

During 2019, 2018 and 2017, Teradyne granted 0.1 million of PBIT PRSUs with a grant date fair value of \$36.88, \$46.62 and \$27.72, respectively.

During 2019, 2018 and 2017, Teradyne granted 0.1 million of service-based stock options to executive officers at a weighted average grant date fair value of \$10.64, \$12.17 and \$7.13, respectively.

The fair value of stock options was estimated using the Black-Scholes option-pricing model with the following assumptions:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Expected life (years) . . . . .	5.0	5.0	5.0
Risk-free interest rate . . . . .	2.5%	2.4%	2.0%
Volatility-historical . . . . .	30.1%	26.4%	27.8%
Dividend yield . . . . .	1.00%	0.80%	1.00%

Teradyne determined the stock options' expected life based upon historical exercise data for executive officers, the age of the executive officers and the terms of the stock option grant. Volatility was determined using historical volatility for a period equal to the expected life. The risk-free interest rate was determined using the U.S. Treasury yield curve in effect at the time of grant. Dividend yield was based upon an estimated annual dividend amount of \$0.36 per share divided by Teradyne's stock price on the grant date of \$37.95 for the 2019 grants, \$47.70 for the 2018 grants and \$28.56 for the 2017 grants.

Stock compensation plan activity for the years 2019, 2018, and 2017, is as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
	<u>(in thousands)</u>		
Restricted Stock Units:			
Non-vested at January 1 . . . . .	2,454	3,174	3,778
Awarded . . . . .	1,139	790	939
Vested . . . . .	(1,237)	(1,382)	(1,434)
Forfeited . . . . .	(87)	(128)	(109)
Non-vested at December 31 . . . . .	<u>2,269</u>	<u>2,454</u>	<u>3,174</u>
Stock Options:			
Outstanding at January 1 . . . . .	506	531	926
Granted . . . . .	102	69	111
Exercised . . . . .	(280)	(94)	(501)
Forfeited . . . . .	(7)	—	—
Expired . . . . .	(2)	—	(5)
Outstanding at December 31 . . . . .	<u>319</u>	<u>506</u>	<u>531</u>
Vested and expected to vest at December 31 . . . . .	<u>319</u>	<u>506</u>	<u>531</u>
Exercisable at December 31 . . . . .	<u>85</u>	<u>256</u>	<u>233</u>