

SECTION 1. PURPOSE

This revenue procedure provides guidance on the valuation of stock options solely for purposes of §§ 280G and 4999 of the Internal Revenue Code. This revenue procedure restates and modifies Revenue Procedure 2002-13, 2002-1 C.B. 549, as modified by Revenue Procedure, 2002-45, 2002-27 I.R.B. 40.

SECTION 2. BACKGROUND

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

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 (i) such payment is 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. A 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. An option is considered transferred when the option becomes substantially vested (within the meaning of § 1.83-3(b) and (j) of the Income Tax Regulations). Thus, for purposes of § 280G, stock options must be valued when a payment in the nature of compensation includes the transfer of a stock option, such as the grant or vesting of a stock option, in connection with a change in ownership or control. This revenue procedure provides guidance on the valuation of a stock option for this purpose. However, this revenue procedure does not apply for purposes of valuing a payment in cash (or property), even though the amount of the payment is determined by reference to the cancellation of a stock option.

Pursuant to § 1.280G-1, Q/A-13, the value of an option is determined under all the facts and circumstances in the particular case. Factors relevant to such a determination include, but are not limited to: the difference between the option's exercise price and the value of the property subject to the option at the time of vesting; the probability of the value of such property increasing or decreasing; and the length of the period during which the option can be exercised. For purposes of Q/A-13, valuation may be determined by any method prescribed by the Commissioner in published guidance of general applicability.

The determination of when there has been a change in ownership or control for purposes of section 280G is made under § 1.280G-1, Q/A-27 through Q/A-29.

Section 1.280G-1, Q/A-33, provides that, to the extent provided in published guidance of general applicability, an initial estimate of the value of an option is permitted to be made, with the valuation subsequently re-determined, and the base amount reallocated.

Rev. Proc. 98-34, 1998-1 C.B. 983, provides a methodology for the valuation of certain 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). The methodology in Rev. Proc. 98-34 applies only to the valuation of a nonpublicly traded stock option for stock that, on the valuation date, is publicly traded on an established securities market.

Concurrently with the issuance of proposed regulations under section 280G (see § 1.280G-1 of the Proposed Income Tax Regulations at 67 Fed. Reg. 7630), Rev. Proc. 2002-13 was issued concerning the valuation of stock options (including a safe harbor valuation method) for purposes of §§ 280G and 4999. Rev. Proc. 2002-45 modified various portions of Rev. Proc. 2002-13.

This revenue procedure restates and further modifies Rev. Proc. 2002-13 and Rev. Proc. 2002-45 to address additional issues regarding the valuation of stock options in connection with a change in ownership or control under §§ 280G and 4999.

SECTION 3. STOCK OPTION VALUATION

.01 *General rule.* A taxpayer may value a stock option, without regard to whether the option is on publicly or nonpublicly traded stock, using any valuation method that (i) is consistent with generally accepted accounting principles (such as FAS 123 or a successor standard) and (ii) takes into account the factors provided in § 1.280G-1, Q/A 13. The safe harbor method provided in section 4 of this revenue procedure and Rev. Proc. 98-34 are considered consistent with generally accepted accounting principles and take into account the factors provided in § 1.280G-1, Q/A 13. For purposes of §§ 280G and 4999 and this revenue procedure, the value of a stock option will not be considered properly determined if the option is valued solely by reference to the spread between the exercise price of the option and the value of the stock at the time of the change in ownership or control.

.02 *Payment date.* For purposes of this revenue procedure, the valuation date is the payment date as determined in accordance with § 280G. Thus, the valuation of a stock

option is determined based on the spread, the volatility of the underlying stock, the option term, and any other relevant factors as of that date.

.03 *Substitution of an option.* If, in addition to vesting, there is, contingent on the change in ownership or control, a substitution of an option on different stock for the option, the valuation is based on the substituted option.

.04 *Recalculation.* Pursuant to § 1.280G-1, Q/A-33, for purposes of §§ 280G and 4999, the payor is permitted to re-determine the value of an option, during the 18-month period beginning on the date of the change in ownership or control (the re-determination period), in accordance with this revenue procedure. Recalculation is permitted if, during the re-determination period, either of the following occurs: (1) there is a change in the term of the option due to a termination of employment, or (2) there is a change in the volatility of the stock.

