	1,518	\$1,984	60.2	1,411	\$2,142	60.1
All Healthy Pensioners	9,345	\$1,376	63.1	8,973	\$1,476	63.0
Disabled Pensioners	371	\$1,304	57.6	326	\$1,233	57.5
Healthy Beneficiaries	326	\$460	55.6	429	\$504	55.2
Total	10,042	\$1,344	62.6	9,728	\$1,425	62.5

Notes: This exhibit includes all pensions associated with participants new to the ABC files as of December 31, 2020 and 2021.

The average monthly pension amount shown for the Benefit Adjustment Option and the Employee and Spouse with Benefit Adjustment Option is the sum of the lifetime portion of the benefit, plus any temporary benefit remaining as of December 31, 2020 and 2021.

The total average monthly pension amount includes the options listed above as well as the Child Survivor Benefit amounts as of December 31, 2020 and 2021.

TABLE 2022-6				
Historical Statistics by Year of Retirement for Healthy Pensioners (Based on Number of Participants)				
Year of Retirement	Number of Surviving Retirees	Average Age at Retirement	Average Age as of 1/1/2022	Average Monthly Pension
1996 and prior	18,197	57.9	87.4	\$727
1997 – 2001	19,700	58.6	80.8	\$1,022
2002 – 2006	29,635	58.8	76.2	\$1,220
2007 – 2011	34,578	60.1	72.4	\$1,099
2012 – 2016	41,335	61.1	68.5	\$1,166
2017 – 2021	43,319	62.0	64.5	\$1,358
Total	186,764	60.2	72.6	\$1,149
Total Last Year	185,936	60.1	72.5	\$1,121

TABLE 2022-7							
Age / Longevity of Healthy Pensioners (Based on Number of Participants)							
Attained Age Group	Years Since Pension Commencement						Total
	Less than 1	1 – 4	5 – 9	10 - 14	15 - 19	Greater than 19	
Under 50	11	26	11	5	2	1	56
50 - 54	340	718	71	22	4	1	1,156
55 - 59	1,112	4,481	1,185	96	27	11	6,912
60 - 64	2,079	8,837	7,598	1,620	138	21	20,293
65 - 69	2,893	19,326	12,322	8,564	2,181	113	45,399
70 - 74	92	3,309	17,680	10,964	9,297	1,225	42,567
75 - 79	1	74	2,429	11,820	9,676	7,506	31,506
80 - 84	1	11	33	1,444	7,443	12,147	21,079
85 - 89	0	5	2	31	855	10,287	11,180
90 - 94	0	2	4	8	11	5,010	5,035
95 - 99	1	0	0	2	0	1,392	1,395
100 and Over	0	0	0	2	1	183	186
Total	6,530	36,789	41,335	34,578	29,635	37,897	186,764
Total Last Year	6,467	37,055	40,939	34,616	29,331	37,528	185,936

TABLE 2022-8								
Age / Longevity of Healthy Beneficiaries (Based on Number of Participants)								
Attained Age Group	Years Since Pension Commencement							Total
	Deferred	Less than 1	1 - 4	5 - 9	10 - 14	15 - 19	Greater than 19	
39 and Under	3	36	247	202	112	23	0	623
40 - 44	14	6	46	50	34	17	3	170
45 - 49	29	17	99	76	73	32	10	336
50 - 54	48	38	174	181	154	91	68	754
55 - 59	51	47	374	419	262	210	205	1,568
60 - 64	19	47	433	784	761	476	494	3,014
65 - 69	2	20	340	892	1,212	955	1,009	4,430
70 - 74	2	10	138	606	1,326	1,642	2,146	5,870
75 - 79	0	0	20	167	799	1,668	3,957	6,611
80 - 84	0	0	4	40	186	761	4,880	5,871
85 - 89	0	0	2	5	29	159	3,701	3,896
90 - 94	0	0	1	1	5	21	1,933	1,961
95 - 99	0	0	0	1	4	5	705	715
100 and Over	0	0	1	0	0	0	111	112
Total	168	221	1,879	3,424	4,957	6,060	19,222	35,931
Total Last Year	174	161	1,790	3,509	4,775	6,037	18,663	35,109

