13. Employee Retirement Plans (Continued)

Corning uses a hypothetical yield curve and associated spot rate curve to discount the plan's projected benefit payments. Once the present value of projected benefit payments is calculated, the suggested discount rate is equal to the level rate that results in the same present value. The yield curve is based on actual high-quality corporate bonds across the full maturity spectrum, which also includes private placements and eurobonds that are denominated in U.S. currency. The curve is developed from yields on hundreds of bonds from four grading sources, Moody's, S&P, Fitch and the Dominion Bond Rating Service. A bond will be included if at least half of the grades from these sources are Aa, non-callable bonds. The very highest 10% yields and the lowest 40% yields are excluded from the curve to eliminate outliers in the bond population.

Mortality is one of the key assumptions used in valuing liabilities of retirement plans. It is used to assign a probability of payment for benefits that are contingent upon participants' survival. To make this assumption, benefit plan sponsors typically use a base mortality table and an improvement scale to mortality rates for future anticipated changes to historical death rates.

As of December 31, 2021, Corning updated the adjustment factors applied to its base mortality assumption (PRI-2012 white collar table and PRI-2012 blue collar table for non-union and union participants, respectively) to value its U.S. benefit plan obligation. In addition, Corning also updated to the MP-2020 projection scale and the mortality assumption applied to disabled participants (PRI-2012 disabled mortality base table with future improvements using MP-2020) for the year ended December 31, 2020, with no change in 2021. As the Society of Actuaries publishes additional mortality improvement scales and base mortality tables, Corning considers these revised schedules in setting its mortality assumptions.

Measurement of postretirement benefit expense is based on assumptions used to value the postretirement benefit obligation at the beginning of the year.

The weighted-average assumptions used to determine benefit obligations were as follows:

	Pension benefits								
	Domestic			International			Postretirement benefits		
	2021	2020	2019	**2021**	2020	2019	**2021**	2020	2019
Discount rate	**2.87%**	2.50%	3.28%	**1.20%**	1.02%	1.34%	**2.99%**	2.69%	3.41%
Rate of compensation increase	**3.50%**	4.16%	3.50%	**3.63%**	3.55%	2.96%			
Cash balance crediting rate	**3.86%**	3.84%	3.94%	**0.91%**	0.94%	0.97%			
Employee contributions crediting rate	**1.57%**	0.62%	2.03%						

The weighted-average assumptions used to determine net periodic benefit (income) expense were as follows:

	Pension benefits								
	Domestic			International			Postretirement benefits		
	2021	2020	2019	**2021**	2020	2019	**2021**	2020	2019
Discount rate	**2.50%**	3.28%	4.28%	**1.02%**	1.34%	1.96%	**2.69%**	3.41%	4.33%
Expected return on plan assets	**6.00%**	6.00%	6.00%	**1.26%**	1.71%	2.01%			
Rate of compensation increase	**4.16%**	3.50%	3.50%	**3.55%**	2.96%	2.96%			
Cash balance crediting rate	**3.84%**	3.94%	3.94%	**0.94%**	0.97%	0.97%			
Employee contributions crediting rate	**0.62%**	2.03%	3.47%						

Assumed health care trend rates are as follows:

Assumed health care trend rates at December 31	**2021**	2020
Health care cost trend rate assumed for next year	**6.25%**	6.50%
Rate that the cost trend rate gradually declines to	**5%**	5%
Year that the rate reaches the ultimate trend rate	**2027**	2027

Plan Assets

The Company's primary objective is to ensure the plan has sufficient return on assets to fund the plan's current and future obligations as they become due. Investments are primarily made in public securities to ensure adequate liquidity to support benefit payments. Domestic and international stocks provide diversification to the portfolio. The target allocation range equity investment is 40% which includes large, mid and small-cap companies and investments in both developed and emerging markets. The target allocation for bond investments is 60%, which predominately includes corporate bonds. Long-duration fixed income assets are utilized to mitigate the sensitivity of funding ratios to changes in interest rates.