

Rev. Proc. 2002-13

SECTION 1. PURPOSE

This revenue procedure provides guidance for valuing stock options, including a safe harbor for valuing compensatory stock options for purposes of §§ 280G and 4999 of the Internal Revenue Code. The Internal Revenue Service will treat the value of a compensatory stock option determined in accordance with the requirements of this revenue procedure as properly determined for purposes of §§ 280G and 4999.

SECTION 2. BACKGROUND

Section 280G denies a deduction to a corporation for any excess parachute payment. An excess parachute payment is defined in § 280G(b)(1) as an amount equal to the excess of any parachute payment over the portion of the disqualified individual's base amount that is allocated to such payment.

Section 280G(b)(2)(A) defines a parachute payment as any payment in the nature of compensation to (or for the benefit of) a disqualified individual if such payment is (i) contingent on a change in the ownership of a corporation, the effective control of a corporation, or the ownership of a substantial portion of the assets of a corporation (a change in ownership or control), and (ii) the aggregate present value of the payments in the nature of compensation which are contingent on such change equals or exceeds an amount equal to 3 times the base amount. The term parachute payment also includes any payment in the nature of compensation to, or for the benefit of, a

disqualified individual if the payment is pursuant to an agreement that violates any generally enforced securities laws or regulations.

A payment in the nature of compensation for purposes of § 280G includes the transfer of an option (including an option to which § 421 applies), without regard to whether the option has a readily ascertainable fair market value within the meaning of § 83. The option is considered transferred not later than the time at which the option becomes substantially vested (within the meaning of § 1.83-3(b) and (j)).

An individual's base amount is, in general, the individual's average annualized includible compensation for the most recent 5 taxable years ending before the date of the corporation's change in ownership or control. For this purpose, the portion of the base amount allocated to a parachute payment is the amount that bears the same ratio to the base amount as the present value of the parachute payment bears to the aggregate present value of all such payments to the same disqualified individual.

Section 4999 imposes a 20-percent excise tax on the recipient of any excess parachute payment, within the meaning of § 280G(b).

Rev. Proc. 98-34 (1998-1 C.B. 983) provides a methodology for valuation of certain compensatory stock options for purposes of gift, estate, and generation-skipping transfer taxes. The methodology described in Rev. Proc. 98-34 is an option pricing model that takes into account factors similar to those established by the Financial Accounting Standards Board in Accounting for Stock-Based Compensation, Statement of Financial Accounting Standards No. 123 (Fin. Accounting Standards Bd. 1995 (FAS 123)). This methodology applies only to the valuation of a nonpublicly traded compensatory stock option for stock that, on the valuation date, is publicly traded on an established securities market.

SECTION 3. STOCK OPTION VALUATION

.01 In general, a taxpayer may value a compensatory stock option using any valuation method that is consistent with generally accepted accounting principles

(such as FAS 123) and that takes into account the factors provided in § 1.280G-1, Q&A 13. A valuation using the valuation safe harbor method provided in Section 4 is considered consistent with generally accepted accounting principles for purposes of §§ 280G and 4999 and this revenue procedure.

.02 If the stock option is one that could otherwise be valued under Rev. Proc. 98-34 because the stock option is one that satisfies the definition of "Compensatory Stock Option" under section 3 of Rev. Proc. 98-34, then, for purposes of §§ 280G and 4999 and this revenue procedure, the valuation is not considered consistent with generally accepted accounting principles unless the valuation is made in accordance with Rev. Proc. 98-34 or the valuation safe harbor method provided in section 4 of this revenue procedure.

SECTION 4. VALUATION SAFE HARBOR

.01 *In general.* The safe harbor valuation method provided by this revenue procedure is based on the Black-Scholes model and takes into account, as of the valuation date, the following factors: (1) the volatility of the underlying stock, (2) the exercise price of the option, (3) the value of the stock at the time of the valuation (the "spot price"), and (4) the term of the option on the valuation date. The safe harbor value of the option is calculated as the number of options multiplied by the spot price of the stock multiplied by a valuation factor determined using the factors described above and reflected in the table in the Appendix. Other relevant factors, including risk-free rate of interest and assumptions related to dividend yields are included in the table in the Appendix. To determine the valuation factor, the taxpayer must determine the volatility, spread, and option term factors, as described below. To rely on this revenue procedure, assumptions made for purposes of this revenue procedure and the determination of each factor must be reasonable and consistent with assumptions made with respect to other options valued in connection with the change in ownership or control.