TABLE 2022-9							
Age / Longevity of Disabled Pensioners (Based on Number of Participants)							
Attained Age Group	Years Since Pension Commencement						
	Less than 1	1 - 4	5 - 9	10 - 14	15 - 19	Greater than 19	Total
39 and Under	0	13	21	23	13	23	93
40 - 44	0	21	33	27	8	15	104
45 - 49	2	38	60	74	28	23	225
50 - 54	7	132	176	151	91	83	640
55 - 59	22	387	450	350	201	165	1,575
60 - 64	19	519	1,003	711	389	370	3,011
65 - 69	1	171	954	1,129	750	617	3,622
70 - 74	0	0	196	757	978	941	2,872
75 - 79	0	0	0	107	619	1,256	1,982
80 - 84	0	0	0	0	88	1,090	1,178
85 - 89	0	0	0	0	0	524	524
90 - 94	0	0	0	0	0	177	177
95 - 99	0	0	0	0	0	23	23
100 and Over	0	0	0	0	1	5	6
Total	51	1,281	2,893	3,329	3,166	5,312	16,032
Total Last Year	58	1,447	3,244	3,283	3,319	5,184	16,535

Appendix C

Actuarial Assumptions and Cost Methods

Actuarial Assumptions

The Plan's economic and demographic assumptions, along with rationale supporting each assumption's development are provided below.

Each assumption is reviewed for reasonableness annually, taking into account relevant factors that may affect future experience. Such factors include:

- Forward looking economic and capital market expectations
- Published studies
- The Plan's past experience
- Recent gain and loss analyses

Please refer to Section 1 of this report for an overview of actuarial gains and losses experienced by the Plan during the prior year. The experience of the Plan for the primary demographic assumptions is studied annually.

Investment Earnings Assumptions

Strategic Bond Account (SBA)

The assumed rate of return for these assets is 3.17%. This assumption is used to value 85.20% of the pension benefits related to service through December 31, 1985, based on December 31, 1984, Plan provisions and not covered by the prior asset dedications.

The assumption is updated annually such that it equals the SBA's internal rate of return during the prior year net of insurer expenses.

Remaining Assets

The assumed rate of investment return which is used to value all benefits expected to be paid out of remaining assets and future contributions is 6.50%, net of investment expenses.

The investment return assumption was selected based on the Plan's target asset allocation as of the valuation date (shown below), combined with capital market assumptions from several sources, as well as published studies summarizing the expectations of various investment experts. This information was then used to develop forward looking expected long-term expected returns, producing a range of potential reasonable expectations according to industry experts. Based on this information, an assumption was selected that, in our professional judgement, is not expected to have any significant bias.

Investment Policy Target Allocation Percentages:

Public US Equity	30.5%
Public International Equity	16.0%
Fixed Income	18.5%
Private Debt	9.0%
Commodities	0.0%
Real Estate	8.0%
Private Equity	8.0%
Infrastructure	5.0%
Multi-Asset	5.0%
Total	100.0%

Expected Annual Employer Contributions

The annual employer contributions expected during 2022 have been assumed to be \$2.500 billion. This amount is used to determine the projected Funding Standard Account and the expected amortization period

of the UAL. The assumption is based on contribution rates in effect as of the measurement date multiplied by assumed working hours for the upcoming year.

Provision for Non-investment Expenses

Administrative expenses are assumed to be \$125 million per year, assumed payable equally throughout the year at the end of each month. The assumption equals prior year expenses adjusted for inflation.

Inflation

Inflation is assumed to be 2.50% per year. The assumption is based on capital market assumption sources and published studies used to develop the Plan's investment return assumption.