Without regard to whether the value of the option will be re-determined, an initial determination of the value of the option must be made in accordance with this revenue procedure. This initial valuation is the amount of the payment, subject to adjustment as otherwise applicable (e.g., pursuant to § 1.280G-1, Q/A-24). This amount is used both to determine whether there are parachute payments and to calculate excess parachute payments and any excise tax liability associated with the transfer of the option.

A recalculation under this revenue procedure must be determined as of the date of payment used in the initial calculation (i.e., the valuation date). Thus, while the term assumption and the volatility assumption are permitted to be re-determined, the spread and the interest rate assumptions continue to be determined as of the valuation date.

For purposes of re-determining the value of the option, an employer is permitted to use a method other than the method used in making the initial determination, provided that both methods are otherwise permitted under this revenue procedure.

If the value of an option is recalculated under this revenue procedure, parachute payments and excess parachute payments must be recalculated using the re-determined valuation. However, the base

amount does not have to be re-apportioned; instead, the base amount allocated to the parachute payment is permitted to remain the same, with any adjustment to the excise tax made with respect to the option. This adjustment may be claimed only by filing an amended return for the taxable year that includes the payment date.

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 equals (i) the number of shares covered by the options multiplied by (ii) the spot price of the stock, and then multiplied by (iii) a valuation factor determined using the factors described above and reflected in the Table at the end of this revenue procedure. Other relevant factors, including risk-free rate of interest and assumptions related to dividend yields, are included in the Table. 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 that may be 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. If the valuation is based on a substituted option pursuant to section 3.03, volatility is determined based on the stock under the substituted option. 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 for the most recent year 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 ownership or control under § 280G(b)(2)(A). For purposes of determining the factor based on the spread between the exercise price and the spot price under the Table, 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 *Term of the option.* The term of the option is the number of full months between the valuation date 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 12-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. If the remaining term of the option is less than 12 months, the taxpayer may round down to the 3-month interval. For purposes of this paragraph, the taxpayer is permitted to use the expected term of the option calculated in accordance with Rev. Proc. 98-34.

SECTION 5. EXAMPLE

E is an employee of Corporation A, a publicly traded corporation. On September 1, 2004, in connection with E's performance of services, A grants E options to purchase 100,000 shares of A stock at \$10 per share. The options are exercisable for 10 years. The options will vest on September 1, 2007, if E continues to be employed by A through that date, or on a change in ownership or control, if earlier. Under the terms of the option, if E's employment is terminated after the option is vested, the option must be exercised on or before the date that is 3 months after the termination of employment.

On September 15, 2005, Corporation B acquires all of the stock of A, and A is merged into B. Contingent on the change in ownership, E's options become fully vested and are converted into B options with the same aggregate spread and the same ratio between the exercise price and the value of the stock (determined immediately before the conversion). At the time of the vesting, A stock has a fair market value of \$20, and B stock has a fair market value of \$50. Thus, in connection with the change in ownership, E receives fully vested options for 40,000 shares of B stock with an exercise price of \$25. The date of the vesting and substitution is the payment date and, therefore, the valuation date.

Using a valuation method that complies with this revenue procedure, B determines that, as of the valuation date, it is reasonable to assume that the volatility of B stock is .25, that the remaining expected term of the option is 36 months, and that the risk-free interest rate is 5%. B determines that the value of the option is \$1,096,000 (or \$27.40 per share).

Without regard to the change in ownership, this payment was contingent only on continued performance of services for Corporation A for a specified period of time and the payment is attributable, in part, to the performance of services before the date the payment was made. Therefore,

the portion of the payment that is contingent on the change in ownership is determined under § 1.280G-1, Q/A-24(c). The acceleration of the vesting of a stock option is considered to significantly increase the value of the payment. Therefore, the future value of the payment is assumed to be equal to the payment. Under § 1.280G-1, Q/A-31 and 32, the present value of the option is determined to be \$975,000. The vesting of the option has been accelerated by 23 full months. Therefore, the portion of the payment that is contingent on the change in ownership is \$373,080, the sum of (1) \$121,000 (the amount by which \$1,096,000, exceeds \$975,000), and (2) \$252,080 (23 months times 1% times \$1,096,000).

