# CENTRAL PENNSYLVANIA TEAMSTERS DEFINED BENEFIT PLAN

## ACTUARIAL VALUATION AS OF JANUARY 1, 2019

*Prepared by:*

CBIZ Retirement Plan Services

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*November 2019*

**CBIZ Retirement Plan Services**
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November 13, 2019

Trustees of the Central Pennsylvania
Teamsters Defined Benefit Plan
PO Box 15223
Reading, PA 19612-5223

Dear Trustees:

As requested by the Central Pennsylvania Teamsters, this report was prepared by CBIZ Retirement Plan Services (RPS) to present the results of the actuarial valuation of Central Pennsylvania Teamsters Defined Benefit Plan as of January 1, 2019. The primary purposes of the valuation are to:

1. Determine the minimum funding requirements of ERISA (as amended) for the plan year ending December 31, 2019.

2. Determine the limitation on maximum deductible contribution for the Plan's tax year ending December 31, 2019 in accordance with IRC Section 404.

3. Provide information required by FASB ASC 960, *Plan Accounting - Defined Benefit Pension Plans*.

This report is intended for the sole use of the Plan Sponsor and Plan Administrator to comply with the stated purposes and may not be appropriate for other purposes. Additional determinations may be needed for other purposes, such as meeting employer financial accounting requirements or judging benefit sufficiency for plan termination. This report should not be relied upon for other purposes without consulting CBIZ RPS.

CBIZ RPS has relied upon participant data and financial information provided to us by Central Pennsylvania Teamsters and other organizations designated by Central Pennsylvania Teamsters. We did not audit this data, but we have reviewed it for reasonableness and consistency with prior years. We believe that the information is sufficiently complete to be relied upon for the purposes intended. To the best of our knowledge, all plan participants on January 1, 2019, and all plan provisions in effect on that date have been reflected in the valuation.

In our opinion, all calculations and procedures conform to generally accepted actuarial principles and practices; the results presented comply with the requirements of the Internal Revenue Code, ERISA, or the FASB Accounting Standards Codification, as applicable. Other than prescribed assumptions, the actuarial assumptions have been selected by CBIZ RPS in concurrence with Central Pennsylvania Teamsters. We believe that each non-prescribed assumption is individually reasonable, and in combination they offer our best estimate of anticipated experience under the Plan.

The actuaries whose signatures appear below meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are qualified to render the actuarial opinion contained herein. CBIZ RPS's relationship with the Plan and Plan Sponsor is strictly professional. There are no aspects of the relationship that may impair or appear to impair the objectivity of our work.

We will be pleased to review this report with you at your convenience and answer any questions.

Respectfully submitted:

CBIZ RPS

Joseph F. Hicks, Jr.

Bryan McCormick

Joseph F. Hicks, Jr., EA, MAAA
Senior Vice President
Enrolled Actuary No. 17-06117

Bryan M. McCormick, ASA, MAAA
Senior Vice President

## Section 1 - Discussion



## Section 2 - Valuation Results

## Section 3 - Plan Assets



## Section 4 - Participant Data



## Section 5 - Appendices



CBIZ Retirement Plan Services

# TRUSTEE SUMMARY

## SUMMARY OF RESULTS

| | January 1, 2019 | January 1, 2018 |
|---|---|---|
| ***Contributions*** | | |
| Minimum Required Contribution | | |
| Before Recognition of Credit Balance | $ 92,030,795 | $ 90,434,702 |
| After Recognition of Credit Balance | 0 | 0 |
| 12-Year Funding Contribution | $ 66,577,501 | $ 49,313,480 |
| Contributions for the Plan Year* | $ 74,300,000 | $ 73,477,138 |
| ***Normal Cost*** | $ 27,082,492 | $ 24,370,132 |
| ***Unfunded Accrued Liability (UAL)*** | | |
| Accrued Liability | $ 1,313,239,199 | $ 1,287,548,058 |
| Actuarial Value of Assets | 1,098,817,395 | 1,089,367,302 |
| Unfunded Accrued Liability | 214,421,804 | 198,180,756 |
| ***Funding Period to Amortize UAL*** | | |
| Based on Unit Credit, Actuarial Value of Assets | 5.66 years | 4.89 years |
| Based on Unit Credit, Market Value of Assets | 9.48 years | 4.39 years |
| Based on Entry Age, Actuarial Value of Assets | 6.56 years | 6.21 years |
| Based on Entry Age, Market Value of Assets | 9.69 years | 5.75 years |
| ***Funded Status (FASB ASC 960)*** | | |
| Market Value of Assets | $ 996,554,029 | $ 1,106,555,556 |
| Present Value of Accumulated Benefits | 1,310,239,199 | 1,284,548,058 |
| Funded Ratio | 76.06% | 86.14% |
| ***Unfunded Vested Benefit Liability**** | | |
| Vested Benefit Liability | $ 1,629,440,559 | $ 1,680,452,350 |
| Unfunded Vested Benefit Liability | 632,886,530 | 573,896,794 |
| ***Funded Status (PPA)*** | | |
| Actuarial Value of Assets | $ 1,098,817,395 | $ 1,089,367,302 |
| PPA Liability (Unit Credit) | 1,313,239,199 | 1,287,548,058 |
| PPA Funded Percentage | 83.67% | 84.61% |
| ***Participants*** | | |
| Actively Employed | 5,557 | 5,722 |
| Vested Terminated | 4,889 | 5,084 |
| Retirees and Beneficiaries | 17,698 | 17,823 |
| Total | 28,144 | 28,629 |

* Includes $3,317,118 in withdrawal payments for 2018. Estimated for 2019.

** For purposes of determining employer withdrawal liability. See page 9 for more details.



CBIZ Retirement Plan Services

# TRUSTEE SUMMARY
**(continued)**

## COMMENTARY

❶ Plan assets had a down year in 2018, returning -7.25% on a market value basis. The actuarial value of assets, which limits fluctuation by recognizing gains and losses over a 5-year period, returned 3.76% for the year. This return, compared to the 7.50% assumed for the prior valuation, created an actuarial investment loss of $39.6 million for 2018. A five year history of fund performance is shown on page 8.

❷ The Plan had a small liability loss for the 2018 plan year of $4.9 million. This loss, combined with the asset loss described above, yielded a total actuarial loss for 2018 of $44.5 million.

❸ Two Plan amendments are reflected in this valuation. First, the 2018 and 2019 monthly benefit accrual cap was increased from $140 to $180 for participants whose employer contributed at a rate of over $11.00 per hour to the Plan. Second, 50% of service earned in the UPS Pension Plan is credited in the Plan toward benefit eligibility (not including the Combined Minimum Monthly Benefit or the Rule of 82-85 Benefit). These changes increased the accrued liability by $6.5 million as of January 1, 2019. The amendments are fully described in Appendix 2.

❹ The ratio of market value of assets to the present value of accumulated benefits (Exhibit E-1) decreased from 86.14% as of January 1, 2018 to 76.06% as of January 1, 2019 due to the asset losses. The Plan's funded percentage on an actuarial value basis, used for actuarial certifications under PPA and MPRA (see page 11), decreased slightly from 84.61% as of January 1, 2018 to 83.67% as of January 1, 2019.

❺ The minimum required contribution, prior to the recognition of the credit balance, increased slightly from $90.4 million for 2018 to $92.0 million for 2019.

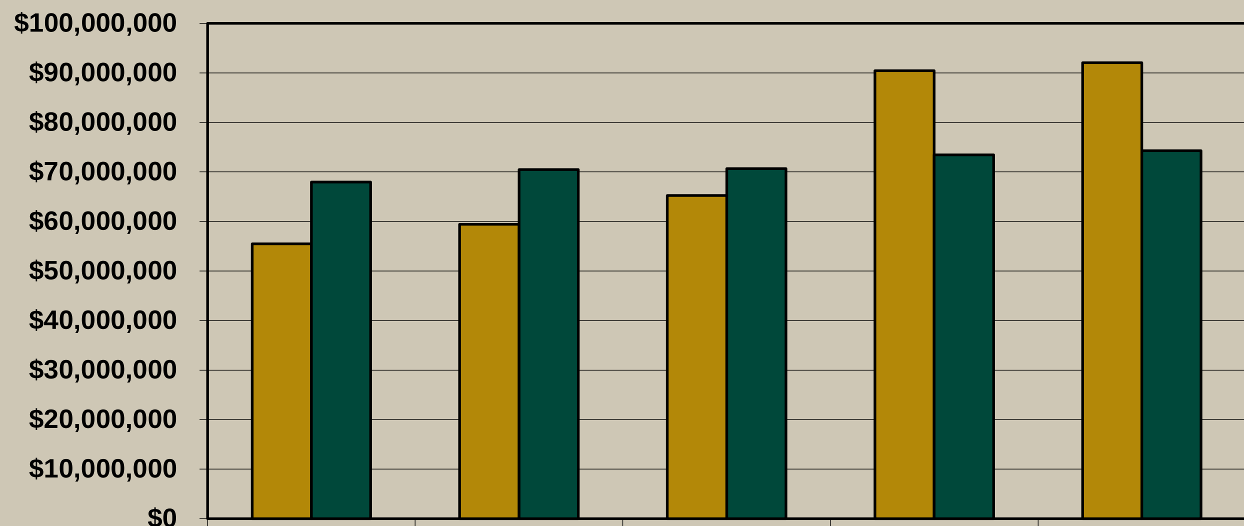
❻ The active count decreased by 2.88% compared to last year. It has also decreased by 12.9% over the last 4 years. Additional information can be seen on page 14 of the report.

❼ There are 2,032 active members between the age of 50 and 60 (36.6% of the active population), with 1,040 of these members having at least 20 years of Credited Service.

# CONTRIBUTION AMOUNTS

Exhibit C-1 shows the development of the minimum required contribution. Exhibits C-2 through C-5 contain information needed to develop the minimum contribution. Exhibit D-1 shows the development of the maximum tax-deductible contribution.

**Five-Year History of Minimum Required and Actual/Expected Contributions**




| | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Minimum Required | $55,494,775 | $59,421,475 | $65,262,081 | $90,434,702 | $92,030,795 |
| Employer Contribution | $67,944,631 | $70,446,005 | $70,657,123 | $73,477,138 | $74,300,000 |

**Notes:**

1. The minimum contribution amounts are calculated before application of the credit balance.
2. Employer contributions shown above include employer withdrawal liability payments.
3. The 2019 employer contribution is estimated based on current contribution rates and the number of active members as of January 2019.

| CREDIT BALANCE ANALYSIS | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Minimum Required before Credit Balance* | $ 55,495 | $ 59,421 | $ 65,262 | $ 90,435 | $ 92,031 |
| Credit Balance* | $ 304,516 | $ 344,739 | $ 384,970 | $ 422,075 | $ 438,029 |
| Minimum Contribution* | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |

* Rolled forward to the end of year with interest, in thousands.

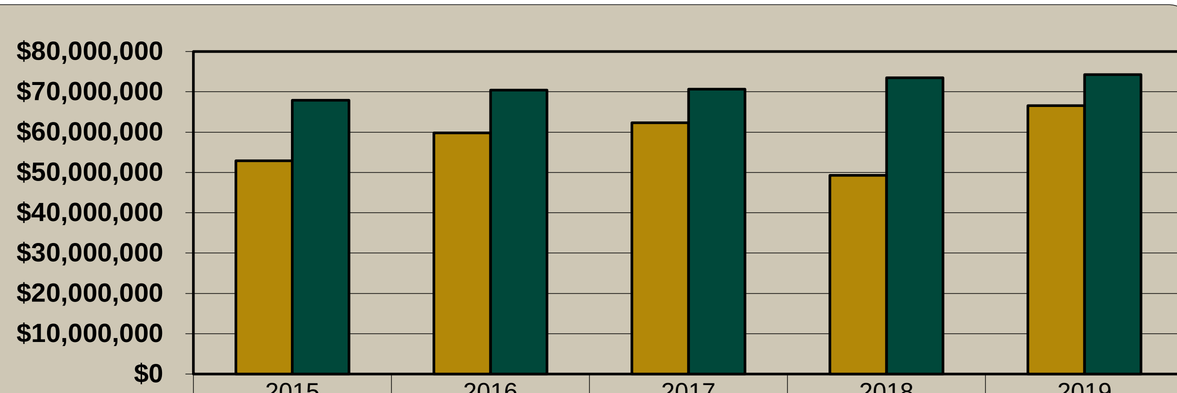
# 12-YEAR FUNDING CONTRIBUTION

The minimum required contribution shown on the previous page is developed using the assumptions and methods disclosed in the Appendix to this report, and amortizing the unfunded liability over the IRS-mandated funding period. This exhibit develops a contribution based on 12-year funding period in conjunction with the following interest rate and methods:

| INTEREST RATE & METHODS | |
|---|---|
| Interest Rate | 7.50% |
| Cost Method | Entry Age Normal |
| Asset Method | Market Value |
| Funding Period | 12 Years |

| 2019 12-YEAR FUNDING CONTRIBUTION & MARGIN | | |
|---|---|---|
| Normal Cost (w/ Expenses) | $ | 14,969,436 |
| 12-Year Amortization of Unfunded | | 49,201,649 |
| Interest to Mid-year | | 2,406,416 |
| **Funding Policy Contribution** | **$** | **66,577,501** |
| | | |
| Estimated Employer Contributions | $ | 74,300,000 |
| **Margin** | **$** | **7,722,499** |

The table below shows a recent history of the funded policy contribution compared with the actual employer contributions made.




| | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| 12-Year Funding Contribution | $52,926,805 | $59,831,232 | $62,335,887 | $49,313,480 | $66,577,501 |
| Employer Contributions | $67,944,631 | $70,446,005 | $70,657,123 | $73,477,138 | $74,300,000 |

# FUNDED STATUS OF THE PLAN

Many benchmarks can be used to measure how well a plan is funded. For purposes of this report, we focus on the **FASB ASC 960**. Although this measurement provides useful information, it should not be used as a measure of the value of plan liabilities for plan termination purposes. Liabilities for this purpose will be based upon the cost of purchasing annuities from insurance companies and/or providing lump-sum settlements, which may vary significantly based upon prevailing interest rates at the time of termination.