Post-retirement Mortality Rates

Healthy Males

- For retirees and beneficiaries prior to the retiree's death, Pri-2012 Total Dataset Amount-Weighted Healthy Annuitant mortality rates adjusted as follows:
 - 80% for ages 55 to 60,
 - 100% for ages 61 to 65,
 - 105% for ages 66 to 69,
 - 115% for ages 70 to 85,
 - 105% for ages 86 to 94,
 - 100% for all other ages.
- For beneficiaries after the retiree's death, Pri-2012 Total Dataset Amount-Weighted Contingent Annuitant table
- Both tables projected with fully generational improvements from 2012 using Scale MP-2019.

Healthy Females

- For retirees and beneficiaries prior to the retiree's death, Pri-2012 Total Dataset Amount-Weighted Healthy Annuitant mortality rates adjusted as follows:
 - 60% for ages 55 to 60,
 - 90% for ages 61 to 70,
 - 105% for ages 71 to 79,
 - 95% for ages 80 to 90,
 - 100% for all other ages.
- For beneficiaries after the retiree's death, Pri-2012 Total Dataset Amount-Weighted Contingent Annuitant mortality rates adjusted as follows:
 - 85% for ages 55 to 64,
 - 100% for ages 65 to 74,
 - 110% for ages 75 to 84,
 - 105% for ages 85 to 90,
 - 100% for all other ages.
- Both tables projected with fully generational improvements from 2012 using Scale MP-2019.

The Plan has enough data to reflect partial credibility. As a result, the mortality assumption is based on Pri-2012 mortality tables adjusted to reflect 2015 through 2018 Plan experience.

The plan does not have enough credible data to review its male beneficiary mortality experience. As a result, the Pri-2012 Contingent Survivor base table for males is used without further adjustment.

Additionally, the Plan does not have enough data to study mortality improvement effects. We therefore rely on SOA mortality improvement tables without adjustment.

Disabled Males

- Pri-2012 Total Dataset Amount-Weighted Disabled Retiree table
- Projected with fully generational improvements from 2012 using Scale MP-2019.

Disabled Females

- Pri-2012 Total Dataset Amount-Weighted Disabled Retiree table.
- Projected with fully generational improvements from 2012 using Scale MP-2019.

The Plan does not have enough data to reflect partial credibility for disabled mortality rates. We therefore rely on SOA mortality studies without adjustment.

The Plan’s mortality experience was reviewed as of the most recent measurement date. The assumptions remain reasonable.

The following tables show the life expectancies for healthy retirees, healthy contingent annuitants, and disabled retirees under the mortality assumptions described above at the current and future valuation dates.

Assumed Years of Life Expectancy – Healthy Male Retirees					
Age	2021	2026	2031	2036	2041
55	28.5	29.0	29.4	29.9	30.3
60	23.8	24.3	24.7	25.2	25.6
65	19.5	19.9	20.3	20.7	21.1
70	15.4	15.7	16.1	16.4	16.8

Assumed Years of Life Expectancy – Healthy Male Contingent Annuitants*					
Age	2021	2026	2031	2036	2041
55	23.6	24.1	24.7	25.3	25.8
60	20.2	20.6	21.2	21.7	22.2
65	17.0	17.4	17.8	18.3	18.8
70	14.0	14.3	14.7	15.1	15.5

Assumed Years of Life Expectancy – Healthy Female Retirees					
Age	2021	2026	2031	2036	2041
55	32.0	32.4	32.9	33.3	33.8
60	27.0	27.4	27.9	28.3	28.7
65	22.4	22.8	23.2	23.6	24.0
70	18.0	18.3	18.7	19.1	19.4

Assumed Years of Life Expectancy – Healthy Female Contingent Annuitants*					
Age	2021	2026	2031	2036	2041
55	29.2	29.7	30.2	30.7	31.2
60	24.8	25.3	25.7	26.2	26.7
65	20.6	21.0	21.4	21.9	22.3
70	16.8	17.1	17.5	17.9	18.3

*Assumed years of life expectancy for beneficiaries when participant has already passed away. Otherwise, assumed years of life expectancy for beneficiaries is the same as a healthy retiree.

