

**COHERENT, INC. AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**12. EMPLOYEE STOCK AWARD AND BENEFIT PLANS (continued)**

*Expected Volatility*—Our process for computing expected volatility considers both historical volatility and market-based implied volatility; however our estimate of expected forfeitures is based on historical employee data and could differ from actual forfeitures.

*Risk-Free Interest Rate*—The risk-free interest rate used in the Black-Scholes-Merton valuation method is based on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

The fair values of shares purchased under the employee stock purchase plan for fiscal 2020, 2019, and 2018 were estimated using the following weighted-average assumptions:

	<b>Employee Stock Purchase Plans</b>		
	<b>Fiscal</b>		
	<b>2020</b>	<b>2019</b>	<b>2018</b>
Expected life in years	<b>0.5</b>	0.5	0.5
Expected volatility	<b>58.0 %</b>	47.9 %	50.1 %
Risk-free interest rate	<b>1.0 %</b>	2.4 %	1.6 %
Weighted average fair value per share	<b>\$ 43.54</b>	\$ 40.77	\$ 64.39

**Time-Based Restricted Stock Units**

Time-based restricted stock units are fair valued at the closing market price on the date of grant.

**Performance Restricted Stock Units**

We grant performance restricted stock units to officers and certain employees. The performance restricted stock unit agreements provide for the award of performance stock units with each unit representing the right to receive one share of our common stock to be issued after the applicable award vesting period. The final number of units awarded, if any, for these performance grants will be determined as of the vesting dates, based upon our total shareholder return over the performance period compared to the applicable Russell Index or companies therein and could range from no units to a maximum of twice the initial award units.

The weighted average fair value for the performance units was determined using a Monte Carlo simulation model incorporating the following weighted average assumptions:

	<b>Fiscal</b>		
	<b>2020</b>	<b>2019</b>	<b>2018</b>
Risk-free interest rate	<b>0.8 %</b>	2.9 %	1.7 %
Volatility	<b>50.5 %</b>	43.7 %	37.0 %
Weighted average fair value	<b>\$ 161.46</b>	\$ 117.43	\$ 315.05

We recognize the estimated cost of these awards, as determined under the simulation model, over the related service period of approximately 3 years, with no adjustment in future periods based upon the actual shareholder return over the performance period.

In addition, during fiscal 2020, we issued performance restricted stock unit award grants to certain employees with vesting based on goals related to free cash flow target amounts, with the initial fair value determined based on our closing stock price on the date of grant. Such awards were granted to serve as a performance incentive with a pay-for-performance forward-looking free cash flow target for the fiscal year in recognition of the impact of the COVID-19 pandemic. The number of shares issuable under these performance units upon satisfaction of the free cash flow performance criteria is capped at 100% of target. The total stock-based compensation of these awards will be adjusted based on the level of achievement of free cash flow for fiscal 2020. We believe that these awards will vest at 100% of target.