## FASB ASC 960

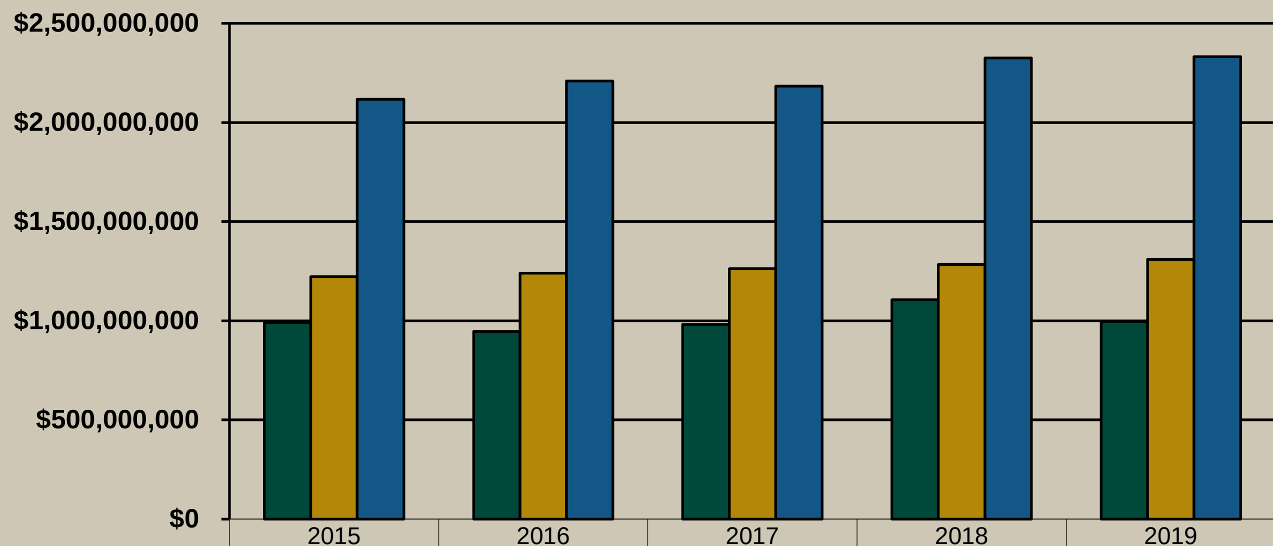
FASB ASC 960 compares the value of accumulated benefits, determined using the valuation assumptions, to the market value of assets. Under this method, the value of accumulated benefits is determined as if all employees stopped earning additional benefits on the valuation date but continued working in Covered Employment. This measure must be disclosed in the plan's financial statements. The result of this comparison is shown below. Additional details are shown in Exhibits E-1 and E-2.

| FASB ASC 960 FUNDED STATUS ON JANUARY 1, 2019 | | |
|---|---|---|
| 1. | Market Value of Assets | $ 996,554,029 |
| 2. | Present Value of Accumulated Benefits | 1,310,239,199 |
| 3. | Funded Ratio (1) ÷ (2) | 76.06% |

# FUNDED STATUS OF THE PLAN
**(continued)**

The graph below shows the five-year history of the present value of accumulated benefits on the FASB ASC 960 basis and the Current Liability basis, and the market value of assets.

### Five-Year History of Present Value of Accumulated Benefits (PVAB), Current Liability (CL), and Market Value of Assets




| | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Market Value of Assets | $992,047,430 | $945,793,054 | $981,945,671 | $1,106,555,556 | $996,554,029 |
| PVAB | $1,222,763,517 | $1,240,373,392 | $1,263,384,697 | $1,284,548,058 | $1,310,239,199 |
| Current Liability | $2,116,511,693 | $2,209,179,579 | $2,183,738,959 | $2,326,033,682 | $2,332,538,660 |

**Note:** The FASB ASC 960 accumulated benefits are calculated based on the same actuarial assumptions as those used to determine the plan's long-term funding requirements. Current Liability (C.L.) is determined based on IRS mandated interest rates and mortality assumptions. The FASB ASC 960 and Current Liability interest rates used for the last five years are shown below:

| Plan Year | Interest Rate | |
|---|---|---|
| | FASB ASC 960 | C.L. |
| 2015 | 8.00% | 3.51% |
| 2016 | 8.00% | 3.28% |
| 2017 | 7.50% | 3.05% |
| 2018 | 7.50% | 2.98% |
| 2019 | 7.50% | 3.06% |

# PLAN EXPERIENCE

To determine the plan's liabilities and contribution amounts, we make various assumptions to predict future benefit payments and the amount of assets available to pay these benefits. To the extent actual experience is different from our assumptions, an actuarial gain or loss results. An actuarial gain improves the funded status and decreases future contributions, while an actuarial loss has the opposite effect.

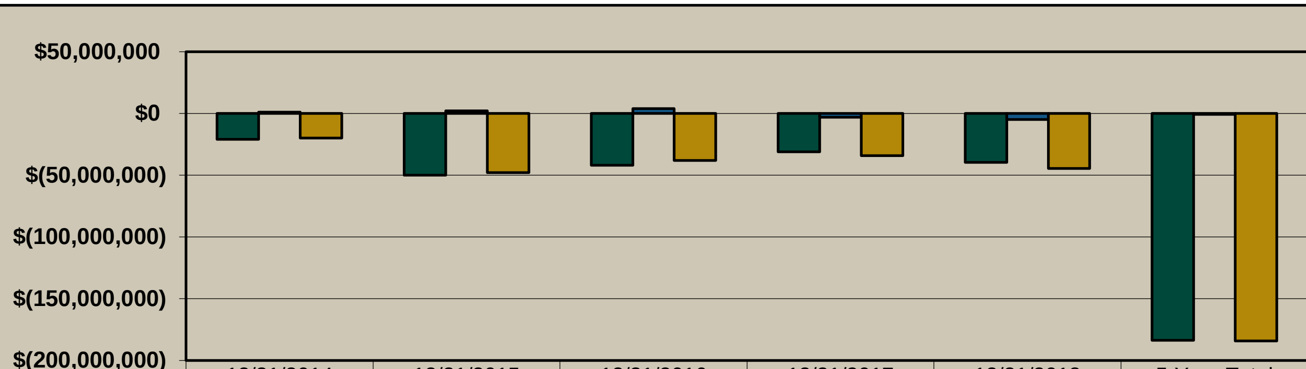
In addition to changes caused by actuarial gains or losses, there are several other reasons why the contribution changes from year to year:

1. Changes occur as a result of the normal operation of the actuarial assumptions and funding method as a result of expected retirements, terminations, etc.
2. Some changes in actuarial assumptions (e.g., the current liability interest rate) are mandated by law. This in turn may impact plan liabilities and required contributions for the year.
3. IRS rules do not allow us to anticipate future new entrants. As a result, additional participants cause contribution increases.

The total net amount of the actuarial gain/(loss) during the prior plan year was ($44,519,353) as shown in Exhibit B-3. This amount is amortized and subtracted from the other contribution requirements. The breakdown of the gain/(loss) is shown below:

| SUMMARY OF THE PRIOR YEAR'S ACTUARIAL GAIN/(LOSS) | | |
|---|---|---|
| Gain/(Loss) Due to Investment Return | $ | (39,577,351) |
| Gain/(Loss) Due to Liability Experience | | (4,942,002) |
| Total Gain/(Loss) | $ | (44,519,353) |

**Five-Year History of Actuarial Gain / (Loss)**




| | 12/31/2014 | 12/31/2015 | 12/31/2016 | 12/31/2017 | 12/31/2018 | 5-Year Total |
|---|---|---|---|---|---|---|
| Asset Gain / (Loss) | ($20,853,856) | ($49,994,109) | ($42,027,404) | ($31,127,747) | ($39,577,351) | ($183,580,467) |
| Liability Gain / (Loss) | $1,009,816 | $2,247,411 | $3,962,369 | ($2,989,051) | ($4,942,002) | ($711,457) |
| Total Gain / (Loss) | ($19,844,040) | ($47,746,698) | ($38,065,035) | ($34,116,798) | ($44,519,353) | ($184,291,924) |

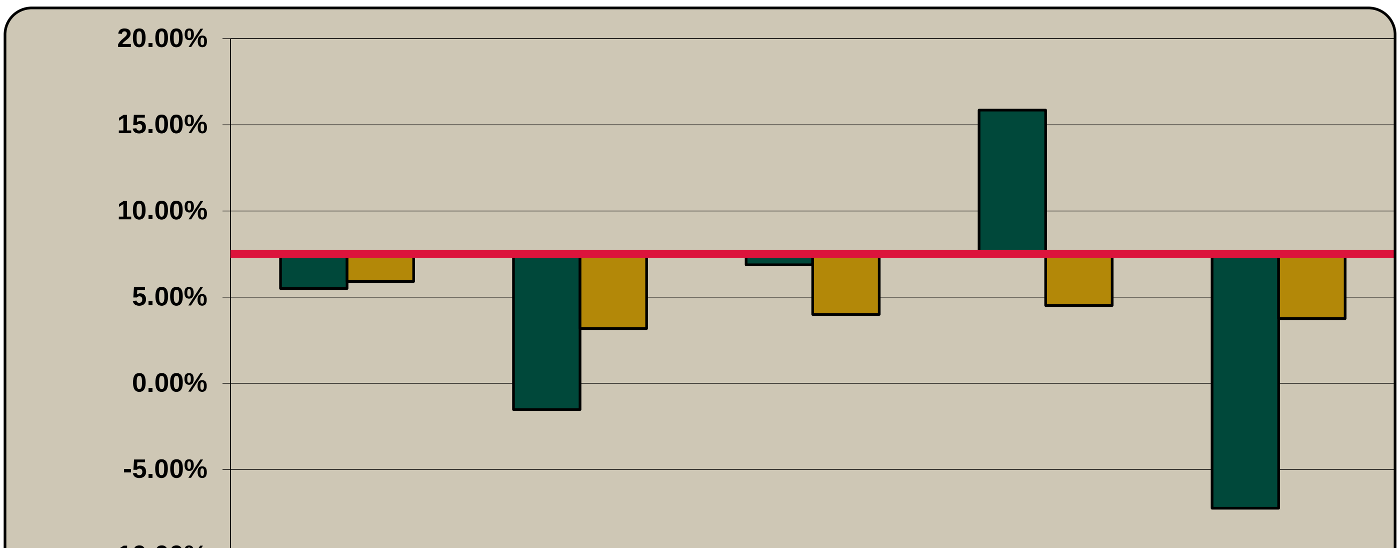
# PLAN ASSETS AND INVESTMENT PERFORMANCE

The plan is funded through a separate trust. The market value of assets as of January 1, 2019 is $996,554,029. This amount includes $10,489,204 of accrued employer contributions at year-end. The actuarial value of assets is equal to $1,098,817,395 as shown in Exhibit F-4.

The rate of return during the prior plan year was -7.25% on a market value basis and 3.76% on an actuarial value basis. These figures are net of investment expenses, and compare to the 7.50% return assumed for last year. Exhibit F-1 shows the calculation of these rates.

The graph below presents the net rates of return in recent years.

**Five-Year History of Investment Returns**




| | 12/31/2014 | 12/31/2015 | 12/31/2016 | 12/31/2017 | 12/31/2018 |
|---|---|---|---|---|---|
| Market Value | 5.51% | -1.53% | 6.87% | 15.85% | -7.25% |
| Actuarial Value | 5.91% | 3.18% | 3.99% | 4.51% | 3.76% |

**Five-year average on a time-weighted basis = 3.59% (market value)**
**Five-year average on a time-weighted basis = 4.27% (actuarial value)**

**Note**: The approximate returns shown above were calculated under the assumption that all receipts and disbursements occurred in the middle of the year. To the extent that substantial receipts and disbursements occurred on a time-weighted basis at other than the middle of the year, these returns may not be indicative of actual investment performance.