Assumed Years of Life Expectancy – Disabled Males					
Age	2021	2026	2031	2036	2041
55	21.6	22.1	22.6	23.2	23.7
60	18.4	18.8	19.3	19.8	20.3
65	15.2	15.6	16.1	16.5	16.9
70	12.2	12.6	12.9	13.3	13.7

Assumed Years of Life Expectancy – Disabled Females					
Age	2021	2026	2031	2036	2041
55	25.1	25.6	26.2	26.7	27.3
60	21.5	22.0	22.5	23.0	23.5
65	18.1	18.5	19.0	19.4	19.9
70	14.8	15.1	15.5	15.9	16.3

Pre-retirement Mortality Rates

The assumed annual rates of healthy mortality for males are based on the Pri-2012 Total Dataset Amount-Weighted Male Employee table with the same adjustments and projection scale as the Post-Retirement Retiree table.

The assumed annual rates of healthy mortality for females are based on the Pri-2012 Total Dataset Amount-Weighted Female Employee table with the same adjustments and projection scale as the Post-Retirement Retiree table.

Retirement Probabilities

Retirement probabilities apply only to retirement eligible participants.

For active PEER participants, different probabilities apply before and after eligibility for unreduced retirement. For active non-PEER participants, different probabilities apply before and after meeting the contributory service requirements for Table Two early retirement factors or age requirements for unreduced retirement.

For vested terminated participants, different probabilities apply for participants who are assumed to have recent PEER coverage, recent non-PEER coverage, and no recent coverage at retirement.

Active Participant Retirement Probabilities

Age	PEER - Before Contributory Service Requirement	PEER - After Contributory Service Requirement	Non-PEER - Before Contributory Service Requirement	Non-PEER - After Contributory Service Requirement
<= 48	0.00	0.00	0.00	0.00
49	0.00	0.12	0.00	0.03
50	0.00	0.12	0.00	0.03
51	0.00	0.12	0.00	0.03
52	0.00	0.12	0.00	0.03
53	0.00	0.12	0.00	0.03
54	0.01	0.10	0.01	0.03
55	0.01	0.10	0.01	0.03
56	0.01	0.10	0.01	0.03
57	0.01	0.10	0.01	0.03
58	0.01	0.10	0.02	0.03
59	0.05	0.15	0.02	0.03
60	0.05	0.15	0.02	0.03
61	0.20	0.20	0.15	0.15
62	0.20	0.20	0.15	0.15
63	0.15	0.15	0.15	0.15
64	0.50	0.50	0.40	0.40
65	0.50	0.50	0.40	0.40
66	0.30	0.30	0.30	0.30
67	0.30	0.30	0.30	0.30
68	0.30	0.30	0.30	0.30
69	0.30	0.30	0.30	0.30
>= 70	1.00	1.00	1.00	1.00
Average Retirement Age	62.9	55.5	63.5	61.1

Vested Terminated Participant Retirement Probabilities

Age	Less than 25 years of Contributory Service	25 or more years of Contributory Service*	PEER Eligible on Valuation Date
<= 48	0.00	0.00	0.00
49	0.00	0.15	0.40
50	0.00	0.15	0.50
51	0.00	0.15	0.40
52	0.00	0.15	0.35
53	0.00	0.15	0.35
54	0.04	0.15	0.35
55	0.04	0.05	0.25
56	0.04	0.05	0.20
57	0.04	0.05	0.20
58	0.04	0.05	0.20
59	0.04	0.05	0.20
60	0.04	0.05	0.15
61	0.10	0.20	0.25
62	0.10	0.15	0.25
63	0.10	0.10	0.15
64	0.30	0.30	0.50
65	0.30	0.30	0.50
66	0.15	0.20	0.30
67	0.10	0.10	0.30
68	0.10	0.10	0.30
69	0.15	0.15	0.30
>= 70	1.00	1.00	1.00
Average Retirement Age	63.2	55.4	50.5

*or otherwise locked-in

The retirement probability assumptions are based on a study of 2013 through 2016 Plan experience.

