

The December 31 balances of these defined benefit pension plans assets and obligations are shown below:

	2019		2018	
	United States	Foreign	United States	Foreign
	(in thousands)			
<i>Assets and Obligations</i>				
Change in benefit obligation:				
Projected benefit obligation:				
Beginning of year	\$178,237	\$ 39,146	\$ 363,026	\$ 39,353
Service cost	1,608	751	2,196	786
Interest cost	7,189	691	8,940	687
Actuarial loss (gain)	24,447	4,520	(30,136)	773
Benefits paid	(7,690)	(836)	(14,793)	(741)
Retiree annuity purchase	—	—	(151,341)	—
Liability loss due to settlement	—	—	345	—
Non-U.S. currency movement	—	(320)	—	(1,712)
End of year	<u>203,791</u>	<u>43,952</u>	<u>178,237</u>	<u>39,146</u>
Change in plan assets:				
Fair value of plan assets:				
Beginning of year	144,301	1,400	324,506	1,307
Company contributions	2,805	923	2,587	822
Actual return on plan assets	27,516	64	(16,658)	50
Benefits paid	(7,690)	(836)	(14,793)	(741)
Retiree annuity purchase	—	—	(151,341)	—
Non-U.S. currency movement	—	35	—	(38)
End of year	<u>166,932</u>	<u>1,586</u>	<u>144,301</u>	<u>1,400</u>
Funded status	<u>\$ (36,859)</u>	<u>\$ (42,366)</u>	<u>\$ (33,936)</u>	<u>\$ (37,746)</u>

The following table provides amounts recorded within the account line items of the statements of financial position as of December 31:

	2019		2018	
	United States	Foreign	United States	Foreign
	(in thousands)			
Retirement plans assets	\$ 18,457	\$ —	\$ 16,883	\$ —
Accrued employees' compensation and withholdings	(2,826)	(922)	(2,676)	(852)
Retirement plans liabilities	<u>(52,490)</u>	<u>(41,444)</u>	<u>(48,143)</u>	<u>(36,894)</u>
Funded status	<u>\$ (36,859)</u>	<u>\$ (42,366)</u>	<u>\$ (33,936)</u>	<u>\$ (37,746)</u>

The following table provides amounts recognized in accumulated other comprehensive income as of December 31:

	2019		2018	
	United States	Foreign	United States	Foreign
	(in thousands)			
Deferred taxes related to prior service cost recognized in other comprehensive income	<u>\$560</u>	<u>\$—</u>	<u>\$560</u>	<u>\$—</u>

The accumulated benefit obligation for the United States defined benefit pension plans was \$198.2 million and \$172.8 million at December 31, 2019 and 2018, respectively. The accumulated benefit obligation for foreign defined benefit pension plans was \$39.9 million and \$35.6 million at December 31, 2019 and 2018, respectively.

Information for pension plans with an accumulated benefit obligation in excess of plan assets as of December 31:

	2019		2018	
	United States	Foreign	United States	Foreign
	(in millions)			
Projected benefit obligation	\$55.3	\$44.0	\$50.8	\$39.1
Accumulated benefit obligation	53.2	39.9	48.6	35.6
Fair value of plan assets	—	1.6	—	1.4

Expense

For the years ended December 31, 2019, 2018, and 2017, Teradyne's net periodic pension cost (income) was comprised of the following:

	2019		2018		2017	
	United States	Foreign	United States	Foreign	United States	Foreign
	(in thousands)					
Components of Net Periodic Pension Cost (Income):						
Service cost	\$ 1,608	\$ 751	\$ 2,196	\$ 786	\$ 2,239	\$ 818
Interest cost	7,189	691	8,940	687	13,151	852
Expected return on plan assets	(6,042)	(29)	(9,049)	(19)	(12,008)	(165)
Amortization of prior service cost	—	—	58	—	70	—
Net actuarial loss (gain)	2,973	4,485	(4,429)	743	(6,712)	(310)
Settlement loss	—	—	345	—	—	—
Total net periodic pension cost (income)	\$ 5,728	\$5,898	\$(1,939)	\$2,197	\$ (3,260)	\$1,195
Changes in Plan Assets and Benefit Obligations						
Recognized in Other Comprehensive Income:						
Reversal of amortization items:						
Prior service cost	—	—	(58)	—	(70)	—
Total recognized in other comprehensive income	—	—	(58)	—	(70)	—
Total recognized in net periodic pension cost						
(income)						
and other comprehensive income	\$ 5,728	\$5,898	\$(1,997)	\$2,197	\$ (3,330)	\$1,195

Weighted Average Assumptions to Determine Net Periodic Pension Cost at January 1:

	2019		2018		2017	
	United States	Foreign	United States	Foreign	United States	Foreign
Discount rate	4.1%	1.8%	3.4%	1.8%	3.9%	1.8%
Expected return on plan assets	4.3	2.0	4.3	1.5	4.0	2.0
Salary progression rate	2.5	2.5	2.3	2.7	2.6	2.7

Weighted Average Assumptions to Determine Pension Obligations at December 31:

	2019		2018	
	United States	Foreign	United States	Foreign
Discount rate	3.0%	1.1%	4.1%	1.8%
Salary progression rate	2.6	2.5	2.5	2.6