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# UNFUNDED VESTED BENEFIT LIABILITY

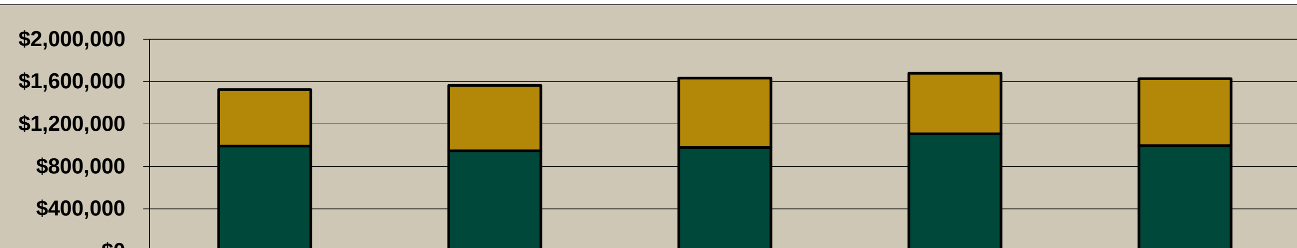
The unfunded vested benefit liability as of December 31, 2018 is the amount used in the determination of withdrawal liability under the Multiemployer Pension Plan Amendments Act of 1980. Except for the discount rate described below, the vested benefit liability was calculated on the same basis as used for the regular valuation of the Plan. The calculation of the unfunded vested benefit liability is shown below:

| UNFUNDED VESTED BENEFIT LIABILITY ON DECEMBER 31, 2018 | |
|---|---|
| 1. Vested Benefit Liability* | |
| a. For retired participants and beneficiaries in pay status | $ 1,063,675,278 |
| b. For other participants | 565,765,281 |
| c. Total | $ 1,629,440,559 |
| 2. Market Value of Assets | $ 996,554,029 |
| 3. Unfunded / (Overfunded) Vested Benefit Liability | $ 632,886,530 |

* The portion of the vested benefits that is matched by the Plan's assets is valued using current annuity market interest rates developed from the Pension Benefit Guaranty Corporation's plan close-out rates as of the determination date. The portion of vested benefits that is matched by assets is determined by comparing the total present value of vested benefits at the PBGC-based rates with the total value of assets. Each vested benefit is treated as covered by assets to the same extent as other vested benefits. The vested benefits for which future withdrawal liability payments are required are valued using the same interest rates that apply for plan funding.

| | PBGC-Based Rates | | |
|---|---|---|---|
| Determination Date | Immediate | Deferred | Deferral Period |
| 12/31/2014 | 3.10% | 3.29% | 20 years |
| 12/31/2015 | 2.46% | 2.98% | 20 years |
| 12/31/2016 | 1.98% | 2.67% | 20 years |
| 12/31/2017 | 2.34% | 2.63% | 20 years |
| 12/31/2018 | 2.84% | 2.76% | 20 years |

**Five-Year History of Unfunded Vested Benefit (UVB) Liability**
**(000's omitted)**




| | 12/31/2014 | 12/31/2015 | 12/31/2016 | 12/31/2017 | 12/31/2018 |
|---|---|---|---|---|---|
| UVB Liability | $533,169 | $618,387 | $652,434 | $573,897 | $632,887 |
| MV Assets | $992,047 | $945,793 | $981,946 | $1,106,556 | $996,554 |



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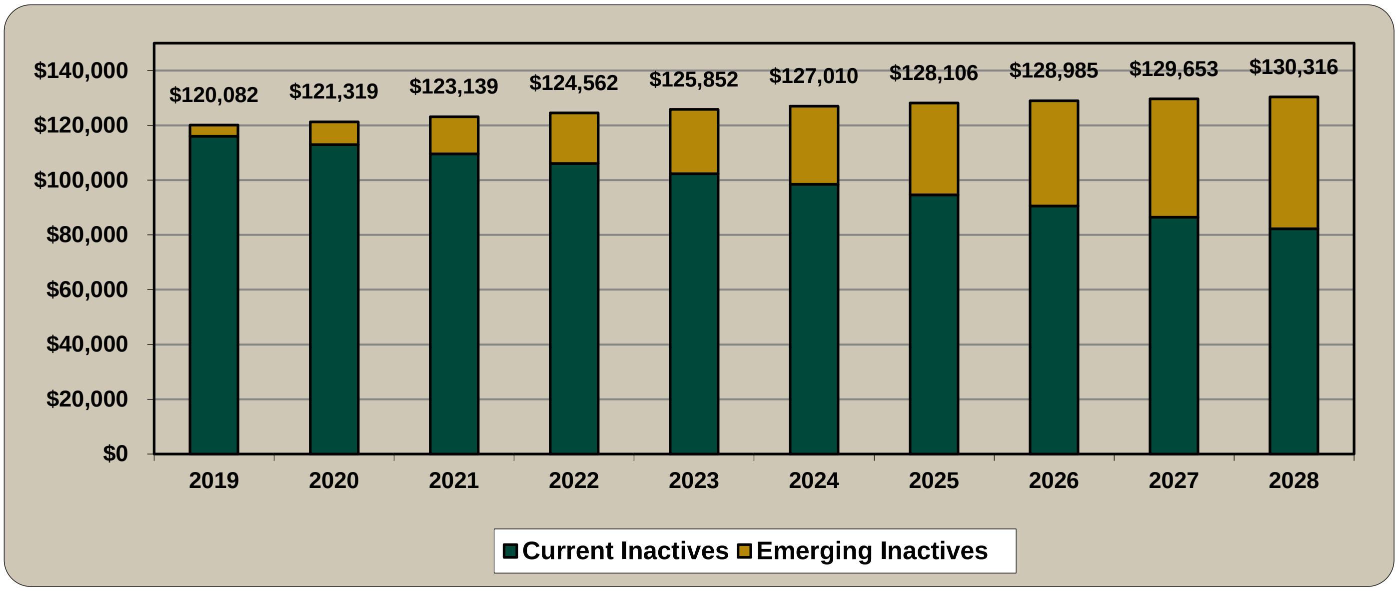
# PROJECTED BENEFIT PAYMENTS AND CASH FLOW

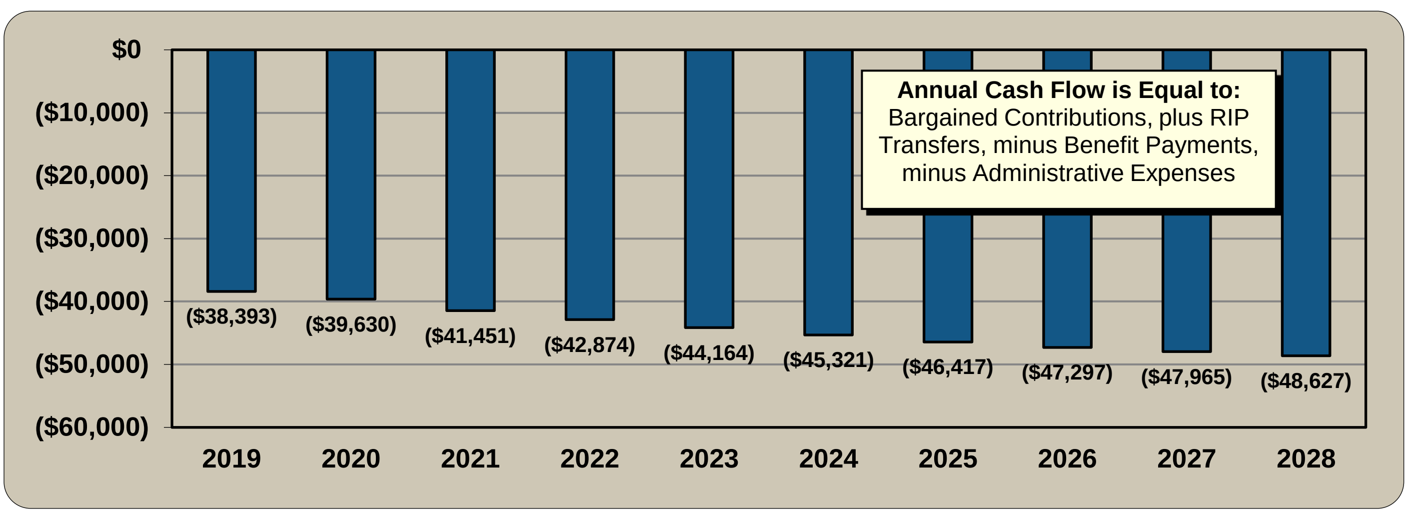
The following graph illustrates the expected benefit payments over the next ten years for participants who are in the plan as of January 1, 2019. This information should assist the plan's investment advisors in determining the liquidity requirements that the plan will face in the near term.

**Expected Benefit Payments (in thousands)**




**Note:** Except for anticipated future RIP transfers (assumed to be $10.49 million per year for these two exhibits), the benefit disbursements and projected cash flow are calculated based on the assumptions used in the valuation.

**Projected Cash Flow (in thousands)**




**Comment:** Mathematically, if two portfolios have the same average rate of return, the portfolio with less period-to-period volatility will have a greater compound rate of return. The larger a plan's negative cash flow, the more susceptible its time-weighted, compound investment return will be to volatility.



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# ANNUAL ACTUARIAL CERTIFICATIONS

The Pension Protection Act of 2006 ("PPA") imposed rules aimed at accelerating the funding of multiemployer defined benefit plans based on current and projected Plan assets and liabilities.

In December 2014, the Multiemployer Pension Reform Act (MPRA) was passed, which extended the provisions of PPA past the originally scheduled sunset of December 31, 2014. In addition, MPRA added three new certification zones, including one called Critical and Declining Status for deeply troubled plans that are projected to be insolvent in the next 14 years. MPRA also eliminated the reorganization test, increased PBGC premiums, and made technical changes to PPA.

This exhibit provides an overview of PPA and MPRA and the Plan's history under them. Certifications and other detailed calculations required under PPA are provided in separate reports, and the information provided herein should not be considered a substitute for those reports.

### *Annual Certification*

Beginning in 2008, the actuary must annually certify the Plan's status based on the current funded status of the Plan as well as on projections of the Plan's Funding Standard Account (FSA) credit balance and asset sufficiency. For purposes of certification, the funded status is calculated using the actuarial value of assets and the Unit Credit actuarial liability. For plan years beginning on or after 2015, the annual certification is is determined in accordance with the following zone classifications:

**Critical and Declining** A plan is in Critical and Declining status if it meets the criteria for Critical Status and the plan is projected to become insolvent within 15 years (or within 20 years with an inactive-to-active participant ratio exceeding 2 to 1 or a funded percentage less than 80%).

**Critical** A plan is in Critical Status if one of the following conditions is met:

- PPA funded percentage under 65% and either a projected FSA deficiency within five years or insufficient assets to pay benefits within seven years.
- A projected FSA deficiency within four years.
- Insufficient assets to pay benefits within five years.
- The present value of vested benefits for inactive participants exceeds that for actives, contributions are less than the normal cost plus interest on the unfunded liability, and there is a projected FSA deficiency within five years.

**Projected to be Critical** A Plan is Projected to be Critical status if Critical Status is projected within five years.

# ANNUAL ACTUARIAL CERTIFICATIONS
**(continued)**

**Seriously Endangered** A plan is in Seriously Endangered status if both of the following conditions are met:

- A PPA funded percentage under 80%.
- A projected FSA deficiency within seven years.