The Plan's retirement experience was reviewed as of the most recent measurement date. The assumptions remain reasonable.

Disability Retirement

Disability probabilities apply only to employees with 4 or more years of vesting service.

Age Last Birthday	Examples of Annual Probability of Disability Retirement
32	0.0006
37	0.0008
42	0.0011
47	0.0017
52	0.0030
57	0.0052

The disabled retirement assumption is reviewed annually and remains reasonable based on a review of the Plan's recent gain / loss actuarial analysis.

Employee Termination Probabilities

The termination probabilities shown below exclude death, disability and retirement probabilities. Termination probabilities are not applied when an individual is eligible for retirement. Below are the annual probabilities of employment termination for active employees.

Seasonal Participant Termination Probabilities

Years of Service:	< 2	2	3	4	5	6	7	8	9	10 - 14	15 - 19	20 - 24	25 - 29	>= 30
Age 15 - 30	0.30	0.35	0.30	0.15	0.15	0.10	0.09	0.07	0.06	0.05	0.04	0.04	0.03	0.02
Age 31 - 40	0.25	0.25	0.20	0.10	0.10	0.10	0.09	0.07	0.06	0.05	0.04	0.04	0.03	0.02
Age 41 - 50	0.12	0.15	0.15	0.10	0.10	0.07	0.09	0.07	0.06	0.05	0.04	0.04	0.03	0.02
Age >= 51	0.12	0.15	0.15	0.10	0.10	0.07	0.09	0.07	0.06	0.05	0.04	0.04	0.03	0.02

Non-Seasonal Participant Termination Probabilities

Years of Service:	< 2	2	3	4	5	6	7	8	9	10 - 14	15 - 19	20 - 24	25 - 29	>= 30
Age 15 - 30	0.20	0.25	0.20	0.15	0.12	0.12	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01
Age 31 - 40	0.16	0.18	0.15	0.12	0.10	0.10	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01
Age 41 - 50	0.14	0.15	0.12	0.10	0.08	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01
Age >= 51	0.13	0.13	0.10	0.10	0.08	0.08	0.08	0.07	0.06	0.05	0.04	0.03	0.02	0.01

The termination probability assumptions are based on a study of 2013 through 2016 Plan experience.

The termination probability assumptions are reviewed annually and remain reasonable based on a review of the Plan's recent gain / loss actuarial analysis.

Future Annual Hours and Contributions

Projected benefit accruals and contributions are based on contribution probabilities in effect as of December 31 prior to the valuation date and the following assumed level of future annual hours worked:

	Less than Five Years of Service	Five or More Years of Service
Non-seasonal	1,600	1,900
Seasonal	850	850

A non-retired participant was considered Active as of the valuation date, if he or she earned at least 250 covered hours during the prior year, or at least 1 covered hour in the prior year and at least 250 covered hours in second prior year.

The hours of service assumption is based on a study of contribution-weighted Plan experience for the periods 2018 through 2020. The Plan's hours of service experience was reviewed as of the most recent measurement date. The assumptions remain reasonable.

Sample Valuation Data

We have relied on data supplied by Prudential Investments and Northwest Administrators. The actuarial values for non-retired participants are based on a sample of the employees covered under the Plan, as described in Appendix B. The actuarial values for records with valid data are adjusted for sampling and incomplete data, and the results are assumed to represent the values of the entire covered group.

Probability of Marriage

Non-retired participants are assumed to have a probability of marriage of 80%. The assumption is based on a study of 2013 to 2016 Plan experience.

The marriage assumption remains reasonable based on a review of the Plan's recent gain / loss actuarial analysis.

Spouse Age Difference

Where applicable, husbands are assumed to be two years older than their wives. This is the mean difference among retirees who elected a spousal form of benefit option who retired between 2017 and 2020. The assumption remains reasonable.

Survivor Benefit Costs

The family composition of covered employees was assumed to be similar to that tabulated in the 27th Actuarial Valuation published by the Railroad Retirement Board. This assumption was used to estimate the probability that an employee will be survived by a beneficiary eligible for a survivor benefit and to establish the probable duration of the benefit. The probable duration of the benefit is then converted to a period certain factor.