.02 *Volatility.* The taxpayer must determine whether the volatility of the underlying stock is low, medium, or high. For

this purpose, a low volatility stock has an annual standard deviation of 30 percent or less. A medium volatility stock has an annual standard deviation greater than 30 percent but less than 70 percent. A high volatility stock has an annual standard deviation of 70 percent or greater. If the stock is publicly traded on an established securities market (or otherwise), the expected volatility of the underlying stock used for purposes of volatility under this revenue procedure must be the volatility used for purposes of complying with FAS 123 and disclosed in the most recent financial statements of the corporation. If the stock is not publicly traded on an established securities market or otherwise, but the stock is required to be registered under the Securities Exchange Act of 1934, the volatility for such stock is assumed to be the same as the volatility for a comparable corporation that is publicly traded. For this purpose, whether a corporation is considered comparable is determined by comparing relevant characteristics such as industry, corporate size, earnings, market capitalization, and debt-equity structure. If the stock is not publicly traded and the corporation is not required to register under the Securities Exchange Act of 1934, the taxpayer must assume medium volatility. If the stock is not required to be registered under the Securities Exchange Act of 1934, but the corporation voluntarily registers its stock and its stock is publicly traded, the corporation must use the volatility of the underlying stock.

.03 *Spread between exercise price and spot price.* The factor based on the spread between the exercise price and the spot price is calculated by dividing the spot price by the exercise price and subtracting 1. If the stock is not publicly traded, the determination of the spot price for this

purpose must be reasonable and consistent with the price, if any, otherwise determined for the stock in connection with the transaction giving rise to the change in control under § 280G(b)(2)(A). For purposes of determining the factor based on spread between the exercise price and the spot price under the table in the Appendix, the resulting percentage may be rounded down to the next lowest interval. If this factor exceeds 220%, this safe harbor valuation method cannot be used to value the stock option.

.04 *Maximum term of the option.* The term of the option is the number of full months between the date of the valuation and the latest date on which the option will expire. For purposes of determining the term factor under the table, the number of full months may be rounded down to the next lowest six-month interval. If the term of the option exceeds 10 years (120 months), then this safe harbor valuation method cannot be used to value the stock option.

.05 *Example.* Corporation A undergoes a change in ownership or control within the meaning of § 280G(b)(2). Contingent on the change in ownership or control, Employee E, a disqualified individual, vests in 100 stock options in Corporation A stock, each of which has a remaining term of 60 months after vesting. The volatility for Corporation A is 50%. Therefore, the stock has medium volatility. At the time of the change in ownership or control, the value of the stock is \$24 (the spot price). The exercise price under each of Employee E's options is \$20. Therefore, the factor based on spread is 20% ($24/20 - 1$). The value of the options under the safe harbor valuation method described in section 4 of this revenue procedure is \$1,219.20 computed as follows: 100 options times the spot price

of \$24 times 50.8% (the factor in the table in the Appendix for a medium volatility stock with a 20% spread factor and a 60-month term). Corporation A is permitted to use this value as the value of the payment under § 1.280G-1, Q&A-13.

SECTION 5. REQUEST FOR COMMENTS

Comments are requested regarding safe harbor valuation method described in this revenue procedure. All comments will be available for public inspection and copying. Comments must be submitted by June 5, 2002. Comments should be sent to CC:ITA:RU (Rev. Proc. 2002-13), room 5226, Internal Revenue Service, POB 7604, Ben Franklin Station, Washington, DC 20044. Comments may also be hand delivered between the hours of 8 a.m. and 5 p.m. to: CC:ITA:RU (Rev. Proc. 2002-13), Courier's Desk, Internal Revenue Service, 1111 Constitution Avenue NW, Washington, DC. In the alternative, e-mail your comments to: Notice.Comments@irs.counsel.treas.gov.

SECTION 6. EFFECTIVE DATE

This revenue procedure is effective April 26, 2002.

SECTION 7. DRAFTING INFORMATION

The principal author of this revenue procedure is Erinn Madden of the Office of the Division Counsel/Associate Chief Counsel (Tax Exempt and Government Entities). However, other personnel from the IRS and Treasury Department participated in its development. For further information regarding this revenue procedure, contact Ms. Madden at (202) 622-6060 (not a toll-free call).

Appendix

	Term (months)	12	24	36	48	60	72	84	96	108	120
Volatility	Spread Factor*										
Low	200%	67.3%	67.9%	68.4%	69.0%	69.5%	69.9%	70.3%	70.7%	71.0%	71.2%
	180%	65.0%	65.7%	66.4%	67.1%	67.7%	68.3%	68.8%	69.3%	69.6%	69.9%
	160%	62.4%	63.3%	64.1%	65.0%	65.8%	66.5%	67.1%	67.7%	68.1%	68.5%
	140%	59.4%	60.4%	61.5%	62.5%	63.5%	64.4%	65.1%	65.8%	66.4%	66.9%
	120%	55.8%	57.1%	58.4%	59.7%	60.9%	62.0%	62.9%	63.7%	64.5%	65.1%
	100%	51.5%	53.2%	54.8%	56.4%	57.9%	59.1%	60.3%	61.3%	62.2%	63.0%