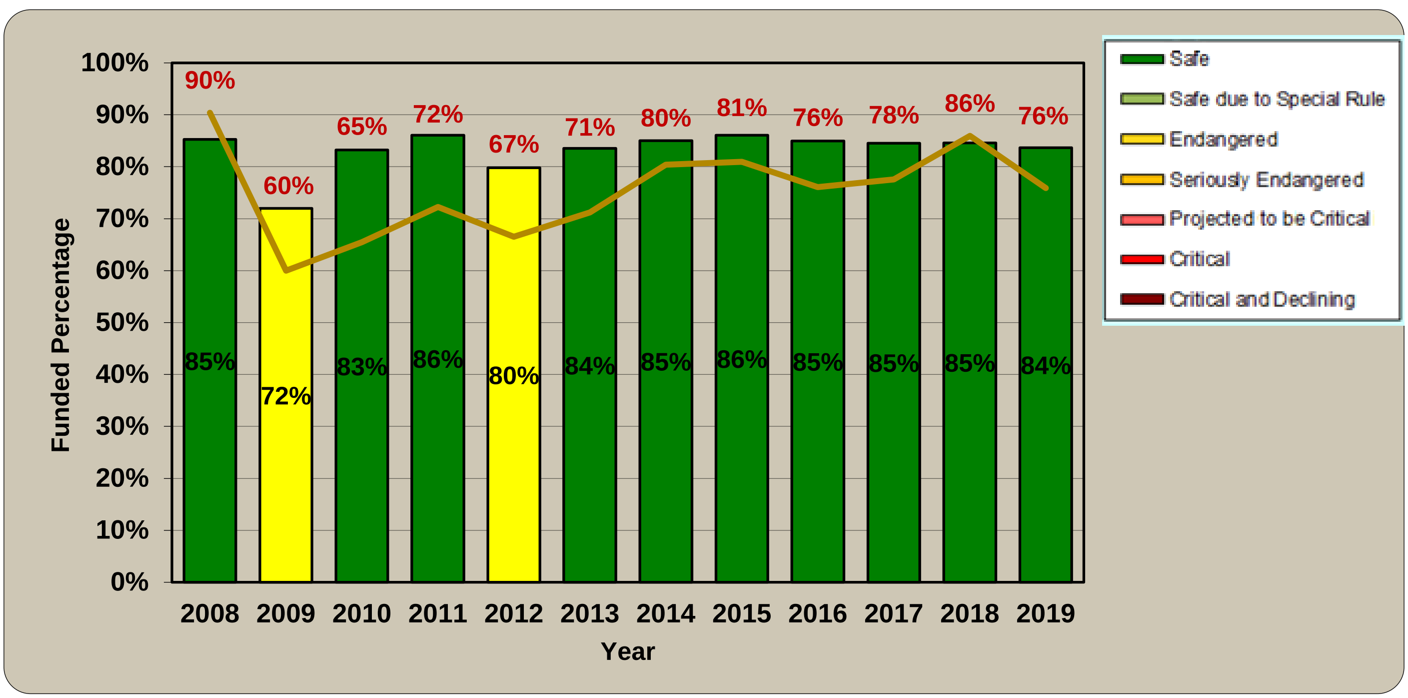
**Endangered** A plan is in Endangered Status if only one of the conditions for Seriously Endangered status is met.

**Safe due to Special Rule** A plan is in Safe due to Special Rule status if the Plan would be in endangered status for the current year, the Plan was not critical or endangered for the prior year, and the Plan is projected to be safe by the end of the 10th plan year after the plan year for the certification.

**Safe** A plan is in safe status if it does not meet any of the criteria described above.

Plans that are in critical status must adopt a Rehabilitation Plan, consisting of benefit reductions and/or contribution increases, that is designed to exit critical status within 10 years. Similarly, plans that are in either endangered or seriously endangered status must adopt a Funding Improvement Plan to improve the plan's funded status over time by reducing benefits and/or increasing contributions. The chart below shows the Plan's certified status and funded percentage since the effective date of PPA.

**History of Plan's Funded Percentage and Zone Status**




***Bars represent the funded percentage based on Actuarial Value of Assets.***
***Line represents the funded percentage based on Market Value.***

# PARTICIPANT DATA

Participant information was provided by Central Pennsylvania Teamsters. An audit of the data was not made. However, a thorough check of the data was prepared, reconciling last year's data with the new data. This reconciliation accounted for all changes to the covered population. The result of this reconciliation is shown in Exhibit G-1. Additionally, all data was checked for internal consistency and for consistency with last year's data.

Exhibit G-2 shows the age and service distribution of active participants. Exhibit G-3 shows the distribution of the inactive participants.

Comparing this year's census data to last year's, the number of active participants included in the valuation decreased by 2.9%. The average age of the active participants is 48.2. The average benefit service of this group is 14.7 years.

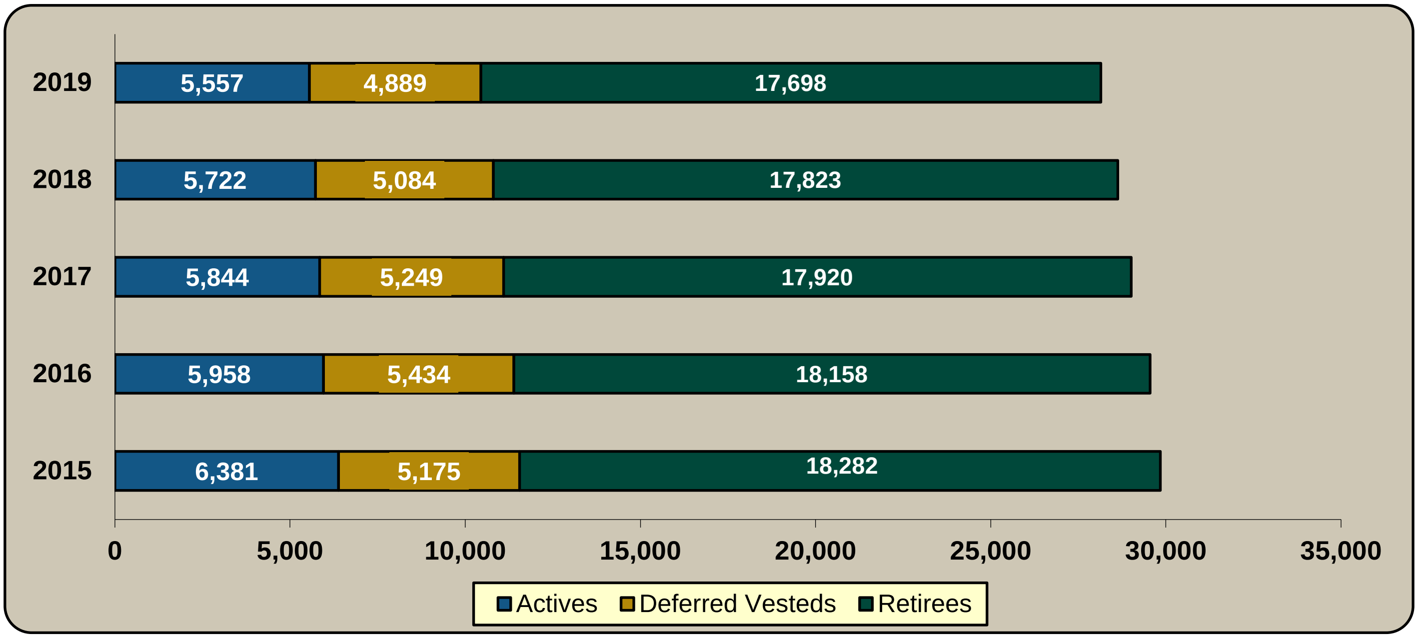
The number of terminated vested participants in the plan decreased by 3.8%, from 5,084 to 4,889. The average age of the terminated vested participants is 55.1. The average monthly benefit amount for this group is $347.

The number of retired participants in the plan decreased by 0.7%, from 17,823 to 17,698. The average age of the retired participants is 74.5. The average monthly benefit amount for this group is $524.

# PARTICIPANT DATA
**(continued)**

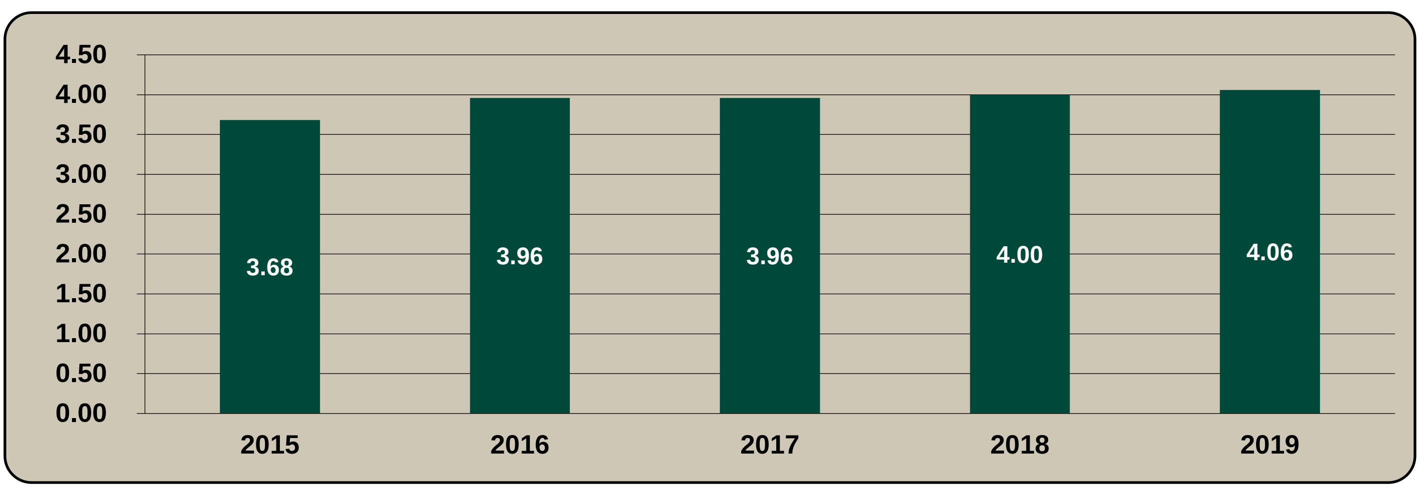
The following graph illustrates the change in participation during the past several years.

**Five-Year History of Number of Participants**




As a plan matures, the ratio of inactive to active participants increases. A higher ratio signifies an increased risk profile associated with actuarial gains and losses that the plan faces. The following graph shows the change in the inactive to active ratio over the past several years.

**Ratio of Inactive Participants to Active Participants**



# ACTUARIAL METHODS AND ASSUMPTIONS

Appendix 1 (Section 5) summarizes the actuarial assumptions and methods used to determine plan liabilities and contribution requirements. The changes to the assumptions and methods for the plan year beginning January 1, 2019 are as follows:

❶ The interest rate used to calculate the RPA current liability was increased from 2.98% to 3.06%.

❷ The mortality table used to calculate the RPA current liability was updated from 2018 to 2019.

ERISA requires that the actuary use assumptions that represent his or her best estimate of future experience under the plan and reasonably relate to the experience of the plan. We believe that the current actuarial basis meets this requirement. We will monitor the actuarial experience under the plan in future years in order to judge the continuing appropriateness of these assumptions.

# PLAN PROVISIONS

Appendix 2 (Section 5) summarizes the main provisions of the plan as of the valuation date. The following changes in benefit provisions were effective since the prior valuation:

❶ For calendar years 2018 and 2019, the monthly benefit accrual cap is $180 for participants whose employer contributes at a rate of at least $11.00 per hour (or $1,906.67 per month) as of the December 31 immediately preceding.

❷ Effective January 1, 2018, participants receive 0.5 years of service for benefit eligibility for each 1.0 years of service earned in the UPS Pension Plan. This additional eligibility does not apply for the Combined Minimum Monthly Benefit or the Rule of 82-85 Benefit.

To the best of our knowledge, all Plan provisions in effect on the valuation date have been reflected in determining the Plan's liabilities and contribution requirements. All calculations were made assuming the Plan will continue indefinitely.

# SUMMARY AND COMPARISON OF VALUATION RESULTS

| | | Actuarial Valuation as of | |
|---|---|---|---|
| | | January 1, 2019 | January 1, 2018 |
| 1. | Number of Plan Participants | | |
| | a. Active Participants | 5,557 | 5,722 |
| | b. Terminated Vested Participants | 4,889 | 5,084 |
| | c. Retired Participants and Beneficiaries | 17,698 | 17,823 |
| | d. Total | 28,144 | 28,629 |
| 2. | RPA Current Liability (value of benefits accrued) (based on a discount rate of 3.06% at 01/01/19 and a discount rate of 2.98% at 01/01/18) | $ 2,332,538,660 | $ 2,326,033,682 |
| 3. | Actuarial Accrued Liability | $ 1,313,239,199 | $ 1,287,548,058 |
| 4. | Assets | | |
| | a. Market value | $ 996,554,029 | $ 1,106,555,556 |
| | b. Actuarial value | $ 1,098,817,395 | $ 1,089,367,302 |
| 5. | Normal Cost | | |
| | a. Amount | $ 27,082,492 | $ 24,370,132 |
| | b. Per participating employee* | 4,888.54 | 4,274.71 |
| 6. | Maximum Deductible Contribution | | |
| | a. Amount | $ 2,233,684,691 | $ 2,223,373,987 |
| | b. Per participating employee* | 403,192.18 | 389,997.19 |
| 7. | Minimum Required Contribution | | |
| | a. Amount | $ 0 | $ 0 |
| | b. Per participating employee* | 0.00 | 0.00 |

Current plan year amounts are calculated assuming that contributions will be made in the amounts and on the dates described in Exhibit C-2 and that the receivable contributions for the prior plan year will be made when due. Prior plan year amounts may differ from the prior report if actual contributions were made in different amounts or on different dates than described in the prior report.

* For actives under the plan's assumed retirement age (5,540 for 2019; 5,701 for 2018).