At each age, a present value factor is established that is the product of the probability that an employee at that age is survived by an eligible beneficiary and the period certain factor.

Form of Payment

The probabilities at which participants elect the Plan's available benefit forms upon retirement are shown below.

Current Status	Assumption (Age < 62 / Age 62-64 / Age 65+)		
	Active	Term Vested (Locked)	Term Vested (Non- Locked)
Life Only*	15% / 20% / 55%	15% / 25% / 55%	15% / 30% / 60%
Life Only Pension with Benefit Adjustment Option (Age 62 Adjustment Date)	15% / 0% / 0%	15% / 0% / 0%	20% / 0% / 0%
Life Only Pension with Benefit Adjustment Option (Age 65 Adjustment Date)	25% / 30% / 0%	25% / 30% / 0%	30% / 35% / 0%
Regular Employee and Spouse Pension with Benefit Adjustment Option (Age 62 Adjustment Date)	10% / 0% / 0%	5% / 0% / 0%	5% / 0% / 0%
Regular Employee and Spouse Pension with Benefit Adjustment Option (Age 65 Adjustment Date)	10% / 15% / 0%	10% / 10% / 0%	5% / 5% / 0%
Optional Employee and Spouse Pension with Benefit Adjustment Option (Age 62 Adjustment Date)	5% / 0% / 0%	5% / 0% / 0%	5% / 0% / 0%
Optional Employee and Spouse Pension with Benefit Adjustment Option (Age 65 Adjustment Date)	10% / 15% / 0%	10% / 15% / 0%	10% / 10% / 0%
Regular Employee and Spouse Pension	5% / 15% / 25%	10% / 15% / 25%	5% / 10% / 15%
Optional Employee and Spouse Pension	5% / 5% / 20%	5% / 5% / 20%	5% / 10% / 25%

*The 4-year certain death benefit is assumed to be applicable only for active and locked in (i.e. with recent coverage) terminated vested retirements who elect the life only pension. We have assumed non-locked in (i.e. without recent coverage) terminated vested electing a life only pension are ineligible for the 4-year certain death benefit. Further, due to programming limitations, the 4-year certain death benefit has not been reflected for those who elect the life only pension with benefit adjustment option. Its exclusion is expected to have a de minimis impact on the results.

The form of payment assumptions are based on a study of 2016 through 2020 Plan experience. The Plan's form of payment election experience was reviewed as of the most recent measurement date. The assumptions remain reasonable.

The probabilities at which participants elect the Plan's available benefit forms upon disability are shown below.

	Assumption (Age < 62 / Age 62-64)
Current Status	Active
Life Only*	29% / 13%
Life Only Pension with Benefit Adjustment Option (Age 62 Adjustment Date)	6% / 0%
Life Only Pension with Benefit Adjustment Option (Age 65 Adjustment Date)	14% / 28%
Regular Employee and Spouse Pension with Benefit Adjustment Option (Age 62 Adjustment Date)	5% / 0%
Regular Employee and Spouse Pension with Benefit Adjustment Option (Age 65 Adjustment Date)	7% / 15%
Optional Employee and Spouse Pension with Benefit Adjustment Option (Age 62 Adjustment Date)	3% / 0%
Optional Employee and Spouse Pension with Benefit Adjustment Option (Age 65 Adjustment Date)	9% / 16%
Regular Employee and Spouse Pension	12% / 13%
Optional Employee and Spouse Pension	15% / 15%

*The 4-year certain death benefit is assumed to be applicable only for active disability retirements who elect the life only pension. Further, due to programming limitations, the 4-year certain death benefit has not been reflected for those who elect the life only pension with benefit adjustment option. Its exclusion is expected to have a de minimis impact on the results.

The form of payment assumptions are based on a study of 2016 through 2020 Plan experience. The Plan's form of payment election experience was reviewed as of the most recent measurement date. The assumptions remain reasonable.