The value of the payment related to the options, \$373,080, is taken into account for purposes of determining whether A has received parachute payments and, if so, the portion of the parachute payments that are excess parachute payments. For purposes of this example, assume E is receiving parachute payments and that \$50,000 in base amount is allocated to this payment. In that case, \$323,080 of the payment is an excess parachute payment, and the excise tax under section 4999 is \$64,616. B must satisfy its obligations under section 4999(c) with respect to this amount, and E is responsible for the excise tax related to this payment for E's 2005 taxable year. B cannot claim the amount of the excess parachute payment as a deduction.

On July 1, 2006, E's employment is terminated, shortening the term of the option. As a result, the actual term of the option, measured from the date of the change in ownership, is 12 months (the 9 full months that E was employed following the change in ownership plus the 3 months following a termination of employment during which E can exercise the option). B decides to recalculate the value of the options as of the valuation date in accordance with section 3.04 of this revenue procedure, using the value of B stock at the change of ownership, \$50, and the exercise price of \$25 a share. In addition, B uses the same 5% risk-free assumption rate used in the initial valuation. Finally, B determines that .25 continues to be a reasonable assumption for volatility. The value of the option, as recalculated, is \$1,030,000 (or \$25.75 a share).

This value is then used to re-determine the portion of the payment that is contingent on the change in ownership under § 1.280G-1, Q/A-24(c). This amount is \$350,800, the sum of (1) \$113,900 (the amount by which the value of the payment, \$1,030,000, exceeds the present value of the payment, determined to be \$916,100), and (2) \$236,900 (23 times 1% times \$1,030,000). Using the base amount initially allocated to this payment, \$50,000, the portion of the payment that is an excess parachute payment is \$300,800, and the excise tax is \$60,160. E is permitted to file an amended return for 2005 using the revised calculations as a basis for claiming a refund of \$4,456.

SECTION 6. EFFECT ON OTHER DOCUMENTS

Rev. Proc. 2002-13, 2002-1 C.B. 549, and Rev. Proc. 2002-45, 2002-27 I.R.B. 40, are revoked as of January 1, 2004.

SECTION 7. EFFECTIVE DATE

This revenue procedure is effective January 1, 2004. Taxpayers are permitted to apply this revenue procedure with respect to a change in ownership or control occurring prior to such date.

SECTION 8. DRAFTING INFORMATION

The principal author of this procedure is Erinn Madden of the Office of Chief Counsel 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 (202) 622-6030 (not a toll-free call).

TABLE

	Term (months)	3	12	24	36	48	60	72	84	96	108	120
Volatility	Spread Factor*											
Low	200%	66.8%	67.3%	67.9%	68.4%	69.0%	69.5%	69.9%	70.3%	70.7%	71.0%	71.2%
	180%	64.5%	65.0%	65.7%	66.4%	67.1%	67.7%	68.3%	68.8%	69.3%	69.6%	69.9%
	160%	61.8%	62.4%	63.3%	64.1%	65.0%	65.8%	66.5%	67.1%	67.7%	68.1%	68.5%
	140%	58.6%	59.4%	60.4%	61.5%	62.5%	63.5%	64.4%	65.1%	65.8%	66.4%	66.9%
	120%	54.9%	55.8%	57.1%	58.4%	59.7%	60.9%	62.0%	62.9%	63.7%	64.5%	65.1%
	100%	50.4%	51.5%	53.2%	54.8%	56.4%	57.9%	59.1%	60.3%	61.3%	62.2%	63.0%
	80%	44.9%	46.3%	48.5%	50.6%	52.6%	54.3%	55.9%	57.3%	58.5%	59.6%	60.5%
	60%	38.0%	40.0%	42.9%	45.6%	48.0%	50.1%	52.0%	53.7%	55.2%	56.5%	57.6%
	40%	29.3%	32.3%	36.3%	39.7%	42.6%	45.2%	47.4%	49.4%	51.2%	52.7%	54.1%
	20%	18.1%	23.3%	28.5%	32.7%	36.2%	39.3%	41.9%	44.3%	46.4%	48.2%	49.9%
	0%	6.4%	13.6%	19.9%	24.7%	28.8%	32.3%	35.4%	38.1%	40.5%	42.7%	44.7%
	-20%	0.6%	5.4%	11.2%	16.1%	20.4%	24.2%	27.6%	30.6%	33.4%	35.9%	38.1%
	-40%	0%	0.9%	4.1%	7.9%	11.6%	15.2%	18.5%	21.7%	24.6%	27.3%	29.9%
	-60%	0%	0.0%	0.6%	2.0%	4.0%	6.4%	9.0%	11.6%	14.3%	16.8%	19.3%