# DETAILS OF ACTUARIAL ACCRUED LIABILITY AND NORMAL COST UNDER THE UNIT CREDIT COST METHOD

| | | | |
|---|---|---|---|
| 1. | Actuarial Accrued Liability | | |
| | a. Active Participants | | |
| | (i) Retirement benefits | $ 306,554,111 | |
| | (ii) Termination benefits | 3,270,805 | |
| | (iii) Death benefits | 7,510,723 | |
| | (iv) Disability benefits | 5,640,299 | |
| | (v) Total Active | | $ 322,975,938 |
| | b. Terminated Vested Participants | | 102,797,956 |
| | c. Retired Participants and Beneficiaries | | 887,465,305 |
| | d. Total | | $ 1,313,239,199 |
| 2. | Normal Cost | | |
| | a. Retirement benefits | | $ 22,371,420 |
| | b. Termination benefits | | 508,957 |
| | c. Death benefits | | 624,639 |
| | d. Disability benefits | | 477,476 |
| | e. Administrative expenses | | 3,100,000 |
| | f. Total | | $ 27,082,492 |
| 3. | Present Value of Future Benefits | | |
| | a. Active Participants | | |
| | (i) Retirement benefits | $ 480,197,518 | |
| | (ii) Termination benefits | 5,892,050 | |
| | (iii) Death benefits | 12,056,903 | |
| | (iv) Disability benefits | 8,579,717 | |
| | (v) Total Active | | $ 506,726,188 |
| | b. Terminated Vested Participants | | 102,797,956 |
| | c. Retired Participants and Beneficiaries | | 887,465,305 |
| | d. Total | | $ 1,496,989,449 |
| 4. | Expected Benefit Payments | | $ 120,081,541 |

# DETAILS OF CURRENT LIABILITY

| | | RPA '94 Based on IRS Mandated Mortality |
|---|---|---|
| 1. | Applicable Interest Rate | 3.06% |
| 2. | Current Liability at Valuation Date | |
| | a. Active Participants | $ 739,982,657 |
| | b. Terminated Vested Participants | 195,517,860 |
| | c. Retired Participants and Beneficiaries | 1,397,038,143 |
| | d. Total: (a) + (b) + (c) | $ 2,332,538,660 |
| | e. Reduction to exclude pre-participation service | 0 |
| | f. Net: (d) - (e) | $ 2,332,538,660 |
| 3. | Expected Benefit Payments | $ 120,081,541 |
| 4. | Assets at Valuation Date | |
| | a. Market Value | $ 996,554,029 |
| | b. Actuarial Value | $ 1,098,817,395 |
| 5. | Funded Percentage at Valuation Date | |
| | a. Market Value | 42.72% |
| | b. Actuarial Value | 47.11% |
| 6. | Current Liability Normal Cost | |
| | a. Benefits | $ 63,903,493 |
| | b. Administrative expenses | 3,100,000 |
| | c. Employer normal cost | $ 67,003,493 |
| 7. | Vested Current Liability at Valuation Date | |
| | a. Active Participants | $ 653,322,257 |
| | b. Terminated Vested Participants | 195,517,860 |
| | c. Retired Participants and Beneficiaries | 1,397,038,143 |
| | d. Total: (a) + (b) + (c) | $ 2,245,878,260 |

# DEVELOPMENT OF (GAIN) / LOSS AS OF JANUARY 1, 2019

| | | | |
|---|---|---|---|
| 1. | Unfunded Accrued Liability as of January 1, 2018 | | $ 198,180,756 |
| 2. | Normal Cost as of January 1, 2018 | | $ 24,370,132 |
| 3. | Interest to the end of the year at 7.50% | | $ 16,691,317 |
| 4. | Employer contributions for the 2018 plan year | | $ 73,477,138 |
| 5. | Interest on (4) to the end of the plan year | | $ 2,351,704 |
| 6. | Expected Unfunded Liability Before Changes as of January 1, 2019: (1) + (2) + (3) - (4) - (5) | | $ 163,413,363 |
| 7. | Actual Unfunded Liability Before Changes as of January 1, 2019 | | |
| | a. Actuarial Accrued Liability | $ 1,306,750,111 | |
| | b. Actuarial Value of Assets | 1,098,817,395 | |
| | c. Unfunded Liability: (a) - (b) | | $ 207,932,716 |
| 8. | (Gain) / Loss as of January 1, 2019 | | |
| | a. Liability (Gain) / Loss | $ 4,942,002 | |
| | b. Asset (Gain) / Loss | 39,577,351 | |
| | c. Total (Gain)/Loss: (a) + (b) | | $ 44,519,353 |
| 9. | Change in unfunded due to a change in assumptions | | $ 0 |
| 10. | Change in unfunded due to a plan amendment | | $ 6,489,088 |
| 11. | Change in unfunded due to method change | | $ 0 |
| 12. | Unfunded Liability as of January 1, 2019 after changes: (7) + (9) + (10) + (11) | | $ 214,421,804 |
| 13. | Actual Unfunded Liability as of January 1, 2019 | | |
| | a. Actuarial Accrued Liability (Exhibit B-1, Item 1) | $ 1,313,239,199 | |
| | b. Actuarial Value of Assets (Exhibit F-1, Item A5) | 1,098,817,395 | |
| | c. Unfunded Liability: (a) - (b) | | $ 214,421,804 |

# CALCULATION OF MINIMUM REQUIRED CONTRIBUTION FOR PLAN YEAR ENDING DECEMBER 31, 2019

| | | |
|---|---|---|
| 1. Regular Minimum Contribution | | |
| a. Normal cost (Exhibit B-1, Item 2) | $ | 27,082,492 |
| b. Net amortization charges (Exhibit C-3, Item C, Column 6) | | 58,527,550 |
| c. Interest on (a) and (b) | | 6,420,753 |
| d. Total, but not less than zero | $ | 92,030,795 |
| 2. Full funding limitation (Exhibit C-4, Item A9, Column 2) | $ | 1,059,757,444 |
| 3. Minimum required contribution before recognition of credit balance if deposited on or after December 31, 2019: lesser of (1d) or (2) | $ | 92,030,795 |
| 4. Credit balance | | |
| a. Beginning of year (Exhibit C-2, Item A3) | $ | 407,469,030 |
| b. Interest to end of year | | 30,560,177 |
| c. End of year: (a) + (b) | $ | 438,029,207 |
| 5. Minimum required contribution if deposited on or after December 31, 2019: (3) - (4c), but not less than zero | $ | 0 |

# FUNDING STANDARD ACCOUNT

## *A. Funding Standard Account for Plan Year Ended December 31, 2018*

| | | |
|---|---|---|
| 1. Charges for the Plan Year | | |
| a. Normal cost | $ | 24,370,132 |
| b. Amortization charge (on outstanding balance of $792,384,082) | | 90,642,621 |
| c. Interest to end of year on (a) and (b) | | 8,625,956 |
| d. Total charges | $ | 123,638,709 |
| 2. Credits for the Plan Year | | |
| a. Prior year credit balance | $ | 392,627,805 |
| b. Amortization credit (on outstanding balance of $201,575,521) | | 30,887,448 |
| c. Employer contributions * | | 73,477,138 |
| d. Interest on (a), (b), and (c) | | 34,115,348 |
| e. Full funding limitation credit | | 0 |
| f. Total credits | $ | 531,107,739 |
| 3. Credit balance at December 31, 2018: (2f) - (1d) | $ | 407,469,030 |

* Contributions made, or expected to be made, as follows:

| | | |
|---|---|---|
| 6/30/2018 | $ | 2,977,521 |
| 6/30/2018 | $ | 60,010,413 |
| 1/15/2019 | $ | 339,597 |
| 1/15/2019 | $ | 10,149,607 |



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# FUNDING STANDARD ACCOUNT

**(continued)**

### *B. Projected Funding Standard Account for Plan Year Ending December 31, 2019*

| | | |
|---|---|---|
| 1. Charges for the Plan Year | | |
| a. Normal cost (Exhibit B-1, Item 2) | $ | 27,082,492 |
| b. Amortization charge (Exhibit C-3, Item A, Column 6) | | 89,359,963 |
| c. Interest to end of year on (a) and (b) | | 8,733,184 |
| d. Total charges | $ | 125,175,639 |
| 2. Credits for the Plan Year | | |
| a. Prior year credit balance (A3) | $ | 407,469,030 |
| b. Amortization credit (Exhibit C-3, Item B, Column 6) | | 30,832,413 |
| c. Interest to the end of year on (a) and (b) | | 32,872,608 |
| d. Full funding limitation credit (Exhibit C-4, Item B3) | | 0 |
| e. Total | $ | 471,174,051 |
| 3. Minimum required contribution as of December 31, 2019: (1d) - (2e), but not less than zero | $ | 0 |

# SCHEDULE OF REQUIRED AMORTIZATIONS FOR FUNDING STANDARD ACCOUNT AS OF JANUARY 1, 2019

| | Date Established | Initial Amount | Initial Amortization Period (Years) | Outstanding Balance | Remaining Amortization Period (Years) | Amortization Payment as of Beginning of Year |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| ***A. Charges*** | | | | | | |
| 1. Method Change | 1/1/1997 | $ 1,482,948 | 30 | $ 756,792 | 8.000 | $ 120,191 |
| 2. Assumption Change | 1/1/1999 | 14,849,370 | 30 | 8,834,937 | 10.000 | 1,197,327 |
| 3. Assumption Change | 1/1/2001 | 39,167,309 | 30 | 26,135,627 | 12.000 | 3,143,030 |
| 4. Plan Amendment | 1/1/2003 | 294,195,961 | 30 | 214,803,269 | 14.000 | 23,537,917 |
| 5. Experience Loss | 1/1/2005 | 12,286,951 | 15 | 1,323,299 | 1.000 | 1,323,299 |
| 6. Actuarial Loss | 1/1/2006 | 1,432,675 | 15 | 297,202 | 2.000 | 153,972 |
| 7. Assumption Change | 1/1/2006 | 24,185,822 | 30 | 19,544,156 | 17.000 | 1,927,145 |
| 8. Plan Amendment | 1/1/2007 | 4,253,016 | 30 | 3,531,416 | 18.000 | 338,454 |
| 9. PRA Investment Loss | 1/1/2009 | 180,067,557 | 29 | 154,591,532 | 19.000 | 14,439,697 |
| 10. Actuarial Loss | 1/1/2009 | 3,947,037 | 15 | 1,833,896 | 5.000 | 421,651 |
| 11. Assumption Change | 1/1/2010 | 49,667,442 | 15 | 26,722,035 | 6.000 | 5,295,807 |
| 12. PRA Investment Loss | 1/1/2010 | 34,482,290 | 28 | 29,891,231 | 19.000 | 2,792,005 |
| 13. PRA Investment Loss | 1/1/2011 | 45,284,465 | 27 | 39,671,288 | 19.000 | 3,705,516 |
| 14. PRA Investment Loss | 1/1/2012 | 79,197,933 | 26 | 70,184,532 | 19.000 | 6,555,620 |
| 15. Actuarial Loss | 1/1/2012 | 22,931,120 | 15 | 15,339,849 | 8.000 | 2,436,211 |
| 16. Actuarial Loss | 1/1/2014 | 10,428,501 | 15 | 8,147,539 | 10.000 | 1,104,169 |
| 17. Actuarial Loss | 1/1/2015 | 19,844,040 | 15 | 16,496,378 | 11.000 | 2,097,687 |
| 18. Plan Amendment | 1/1/2016 | 649,644 | 15 | 570,151 | 12.000 | 68,565 |
| 19. Actuarial Loss | 1/1/2016 | 47,746,698 | 15 | 41,904,246 | 12.000 | 5,039,340 |
| 20. Actuarial Loss | 1/1/2017 | 38,065,035 | 15 | 35,040,919 | 13.000 | 4,011,426 |
| 21. Assumption Change | 1/1/2017 | 4,730,695 | 15 | 4,354,860 | 13.000 | 498,537 |
| 22. Plan Amendment | 1/1/2017 | 1,723,263 | 15 | 1,586,357 | 13.000 | 181,603 |
| 23. Actuarial Loss | 1/1/2018 | 34,116,798 | 15 | 32,810,560 | 14.000 | 3,595,347 |
| 24. Actuarial Loss | 1/1/2019 | 44,519,353 | 15 | 44,519,353 | 15.000 | 4,691,604 |
| 25. Plan Amendment | 1/1/2019 | 6,489,088 | 15 | 6,489,088 | 15.000 | 683,843 |
| Total | | | | $ 805,380,512 | | $ 89,359,963 |