	Term (months)	12	24	36	48	60	72	84	96	108	120
Volatility	Spread Factor*										
Low	80%	46.3%	48.5%	50.6%	52.6%	54.3%	55.9%	57.3%	58.5%	59.6%	60.5%
	60%	40.0%	42.9%	45.6%	48.0%	50.1%	52.0%	53.7%	55.2%	56.5%	57.6%
	40%	32.3%	36.3%	39.7%	42.6%	45.2%	47.4%	49.4%	51.2%	52.7%	54.1%
	20%	23.3%	28.5%	32.7%	36.2%	39.3%	41.9%	44.3%	46.4%	48.2%	49.9%
	0%	13.6%	19.9%	24.7%	28.8%	32.3%	35.4%	38.1%	40.5%	42.7%	44.7%
	-20%	5.4%	11.2%	16.1%	20.4%	24.2%	27.6%	30.6%	33.4%	35.9%	38.1%
	-40%	0.9%	4.1%	7.9%	11.6%	15.2%	18.5%	21.7%	24.6%	27.3%	29.9%
	-60%	0.0%	0.6%	2.0%	4.0%	6.4%	9.0%	11.6%	14.3%	16.8%	19.3%
Medium	200%	67.4%	68.6%	69.9%	71.1%	72.2%	73.1%	73.9%	74.5%	75.0%	75.4%
	180%	65.2%	66.7%	68.2%	69.6%	70.9%	71.9%	72.8%	73.5%	74.1%	74.6%
	160%	62.7%	64.5%	66.3%	68.0%	69.4%	70.6%	71.6%	72.5%	73.2%	73.7%
	140%	59.8%	62.0%	64.2%	66.1%	67.7%	69.1%	70.3%	71.2%	72.0%	72.7%
	120%	56.4%	59.2%	61.7%	63.9%	65.8%	67.4%	68.8%	69.9%	70.8%	71.6%
	100%	52.5%	55.9%	58.9%	61.5%	63.7%	65.5%	67.0%	68.3%	69.4%	70.3%
	80%	47.9%	52.2%	55.7%	58.7%	61.2%	63.2%	65.0%	66.5%	67.7%	68.8%
	60%	42.6%	47.8%	52.0%	55.4%	58.3%	60.6%	62.7%	64.3%	65.8%	67.0%
	40%	36.3%	42.7%	47.6%	51.6%	54.8%	57.6%	59.9%	61.8%	63.5%	64.9%
	20%	29.1%	36.8%	42.5%	47.0%	50.8%	53.9%	56.5%	58.8%	60.7%	62.3%
	0%	21.2%	30.0%	36.4%	41.6%	45.8%	49.4%	52.4%	55.0%	57.2%	59.1%
	-20%	13.0%	22.2%	29.2%	34.9%	39.7%	43.7%	47.2%	50.2%	52.8%	55.0%
	-40%	5.7%	13.8%	20.8%	26.8%	32.0%	36.4%	40.4%	43.8%	46.8%	49.5%
-60%	1.2%	5.9%	11.4%	16.9%	22.1%	26.7%	31.0%	34.8%	38.3%	41.4%	
High	200%	68.1%	70.7%	73.1%	75.0%	76.6%	77.8%	78.8%	79.5%	80.0%	80.4%
	180%	66.1%	69.1%	71.7%	73.9%	75.6%	77.0%	78.1%	78.9%	79.5%	79.9%
	160%	63.8%	67.3%	70.3%	72.7%	74.6%	76.1%	77.3%	78.2%	78.9%	79.4%
	140%	61.3%	65.3%	68.6%	71.3%	73.4%	75.1%	76.4%	77.4%	78.2%	78.8%
	120%	58.3%	63.0%	66.8%	69.7%	72.1%	73.9%	75.4%	76.6%	77.4%	78.1%
	100%	55.0%	60.4%	64.6%	67.9%	70.6%	72.6%	74.3%	75.6%	76.6%	77.3%
	80%	51.1%	57.4%	62.2%	65.9%	68.8%	71.1%	73.0%	74.4%	75.6%	76.5%
	60%	46.6%	54.0%	59.4%	63.5%	66.8%	69.4%	71.4%	73.1%	74.4%	75.4%
	40%	41.4%	50.0%	56.1%	60.7%	64.4%	67.3%	69.6%	71.5%	73.0%	74.2%
	20%	35.4%	45.3%	52.1%	57.4%	61.5%	64.8%	67.4%	69.6%	71.3%	72.7%
	0%	28.5%	39.6%	47.4%	53.3%	57.9%	61.6%	64.7%	67.1%	69.1%	70.8%
	-20%	20.8%	32.9%	41.5%	48.1%	53.4%	57.6%	61.1%	64.0%	66.4%	68.3%
	-40%	12.7%	24.8%	34.0%	41.4%	47.3%	52.2%	56.3%	59.7%	62.5%	64.8%
	-60%	5.2%	15.2%	24.3%	32.1%	38.8%	44.4%	49.1%	53.2%	56.6%	59.5%

*Strike Price/Exercise Price - 1 or (S/X-1)