	Term (months)	3	12	24	36	48	60	72	84	96	108	120
Volatility	Spread Factor*											
Medium	200%	66.8%	67.4%	68.6%	69.9%	71.1%	72.2%	73.1%	73.9%	74.5%	75.0%	75.4%
	180%	64.5%	65.2%	66.7%	68.2%	69.6%	70.9%	71.9%	72.8%	73.5%	74.1%	74.6%
	160%	61.8%	62.7%	64.5%	66.3%	68.0%	69.4%	70.6%	71.6%	72.5%	73.2%	73.7%
	140%	58.6%	59.8%	62.0%	64.2%	66.1%	67.7%	69.1%	70.3%	71.2%	72.0%	72.7%
	120%	54.9%	56.4%	59.2%	61.7%	63.9%	65.8%	67.4%	68.8%	69.9%	70.8%	71.6%
	100%	50.4%	52.5%	55.9%	58.9%	61.5%	63.7%	65.5%	67.0%	68.3%	69.4%	70.3%
	80%	44.9%	47.9%	52.2%	55.7%	58.7%	61.2%	63.2%	65.0%	66.5%	67.7%	68.8%
	60%	38.2%	42.6%	47.8%	52.0%	55.4%	58.3%	60.6%	62.7%	64.3%	65.8%	67.0%
	40%	30.0%	36.3%	42.7%	47.6%	51.6%	54.8%	57.6%	59.9%	61.8%	63.5%	64.9%
	20%	20.3%	29.1%	36.8%	42.5%	47.0%	50.8%	53.9%	56.5%	58.8%	60.7%	62.3%
	0%	10.4%	21.2%	30.0%	36.4%	41.6%	45.8%	49.4%	52.4%	55.0%	57.2%	59.1%
	-20%	3.0%	13.0%	22.2%	29.2%	34.9%	39.7%	43.7%	47.2%	50.2%	52.8%	55.0%
	-40%	0.3%	5.7%	13.8%	20.8%	26.8%	32.0%	36.4%	40.4%	43.8%	46.8%	49.5%
	-60%	0%	1.2%	5.9%	11.4%	16.9%	22.1%	26.7%	31.0%	34.8%	38.3%	41.4%
High	200%	66.8%	68.1%	70.7%	73.1%	75.0%	76.6%	77.8%	78.8%	79.5%	80.0%	80.4%
	180%	64.5%	66.1%	69.1%	71.7%	73.9%	75.6%	77.0%	78.1%	78.9%	79.5%	79.9%
	160%	61.8%	63.8%	67.3%	70.3%	72.7%	74.6%	76.1%	77.3%	78.2%	78.9%	79.4%
	140%	58.6%	61.3%	65.3%	68.6%	71.3%	73.4%	75.1%	76.4%	77.4%	78.2%	78.8%
	120%	54.9%	58.3%	63.0%	66.8%	69.7%	72.1%	73.9%	75.4%	76.6%	77.4%	78.1%
	100%	50.6%	55.0%	60.4%	64.6%	67.9%	70.6%	72.6%	74.3%	75.6%	76.6%	77.3%
	80%	45.3%	51.1%	57.4%	62.2%	65.9%	68.8%	71.1%	73.0%	74.4%	75.6%	76.5%
	60%	39.1%	46.6%	54.0%	59.4%	63.5%	66.8%	69.4%	71.4%	73.1%	74.4%	75.4%
	40%	31.7%	41.4%	50.0%	56.1%	60.7%	64.4%	67.3%	69.6%	71.5%	73.0%	74.2%
	20%	23.2%	35.4%	45.3%	52.1%	57.4%	61.5%	64.8%	67.4%	69.6%	71.3%	72.7%
	0%	14.3%	28.5%	39.6%	47.4%	53.3%	57.9%	61.6%	64.7%	67.1%	69.1%	70.8%
	-20%	6.4%	20.8%	32.9%	41.5%	48.1%	53.4%	57.6%	61.1%	64.0%	66.4%	68.3%
	-40%	1.5%	12.7%	24.8%	34.0%	41.4%	47.3%	52.2%	56.3%	59.7%	62.5%	64.8%
	-60%	0.1%	5.2%	15.2%	24.3%	32.1%	38.8%	44.4%	49.1%	53.2%	56.6%	59.5%

*Spot (market) Price/Exercise Price — 1 or (S/X-1)