# SCHEDULE OF REQUIRED AMORTIZATIONS FOR FUNDING STANDARD ACCOUNT AS OF JANUARY 1, 2019

**(continued)**

| | Date Established | Initial Amount | Initial Amortization Period (Years) | Outstanding Balance | Remaining Amortization Period (Years) | Amortization Payment as of Beginning of Year |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| ***B. Credits*** | | | | | | |
| 1. Assumption Change | 1/1/1992 | $ 5,292,943 | 30 | $ 1,216,867 | 3.000 | $ 435,285 |
| 2. Assumption Change | 1/1/2003 | 1,370,682 | 30 | 1,000,787 | 14.000 | 109,665 |
| 3. Actuarial Gain | 1/1/2007 | 8,756,839 | 15 | 2,625,521 | 3.000 | 939,174 |
| 4. Actuarial Gain | 1/1/2008 | 24,292,024 | 15 | 9,361,761 | 4.000 | 2,600,109 |
| 5. PRA Asset Relief | 1/1/2010 | 52,800,851 | 30 | 46,872,096 | 21.000 | 4,187,068 |
| 6. Actuarial Gain | 1/1/2010 | 127,096,178 | 15 | 68,380,179 | 6.000 | 13,551,672 |
| 7. Actuarial Gain | 1/1/2011 | 62,571,446 | 15 | 37,917,959 | 7.000 | 6,659,463 |
| 8. Actuarial Gain | 1/1/2013 | 22,157,652 | 15 | 16,114,508 | 9.000 | 2,349,977 |
| Total | | | | $ 183,489,678 | | $ 30,832,413 |
| ***C. Net (A - B)*** | | | | $ 621,890,834 | | $ 58,527,550 |

***D. Balance Test***

| | |
|---|---|
| 1. Reconciliation account due to additional funding charges | N/A |
| 2. Reconciliation account due to additional interest charges | N/A |
| 3. Credit balance | $ 407,469,030 |
| 4. Balance test: [C - D(1) - D(2) - D(3)] | $ 214,421,804 |
| 5. Unfunded accrued liability | $ 214,421,804 |



CBIZ Retirement Plan Services

# DEVELOPMENT OF FULL FUNDING LIMITATION AND CREDIT FOR THE PLAN YEAR ENDING DECEMBER 31, 2019

| | Maximum Deductible Contribution (1) | Minimum Required Contribution (2) |
|---|---|---|
| ***A. Development of Full Funding Limitation*** | | |
| 1. Actuarial accrued liability as of end of year: (Exhibit C-5, Item A2, Column 1) | $ 1,312,928,719 | $ 1,312,928,719 |
| 2. RPA current liability as of end of year: (Exhibit C-5, Item A2, Column 2) | $ 2,347,854,494 | $ 2,347,854,494 |
| 3. RPA current liability minimum: 90% x (2) | $ 2,113,069,045 | $ 2,113,069,045 |
| 4. Assets at end of year | | |
| a. Market value (Exhibit C-5, Item B2, Column 1) | $ 943,378,482 | $ 943,378,482 |
| b. Actuarial value (Exhibit C-5, Item B2, Column 2) | 1,053,311,601 | 1,053,311,601 |
| c. Lesser of (a) or (b) | $ 943,378,482 | $ 943,378,482 |
| 5. Asset adjustments | | |
| a. Credit balance at end of year | N/A | $ 438,029,207 |
| b. Net contribution carryover at end of year | $ 0 | N/A |
| c. Total asset adjustments | $ 0 | $ 438,029,207 |
| 6. Adjusted assets: (4c) - (5c) | $ 943,378,482 | $ 505,349,275 |
| 7. ERISA full funding limitation: (1) - (6), but not less than zero | $ 369,550,237 | $ 807,579,444 |
| 8. RPA Override full funding limitation: (3) - (4b), but not less than zero | $ 1,059,757,444 | $ 1,059,757,444 |
| 9. Full funding limitation: greater of (7) or (8) | $ 1,059,757,444 | $ 1,059,757,444 |



CBIZ Retirement Plan Services

# DEVELOPMENT OF FULL FUNDING LIMITATION AND CREDIT FOR THE PLAN YEAR ENDING DECEMBER 31, 2019
**(continued)**

***B. Development of Credit Due to Full Funding Limitation***

| | | | |
|---|---|---|---|
| 1. Net charges to funding standard account (Exhibit C-1, Item 1) | | | |
| a. Normal cost | $ 27,082,492 | | |
| b. Net amortization charge | 58,527,550 | | |
| c. Interest and penalties | 6,420,753 | | |
| d. Total | | $ | 92,030,795 |
| 2. Full funding limitation: (A9, Column 2) | | $ | 1,059,757,444 |
| 3. Full funding credit: (1) - (2), but not less than zero | | $ | 0 |

# DEVELOPMENT OF PROJECTED END-OF-YEAR AMOUNTS FOR CALCULATION OF FULL FUNDING LIMITATION

| | ERISA Actuarial Accrued Liability | RPA '94 Current Liability Based on IRS Mandated Mortality |
|---|---|---|
| | (1) | (2) |
| ***A. Liabilities*** | | |
| 1. Applicable interest rate | 7.50% | 3.06% |
| 2. Projection to end of year | | |
| a. Beginning-of-year liability | $ 1,313,239,199 | $ 2,332,538,660 |
| b. Normal cost, net of expenses | 23,982,492 | 63,903,493 |
| c. Expected benefit payments | (120,081,541) | (120,081,541) |
| d. Interest to end of year on (a) thru (c) | 95,788,569 | 71,493,882 |
| e. Projected end-of-year amount: (a) + (b) + (c) + (d) | $ 1,312,928,719 | $ 2,347,854,494 |

| | Market Value | Actuarial Value |
|---|---|---|
| | (1) | (2) |
| ***B. Asset Values*** | | |
| 1. Applicable interest rate | 7.50% | 7.50% |
| 2. Projection to end of year | | |
| a. Beginning-of-year amount | $ 996,554,029 | $ 1,098,817,395 |
| b. Expected benefit payments | (120,081,541) | (120,081,541) |
| c. Expected expenses | (3,100,000) | (3,100,000) |
| d. Interest to end of year on (a) thru (c) | 70,005,994 | 77,675,747 |
| e. Projected end-of-year amount: (a) + (b) + (c) + (d) | $ 943,378,482 | $ 1,053,311,601 |

# CALCULATION OF MAXIMUM DEDUCTIBLE CONTRIBUTION FOR TAX YEAR ENDING DECEMBER 31, 2019 BASED ON PLAN YEAR ENDING DECEMBER 31, 2019

| | | | |
|---|---|---|---|
| 1. | Regular maximum contribution | | |
| | a. Normal cost (Exhibit B-1, Item 2) | $ | 27,082,492 |
| | b. Ten-year amortization of unfunded accrued liability | | 29,058,827 |
| | c. Interest on (a) and (b) to end of tax year | | 4,210,599 |
| | d. Total | $ | 60,351,918 |
| 2. | Full funding limitation (Exhibit C-4, Item A9, Column 1) | $ | 1,059,757,444 |
| 3. | Lesser of (1d) or (2) | $ | 60,351,918 |
| 4. | Minimum required contributions for plan years ending within or before the current tax year | $ | 0 |
| 5. | Unfunded current liability | | |
| | a. Current liability at end of tax year | $ | 2,347,854,494 |
| | b. Reduction for pre-participation service | $ | 0 |
| | c. Current liability interest rate | | 3.06% |
| | d. Interest on (b) to end of year: (b) x (c) | $ | 0 |
| | e. Adjusted current liability: [(a) - (b) - (d)] x 140% | $ | 3,286,996,292 |
| | f. Actuarial value of assets at end of tax year (Exhibit C-5, Item B2, Column 2) | $ | 1,053,311,601 |
| | g. Asset adjustments for contribution deductions (Exhibit C-4, Item A5b, Column 1) | $ | 0 |
| | h. Actuarial value interest rate (Exhibit C-5, Item B1, Column 2) | | 7.50% |
| | i. Interest on (g) to end of year: (g) x (h), but not less than zero | | 0 |
| | j. Unfunded current liability: (e) - (f) + (g) + (i), but not less than zero | $ | 2,233,684,691 |
| 6. | Maximum deductible contribution: greatest of (3), (4), or (5j) | $ | 2,233,684,691 |

# PRESENT VALUE OF ACCUMULATED BENEFITS AS OF JANUARY 1, 2019 IN ACCORDANCE WITH FASB ASC 960

| | | January 1, 2019 | | January 1, 2018 |
|---|---|---|---|---|
| 1. | Number of Participants | | | |
| | a. Retiree and beneficiaries | 17,698 | | 17,823 |
| | b. Terminated participants with deferred benefits | 4,889 | | 5,084 |
| | c. Participating employees | 5,557 | * | 5,722 |
| | d. Total | 28,144 | | 28,629 |
| 2. | Present Value of Vested Accumulated Benefits | | | |
| | a. Retiree and beneficiaries | $ 887,465,305 | | $ 872,018,847 |
| | b. Terminated participants with deferred benefits | 102,797,956 | | 100,434,354 |
| | c. Participating employees | 273,174,850 | | 262,446,246 |
| | d. Total | $ 1,263,438,111 | | $ 1,234,899,447 |
| 3. | Present Value of Nonvested Accumulated Benefits for Participating Employees | $ 46,801,088 | | $ 49,648,611 |
| 4. | Present Value of Total Accumulated Benefits | $ 1,310,239,199 | | $ 1,284,548,058 |
| 5. | Market Value of Assets | $ 996,554,029 | | $ 1,106,555,556 |
| 6. | Benefit Security Ratio | | | |
| | a. Retiree benefit security ratio: (5) ÷ (2a) | 112.29% | | 126.90% |
| | b. Vested benefit security ratio: (5) ÷ (2d) | 78.88% | | 89.61% |
| | c. Benefit security ratio: (5) ÷ (4) | 76.06% | | 86.14% |

**Actuarial Assumptions:** The same actuarial assumptions were used to value the FASB ASC 960 liabilities as were used for purposes of determining the plan's funding requirements, as described in the appendices. In particular the valuation interest rate of 7.50% was used.

* Of these, 3,895 are fully vested.



CBIZ Retirement Plan Services

# RECONCILIATION OF PRESENT VALUE OF ACCUMULATED PLAN BENEFITS

| | | |
|---|---|---|
| 1. | Present value of accumulated benefits at January 1, 2018 | $ 1,284,548,058 |
| 2. | Increases / (Decreases) during the year | |
| | a. Due to benefits accumulated and gains and losses* | $ 38,806,636 |
| | b. Due to decrease in the discount period | 92,150,296 |
| | c. Actual benefits paid | (111,754,879) |
| | d. Due to plan amendment | 6,489,088 |
| | e. Due to change of assumptions | 0 |
| | f. Net increase (decrease): (a) + (b) + (c) + (d) + (e) | $ 25,691,141 |
| 3. | Present value of accumulated benefits at January 1, 2019: (1) + (2f) (Exhibit E-1, Item 4, Column 1) | $ 1,310,239,199 |

* For FASB ASC 960 reporting, this is a balancing item and includes the effects of new entrants.

# SUMMARY OF ASSET VALUES AND RATES OF RETURN

***A. Summary of Asset Values***

| | | |
|---|---|---|
| 1. | Fair Value of Assets | $ 982,524,075 |
| 2. | Amounts Receivable | 16,056,588 |
| 3. | Amounts Payable | 2,026,634 |
| 4. | Market Value of Assets: (1) + (2) - (3) | $ 996,554,029 |
| 5. | Actuarial Value of Assets | $ 1,098,817,395 |

***B. Rate of Return***

| | | Market Value (1) | Actuarial Value (2) |
|---|---|---|---|
| 1. | Plan assets as of January 1, 2018 | $ 1,106,555,556 | $ 1,089,367,302 |
| 2. | Employer contributions | 73,477,138 | 73,477,138 |
| 3. | Benefit payments made | (111,754,879) | (111,754,879) |
| 4. | Expenses paid from the trust | (3,127,531) | (3,127,531) |
| 5. | Transfers to/(from) the plan | 10,488,425 | 10,488,425 |
| 6. | Investment return, net of expenses | (79,084,680) | 40,366,940 |
| 7. | Plan assets as of January 1, 2019: (1) + (2) + (3) + (4) + (5) + (6) | $ 996,554,029 | $ 1,098,817,395 |
| 8. | Approximate rate of return (net of investment expenses) on average invested assets | | |
| | a. Average invested assets[1] | $ 1,091,097,133 | $ 1,073,908,879 |
| | b. Rate of return: (6) ÷ (8a) | -7.25% | 3.76% |
| 9. | Approximate rate of return (net of total expenses) on average invested assets | | |
| | a. Average invested assets[2] | $ 1,092,660,898 | $ 1,075,472,644 |
| | b. Rate of return: [(6) + (4)] ÷ (9a) | -7.52% | 3.46% |

1. Determined using the Schedule B (Form 5500) methodology: [Item 1 + Item 2÷2 + Item 3÷2 + Item 4÷2 + Item 5÷2]
2. Determined using the Schedule B (Form 5500) methodology: [Item 1 + Item 2÷2 + Item 3÷2 + Item 5÷2]