Past Employment

Total past employment (continuous past employment plus special past employment) for each employee was calculated as the number of years from year of union membership until year of coverage, but not less than the known continuous past employment for the employee.

Inactive Participants

Vested inactive participants who are 75 or older as of the valuation date are assumed to be deceased and excluded from this valuation. Inactive participants who are coded as a claim (i.e. have submitted a benefit claim but have not been approved) for more than one year are expected to be either deceased or not eligible for a benefit from the Plan. We assume that any such participants do not have and will not create any liability for the Plan. In-pay participants aged 100 or older with a due and unpaid benefit are expected to never receive payment.

Data with Missing or Invalid Birthdates or Gender Codes

Records with missing or invalid birthdates were assumed to be age 31 upon hire, based on historical data for the average entry age for active participants of the Plan. Invalid birthdates include active participants that are age 100 or older as of the valuation date.

Records with missing gender codes were assumed to represent males in the Non-Seasonal group and females in the Seasonal group.

These assumptions are based on observations of recent plan data. We believe the assumptions to be reasonable.

Current Liability

Mortality: Healthy and disabled mortality is assumed to follow the annuitant and non-annuitant projected RP-2014 Mortality Tables for 2022 as mandated by IRS Notice 2020-85.

Interest: 1.91% per annum compounded annually.

Actuarial Value of Assets

The SBA was valued on an amortized cost basis. The actuarial value of the SBA at January 1, 2022 was \$2,402,582,193.

The remaining assets were valued using a smoothing procedure under which market value gains and losses are recognized at the rate of 20% per year over five years. The actuarial value of the remaining assets may not be greater than 120% or less than 80% of the market value.

The actuarial value of assets for purposes of determining the unfunded vested benefit liability is the same method used for ERISA funding purposes.

Actuarial Cost Method

The Unit Credit actuarial cost method was used for this valuation. Under this method, the Actuarial Liability is the Accrued Benefit Liability for all participants included on the valuation date.

The Normal Cost is:

- (i.) the expected increase in Accrued Benefit Liability for these participants resulting from benefits earned during the current year, plus,
- (ii.) as permitted under section 1.412(c)(3)-1(d)(2) of the Regulations, the expected increase in

Accrued Benefit Liabilities resulting from new participants who are covered employees on the valuation date. The additional cost for these employees is based on a sample population that has the same demographic characteristics of a representative cross-section of recent new entrants, reflecting the actuary's best estimate of the number of new hires and number of hours worked by covered employees who are expected to become new participants in the Plan.

Each year, all Funding Standard Account charge and credit amounts to be amortized, except those set up due to PRA 2010, are combined and offset under IRC 431(b)(5).

Assumption Changes Incorporated in This Valuation

- The discount rate used for the SBA Dedication was decreased from 3.36% to 3.17%.
- The current liability interest rate was changed from 2.08% to 1.91% to remain within the IRS prescribed corridor.
- The current liability mortality tables were updated to the applicable tables for 2022 valuation years, as prescribed by the IRS.
- The assumed annual administrative expense assumption was increased from \$120 million to \$125 million, payable mid-year, to better reflect anticipated plan experience.
- The anticipated annual employer contributions were increased from \$2.335 billion to \$2.500 billion to better reflect anticipated plan experience.
- Active participants aged 100 or older as of the valuation date were assumed to have invalid dates of birth and were therefore valued assuming dates of birth corresponding to the average entry age of current active participants.
- Factors utilized in the calculation of the benefit adjustment payment form option were updated to reflect the mortality and segment rates per IRS notices 2020-85 and 2021-54 respectively.

Method Changes Incorporated in This Valuation

There are no method changes for the January 1, 2022 valuation.

Given the substantial uncertainty regarding the impact of COVID-19 on plan experience, we have chosen not to make an adjustment in expected future decrements. At this time, it is not possible to predict the outcomes; however, it is possible that the COVID-19 pandemic could have a material impact on short-term plan experience.