# STATEMENT OF ASSETS AS OF DECEMBER 31, 2018

| | | | |
|---|---|---|---|
| 1. | Total noninterest-bearing cash | | $ 3,366,566 |
| 2. | Receivables | | |
| | a. Employer contributions | $ 10,489,204 | |
| | b. Other | 5,567,384 | |
| | c. Total: (a) + (b) | | $ 16,056,588 |
| 3. | General Investments | | |
| | a. Interest-bearing cash | $ 287,816 | |
| | b. U.S. Government securities | 68,569,904 | |
| | c. Corporate debt instruments | 117,538,325 | |
| | d. Corporate stocks | 355,351,188 | |
| | e. Real estate | 0 | |
| | f. Value of interest in common/collective trusts | 58,164,086 | |
| | g. Value of interest in pooled separate accounts | 112,478,256 | |
| | h. Value of interest in master trusts | 0 | |
| | i. Value of interest in 103-12 investment entities | 149,481,381 | |
| | j. Value of interest in registered investment companies | 58,512,446 | |
| | k. Value of funds held in limited partnerships | 43,536,651 | |
| | l. Other | 15,170,859 | |
| | m. Total: [add (a) through (l)] | | $ 979,090,912 |
| 4. | Employer-related investments (Securities and Real Property) | | $ 0 |
| 5. | Buildings and other property used in plan operation | | $ 66,597 |
| 6. | Total assets: (1) + (2c) + (3m) + (4) + (5) | | $ 998,580,663 |
| 7. | Liabilities | | |
| | a. Benefits claims payable | $ 0 | |
| | b. Other payables and/or liabilities | 2,026,634 | |
| | c. Total liabilities: (a) + (b) | | $ 2,026,634 |
| 8. | Net Assets: (6) - (7c) | | $ 996,554,029 |



CBIZ Retirement Plan Services

# RECONCILIATION OF MARKET VALUE OF ASSETS

| | | | |
|---|---|---|---|
| 1. | Market Value of Assets as of January 1, 2018 | | $ 1,106,555,556 |
| 2. | Contributions | | |
| | a. Bargained | $ 70,160,020 | |
| | b. Withdrawal payments | 3,317,118 | |
| | c. Other | 0 | |
| | d. Total contributions: (a) + (b) + (c) | | $ 73,477,138 |
| 3. | Earnings on investments | | |
| | a. Interest | $ 7,698,466 | |
| | b. Stock dividends | 14,173,996 | |
| | c. Net gain (loss) on sale of assets | 0 | |
| | d. Unrealized appreciation (depreciation) of assets | (101,284,761) | |
| | e. Net investment gain (loss) from common/collective trusts | 0 | |
| | f. Net investment gain (loss) from pooled separate accounts | 0 | |
| | g. Net investment gain (loss) from master trusts | 0 | |
| | h. Net investment gain (loss) from 103-12 investment entities | 0 | |
| | i. Net investment gain (loss) from registered investment companies | 0 | |
| | j. Total earnings: [add (a) through (i)] | | $ (79,412,299) |
| 4. | Other income | | $ 327,619 |
| 5. | Benefit payment and payment to provide benefits | | |
| | a. Directly to participants or beneficiaries | $ 111,754,879 | |
| | b. To insurance carriers for the provision of benefits | 0 | |
| | c. Total payments: (a) + (b) | | $ 111,754,879 |
| 6. | Interest expense | | $ 0 |
| 7. | Administrative expenses | | |
| | a. Professional fees | $ 855,698 | |
| | b. Contract administrator fees | 0 | |
| | c. Investment advisory and management fees | 0 | |
| | d. Other | 2,271,833 | |
| | e. Total administrative expenses: [add (a) through (d)] | | $ 3,127,531 |
| 8. | Transfers to (from) the plan | | $ 10,488,425 |
| 9. | Net assets at end of year: (1) + (2d) + (3j) + (4) - (5c) - (6) - (7e) + (8) | | $ 996,554,029 |



CBIZ Retirement Plan Services

# ACTUARIAL VALUE OF ASSETS

| | | |
|---|---|---|
| 1. Market Value of Assets as of January 1, 2018 | | $ 1,106,555,556 |
| 2. Contributions for the prior plan year | | 73,477,138 |
| 3. Participant account transfers | | 10,488,425 |
| 4. Benefit payments | | (111,754,879) |
| 5. Administrative expenses | | (3,127,531) |
| 6. Expected Investment Return at 7.50% on: | | |
| a. Market Value of Assets as of January 1, 2018 | $ 82,991,667 | |
| b. Contributions for the prior plan year | 2,351,704 | |
| c. Participant account transfers | 393,316 | |
| d. Benefit payments | (4,190,808) | |
| e. Administrative expenses | (117,282) | |
| f. Total: (a) + (b) + (c) + (d) + (e) | | $ 81,428,597 |
| 7. Actual Investment Return as of December 31, 2018 | | $ (79,084,680) |
| 8. Investment Gain/(Loss): (7) - (6f) | | $ (160,513,277) |
| 9. Market Value of Assets as of January 1, 2019 | | $ 996,554,029 |

10. Total Deferred Gain/(Loss)

| | Plan Year | Investment Gain/(Loss) | Percent Recognized | Percent Deferred | Deferred Gain/(Loss) | |
|---|---|---|---|---|---|---|
| a. | 2018 | $ (160,513,277) | 20% | 80% | $ (128,410,622) | |
| b. | 2017 | 81,152,511 | 40% | 60% | 48,691,507 | |
| c. | 2016 | (10,068,288) | 60% | 40% | (4,027,315) | |
| d. | 2015 | (92,584,681) | 80% | 20% | (18,516,936) | |
| e. | Total | | | | | $ (102,263,366) |

| | |
|---|---|
| 11. Preliminary Actuarial Value of Assets as of January 1, 2019: (9) - (10e) | $ 1,098,817,395 |
| 12. Corridor | |
| a. 80% of Market Value: 0.80 x (9) | $ 797,243,223 |
| b. 120% of Market Value: 1.20 x (9) | $ 1,195,864,835 |
| 13. Actuarial Value of Assets as of January 1, 2019: (11), but not less than (12a) nor more than (12b) | $ 1,098,817,395 |

# RECONCILIATION OF PARTICIPANT DATA

| | | Actives | Pensioners & Beneficiaries | Deferred Vested Participants | Total |
|---|---|---|---|---|---|
| 1. | Participants in Prior Valuation | 5,722 | 17,823 | 5,084 | 28,629 |
| 2. | Change During the Year Due to: | | | | |
| a. | New entrants (prior to valuation date) | 523 | 0 | 0 | 523 |
| b. | New entrants (on valuation date) | 0 | 0 | 0 | 0 |
| c. | Returns to active employment | 15 | 0 | (15) | 0 |
| d. | Retirements | (224) | 540 | (316) | 0 |
| e. | Deaths with beneficiary | (1) | (203) | (8) | (212) |
| f. | Deaths without beneficiary | (11) | (741) | (27) | (779) |
| g. | New beneficiaries | 0 | 211 | 1 | 212 |
| h. | Vested terminations | (168) | 0 | 168 | 0 |
| i. | Non-vested terminations | (299) | 0 | 0 | (299) |
| j. | QDRO | 0 | 7 | 0 | 7 |
| k. | Lump sum payments | 0 | 0 | 0 | 0 |
| l. | End of certain period | 0 | (2) | 0 | (2) |
| m. | Benefits suspended | 0 | (17) | 17 | 0 |
| n. | Data corrections | 0 | 80 | (15) | 65 |
| o. | Total increase | (165) | (125) | (195) | (485) |
| 3. | Participants in Current Valuation | 5,557 | 17,698 | 4,889 | 28,144 |

# AGE / SERVICE DISTRIBUTION OF ACTIVE PARTICIPANTS

Average Age:
48.18

Average Service:
14.66

# of Males:
5,252

# of Females:
305

| Attained | Years of Credited Service | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Age | Under 1 | 1-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40 & Over | Number |
| Under 25 | 68 | 86 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 155 |
| 25-29 | 110 | 206 | 33 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 350 |
| 30-34 | 85 | 227 | 60 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 404 |
| 35-39 | 88 | 174 | 79 | 109 | 23 | 3 | 0 | 0 | 0 | 0 | 476 |
| 40-44 | 59 | 169 | 69 | 146 | 71 | 28 | 4 | 0 | 0 | 0 | 546 |
| 45-49 | 59 | 140 | 102 | 136 | 175 | 109 | 49 | 4 | 0 | 0 | 774 |
| 50-54 | 51 | 152 | 89 | 126 | 151 | 168 | 203 | 90 | 3 | 0 | 1,033 |
| 55-59 | 35 | 104 | 70 | 96 | 118 | 119 | 190 | 217 | 46 | 4 | 999 |
| 60-64 | 12 | 58 | 46 | 84 | 88 | 68 | 91 | 105 | 65 | 39 | 656 |
| 65-69 | 3 | 5 | 12 | 22 | 16 | 10 | 23 | 16 | 25 | 19 | 151 |
| 70 & Over | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 3 | 1 | 1 | 13 |
| **Total** | **571** | **1,321** | **562** | **754** | **644** | **506** | **561** | **435** | **140** | **63** | **5,557** |



CBIZ Retirement Plan Services

# AGE DISTRIBUTION OF INACTIVE PARTICIPANTS

| | Normal, Early, and Deferred Vested Retirements* | | Terminated Participants & Beneficiaries with Rights to Future Benefits ** | | Total | |
|---|---|---|---|---|---|---|
| Age Last Birthday | Number | Annual Benefit | Number | Annual Benefit | Number | Annual Benefit |
| Under 45 | 3 | $ 12,948 | 667 | $ 3,471,020 | 670 | $ 3,483,968 |
| 45-49 | 10 | 16,488 | 559 | 3,147,376 | 569 | 3,163,864 |
| 50-54 | 52 | 299,148 | 919 | 4,271,892 | 971 | 4,571,040 |
| 55-59 | 522 | 4,406,652 | 1,284 | 4,980,751 | 1,806 | 9,387,403 |
| 60-64 | 1,964 | 15,125,396 | 1,050 | 3,309,702 | 3,014 | 18,435,098 |
| 65-69 | 3,221 | 24,093,686 | 309 | 844,730 | 3,530 | 24,938,416 |
| 70-74 | 3,724 | 25,825,277 | 58 | 171,569 | 3,782 | 25,996,846 |
| 75-79 | 3,461 | 20,751,206 | 20 | 77,278 | 3,481 | 20,828,484 |
| 80 & Over | 4,741 | 20,832,871 | 23 | 74,809 | 4,764 | 20,907,680 |
| Total | 17,698 | $ 111,363,672 | 4,889 | $ 20,349,127 | 22,587 | $ 131,712,799 |

| | | |
|---|---|---|
| Average age | 74.50 | 55.08 |
| Average monthly benefit | $524 | $347 |

* Including surviving spouses in pay status.

** Including surviving spouses eligible for future payment.



CBIZ Retirement Plan Services

# ASSUMPTIONS AND METHODS

**Interest Rates**

**Funding**

7.50% per year, compounded annually, net of investment expenses.

**Current Liability**

The highest interest rate within the permissible range prescribed under IRC Section 431(c)(6)(E); valued at 3.06% as of January 1, 2019.

**Mortality**

**Healthy Lives**

Sex Distinct RP-2000 Combined Healthy Blue Collar Mortality Table.

**Disabled Lives**

1957-66 Social Security Administration Experience as shown in PBGC Publication #501, Table 5.

**Current Liability**

IRS 2019 Static Mortality, as prescribed

These tables are assumed to reflect both expected mortality rates as of the measurement date and any expected mortality improvement after the measurement date.

**Retirement**

Active rates of retirement are based on age and service. Sample rates are shown below for participants with 20 years of service:

| Attained Age | Rate of Retirement |
|---|---|
| 55 | 0.01 |
| 56 | 0.01 |
| 57 | 0.05 |
| 58 | 0.05 |
| 59 | 0.05 |
| 60 | 0.05 |
| 61 | 0.07 |
| 62 | 0.16 |

| Attained Age | Rate of Retirement |
|---|---|
| 63 | 0.16 |
| 64 | 0.16 |
| 65 | 0.25 |
| 66 | 0.25 |
| 67 | 0.25 |
| 68 | 0.25 |
| 69 | 0.25 |
| 70 | 1.00 |

Vested terminated participants are assumed to retire at age 57.

**Withdrawal**

Participants are assumed to terminate employment for reasons other than death, disability, or retirement according to Scale T-2 from the Actuary's Pension Handbook, with rates graduated from tabular at age 40 to zero at age 50.

# ASSUMPTIONS AND METHODS
**(continued)**

**Disability**
Probability of becoming disabled according to Sarason's Advanced Pension Table pages XXXIX, with rates graduated from tabular at age 50 to zero at age 55.

**Expenses**
An amount equal to the actual expenses (excluding investment expenses) paid in the preceding Plan Year, rounded to the nearest $100,000, added to the Normal Cost. For the plan year beginning January 1, 2019, this amount is assumed to be $3,100,000.

**Marital Status**
80% of participants who have not yet commenced receipt of benefit are assumed to be married. Wives are assumed to be three years younger than their husbands.

**Form of Payment**
Benefits are assumed to be paid as a three-year certain and life annuity.

**Reciprocity Allowance**
$3 million has been added to the accrued liability to account for reciprocity benefits.

**Asset Valuation Method**
Recognition of gains and losses above or below the assumed rate of return over a 5-year period, adjusted, if necessary, to remain no greater than 120% of market value, nor less than 80% of market value. As allowed by the Pension Relief Act of 2010, the loss from the 2008 plan year is being recognized over a 10-year period.

**Actuarial Cost Methods**
*The Unit Credit Cost Method (used for minimum funding)*

Normal Cost - For each active participant, the present value of the benefit expected to be earned during the year.

Actuarial Accrued Liability - For each active participant, the present value of the benefit accrued as of the valuation date. For each terminated participant, the present value at the valuation date of his pension entitlement.

# ASSUMPTIONS AND METHODS
**(continued)**

**Actuarial Cost Methods**

*The Entry Age Normal Cost Method (used for funding policy)*

Normal Cost - For each active participant, the level amount which if paid each year from his hire date to assumed retirement date would accumulate to the amount needed at retirement date to provide the participant's expected pension.

Actuarial Accrued Liability - For each active participant, the amount needed at the valuation date to provide his expected pension at retirement, less the present value of his expected future normal cost amounts. For each terminated participant, the present value at the valuation date of his pension entitlement.

**Changes since the Prior Valuation**

The current liability interest rate was updated from 2.98% to 3.06% to reflect the change in IRS mandated rates.

The mortality table used to calculate the RPA current liability was updated from 2018 to 2019.



CBIZ Retirement Plan Services

# ASSUMPTIONS AND METHODS
**(continued)**

**Rationale for Selection of Significant Actuarial Assumptions**

| | |
|---|---|
| **Interest Rate** | The interest rate assumption used for funding purposes is based on historical data, both current and future market expectations, and professional judgment. In setting the long-term investment return assumption, the Plan's Investment Consultant provided future investment expectations based on the Plan's asset allocation. |
| **Mortality** | The mortality assumption is based on historical and current demographic data, adjusted to reflect estimated future experience, and professional judgment. Experience studies wherein actual experience is compared to expected experience are performed periodically. |
| **Retirement** | The retirement decrements for active participants are based on studies of Plan experience. The retirement age assumption for vested terminated participants (57) represents the unreduced retirement age for pre-1987 benefit accruals. |
| **Withdrawal** | A standard withdrawal table has been selected which results in a similar level of aggregate annual withdrawal as the Plan has experienced over recent years. |
| **Disability** | Because the Fund does not have enough data to do a fully credible experience analysis with respect to disability during active employment, the current assumption has been selected based on observations of recent disabilities, the actuary's experience with plans of a similar size, plan design, workforce composition, geography, and discussions with the Plan Sponsor. |
| **Plan Expenses** | Expenses paid from the plan trust are estimated by reviewing historical fees paid from the trust and adjusting for PBGC premiums and other expenditures expected to be paid in this Plan Year. |
| **Marital Status** | The current assumption has been selected based on the actuary's experience with plans of a similar size, plan design, and workforce composition. |

# SUMMARY OF PRINCIPAL PLAN PROVISIONS

**Introduction**

There are two pieces to the benefit. The first piece is the accrued benefit as of 12/31/1986 (Pre-RIP Benefit) and the second piece is the benefit accrued based on all service after 01/01/2003 (Future Service Date).

**Payment of the Pre-RIP Benefit is generally based on the provisions of the plan at that time. Following is a summary of those provisions.**

**Vesting Service**

Each year during which the participant works at least 1,000 hours.

**Benefit Service**

Prior to 1987: Each year during which the participant works at least 1,800 hours in covered employment. A partial year of benefit service is earned for a year in which less than 1,800 hours but more than 1,000 hours are worked.

**Normal Retirement Date**

The later of age 57 or the fifth anniversary of participation.

**Normal Retirement Pension**

The monthly amount varies by benefit level and was frozen as of 12/31/1986.

**Early Retirement Date**

Separation from covered employment on or after age 55 with five or more years of vesting service.

**Early Retirement Pension**

The Normal Retirement Pension, actuarially reduced for commencement prior to age 57.

**Disability Pension**

An active participant with at least 15 years of benefit service who has been awarded disability benefits by the Social Security Administration and is not eligible for a Normal Retirement Pension may be eligible for a disability benefit. The monthly benefit is payable as of the Social Security Entitlement date with no reduction for early commencement.

**Single Sum Death Benefit**

The beneficiary of an active participant who dies will receive a lump sum death benefit. The amount of benefit is based on the number of years of Pre-RIP benefit service completed prior to death.

**Termination Benefit**

Participants are 100% vested in their accrued pension after five years of vesting service, with benefits payable at age 57, or a reduced pension payable as early as age 55, if eligible.

# SUMMARY OF PRINCIPAL PLAN PROVISIONS
**(continued)**

**Pre-Retirement Spouse's Death Benefit**

If a vested participant or vested former participant dies before his pension begins, his surviving spouse will be entitled to a lifetime pension. The amount of such pension will be the same as the spouse would have received if the participant had (i) separated from covered employment on the date of death, (ii) survived until the later of the earliest retirement date or date of death, (iii) retired having elected a Qualified Joint and Survivor Annuity, and (iv) died on the next day.

**Normal Form of Payment**

For single participants: Three-year Certain and Continuous annuity.
For married participants: 50% Joint and Survivor annuity.

**Payment of the Future Service Benefit is based on the following summary of provisions.**

**Vesting Service**

Each plan year during which the participant works at least 1,000 hours.

**Benefit Service**

Prior to 1987: Each plan year during which the participant works at least 1,800 hours in covered employment. A partial year of benefit service is earned for a plan year in which less than 1,800 hours but more than 1,000 hours are worked.

1987-2001: Each plan year during which the participant works at least 1,000 hours in covered employment.

2002: 1,500 hours in covered employment. A partial year of benefit service is earned for a plan year in which less than 1,500 hours but more than 1,000 hours are worked.

2003 and later: Each plan year during which the participant works at least 1,800 hours in covered employment. A partial year of benefit service is earned for a plan year in which less than 1,800 hours but more than 1,000 hours are worked.

**Normal Retirement Date**

The later of age 65 and the completion of five years of vesting service.



CBIZ Retirement Plan Services

# SUMMARY OF PRINCIPAL PLAN PROVISIONS
**(continued)**

| | |
|---|---|
| **Normal Retirement Pension** | From Future Service Date: For each year of Benefit Service, the monthly benefit accrual is equal to the lesser of (i) 1.25% of Employer Contributions made on behalf of the member, or (ii) \$140 (\$160 for 2006, \$170 for 2007, \$180 for 2008 and \$165 for 2012).<br><br>In addition to the above, a monthly benefit accrual equal to 1.25% of the aggregate Employer Contributions from August 1, 2014 through July 31, 2016 generated by a contribution rate greater than \$10.145 per hour.<br><br>For calendar years 2018 and 2019, the monthly benefit accrual cap in (ii) above is \$180 for participants whose employer contributes at a rate of at least \$11.00 per hour (or \$1,906.67 per month) as of the December 31 immediately preceding. |
| **Early Retirement Pension Eligibility** | Separation from covered employment at any age with less than 15 years of Benefit Service, or separation from covered employment before the attainment of age 57 with 15-29 years of Benefit Service. |
| **Early Retirement Pension Amount** | The Normal Retirement Pension, reduced 0.5% for each month by which the actual benefit commencement date precedes age 65. |
| **Special Early Retirement Eligibility** | Separation from covered employment on or after the attainment of age 57 with 15-29 years of Benefit Service. |
| **Special Early Retirement Pension Amount** | The Normal Retirement Pension, reduced 0.25% for each month by which the actual benefit commencement date precedes age 65. |
| **Service Pension Eligibility** | Separation from covered employment on or after the attainment of age 50 with 30 or more years of Benefit Service. |
| **Service Pension Amount** | The Normal Retirement Pension, reduced 0.5% for each month by which the actual benefit commencement date precedes age 57. |

# SUMMARY OF PRINCIPAL PLAN PROVISIONS
**(continued)**

| | |
|---|---|
| **Combined Minimum Retirement Benefit Eligibility** | Separation from covered employment on or after age 57 with 25 or more years of Benefit Service.<br><br>In addition, a member must be eligible under the "2-Year" and "45-Day" rules described in the Plan document in order to be eligible for this benefit, and must not have previously withdrawn any part of his/her RIP balance or commenced a DB benefit.<br><br>To be eligible for the <u>highest level</u> of the Combined Benefit Minimum, a member must have at least 20 years of Benefit Service at the UPS or Freight contribution rate, or 15 years of Benefit Service at the UPS or Freight contribution rate, including the last 10 consecutive years before retirement. |
| **Combined Minimum Retirement Benefit** | The sum of the Pre-1987 and Future Service retirement benefit cannot be less than the excess, if any, of (a) over (b):<br><br>a) $3,100, prorated for contributions that are at less than the "full" contribution level.<br><br>b) The annuity equivalent of the RIP Account Balance as of the date of benefit commencement, based on the UP 1984 Mortality Table and a 7.0% discount rate. |
| **Rule of 82-85 Retirement Benefit Eligibility** | Separation from covered employment on or after attainment of 26 or more years of Benefit Service, with age plus years of Benefit Service at least 82.<br><br>In addition, a member must be eligible under the "2-Year" and "45-Day" rules described in the Plan document in order to be eligible for this benefit, and must not have previously withdrawn any part of his/her RIP balance or commenced a DB benefit.<br><br>To be eligible for the <u>highest level</u> of the Combined Benefit Minimum, a member must have at least 20 years of Benefit Service at the UPS or Freight contribution rate, or 15 years of Benefit Service at the UPS or Freight contribution rate, including the last 10 consecutive years before retirement. |

# SUMMARY OF PRINCIPAL PLAN PROVISIONS

**(continued)**

**Rule of 82-85 Retirement Benefit**

The sum of the Pre-1987 and Future Service retirement benefit cannot be less than the excess, if any, of (a) over (b):

a) The benefit below, prorated for contributions that are at less than the "full" contribution level.

| Age + Years of Benefit Service | Benefit |
|---|---|
| 82 | $2,250 |
| 83 | $2,350 |
| 84 | $2,450 |
| 85+ | $2,550 |

b) The annuity equivalent of the RIP Account Balance as of the date of benefit commencement, based on the UP 1984 Mortality Table and a 7.0% discount rate.

**Disability Pension**

An active participant with at least 15 years of vesting service who has been awarded disability benefits by the Social Security Administration and is not eligible for a Normal Retirement Pension may be eligible for a disability benefit. The monthly benefit is payable as of the Social Security Entitlement date with no reduction for early commencement.

**Single Sum Death Benefit**

None.

**Pre-Retirement Spouse's Death Benefit**

If a vested active or former participant dies before his pension begins, his surviving spouse will be entitled to a lifetime pension. The amount of such pension will be the same as the spouse would have received if the participant had (i) separated from covered employment on the date of death, (ii) survived until the later of the earliest retirement date or date of death, (iii) retired having elected a Qualified Joint and Survivor Annuity, and (iv) died on the next day.

For purposes of calculating the amount of pre-retirement spouse's death benefit, vested active participants who have 15-29 years of Benefit Service at their date of death will be considered to have been eligible for the Plan's Special Early Retirement Pension (beginning at age 57), regardless of their age at death.

# SUMMARY OF PRINCIPAL PLAN PROVISIONS
**(continued)**

| | |
|---|---|
| **Termination Benefit** | Participants are 100% vested in their accrued pension after five years of vesting service, with benefits payable at age 65, or a reduced pension payable as early as age 57. |
| **UPS Pension Plan Reciprocity** | Effective January 1, 2018, participants receive 0.5 years of service for benefit eligibility for each 1.0 years of service earned in the UPS Pension Plan. This additional eligibility does not apply for the Combined Minimum Monthly Benefit or the Rule of 82-85 Benefit. |
| **Normal Form of Payment** | For single participants: Three-year Certain and Continuous annuity.<br>For married participants: 50% Joint and Survivor annuity. |
| **Changes since the Prior Valuation** | For calendar years 2018 and 2019, the monthly benefit accrual cap is $180 for participants whose employer contributes at a rate of at least $11.00 per hour (or $1,906.67 per month) as of the December 31 immediately preceding.<br><br>Effective January 1, 2018, participants receive 0.5 years of service for benefit eligibility for each 1.0 years of service earned in the UPS Pension Plan. This additional eligibility does not apply for the Combined Minimum Monthly Benefit or the Rule of 82-85 Benefit. |