the plan year in which the initial post restoration valuation date falls. The current liability interest rate differential is charged to the funding standard account at the end of the tenth plan year, but the Pension Benefit Guaranty Corporation may, as part of the restoration payment schedule order, or a modification to that order, direct that the charging of this amount must be spread over not more than 5 years, beginning with the eleventh plan year.

(h) *Election of the alternative minimum funding standard.* A plan using the restoration method may not elect the alternative minimum funding standard under section 412(g).

(i) *Funding review by the Pension Benefit Guaranty Corporation.* The Pension Benefit Guaranty Corporation must review the funding of any plan using the restoration method at least once in each plan year. As a result of a funding review, the Pension Benefit Guaranty Corporation may amend the restoration payment schedule as provided in paragraph (c)(3) of this section. As part of the funding review, the Executive Director of the PBGC must certify to the Corporation's Board of Directors, and to the Internal Revenue Service, that the Corporation has reviewed the funding of the plan, the financial condition of the plan sponsor and its controlled group members, the payments required under the restoration payment schedule (taking into account the availability of deferrals authorized under paragraph (c)(4) of this section), and any other factor that the Corporation deems relevant, and, based on that review, determines that it is in the best interests of participants and beneficiaries of the plan and the pension insurance program that the restored plan not be reterminated.

[T.D. 8317, 55 FR 42707, Oct. 23, 1990; 56 FR 19038, Apr. 25, 1991]

§ 1.412(c)(2)–1 Valuation of plan assets; reasonable actuarial valuation methods.

(a) *Introduction*—(1) *In general.* This section prescribes rules for valuing plan assets under an actuarial valuation method which satisfies the requirements of section 412(c)(2)(A). An actuarial valuation method is a funding method within the meaning of section 412(c)(3) and the regulations thereunder. Therefore, certain changes affecting the actuarial valuation method are identified in this section as changes in a plan's funding method.

(2) *Exception for certain bonds, etc.* The rules of this section do not apply to bonds or other evidences of indebtedness for which the election described in section 412(c)(2)(B) has been made, nor are such assets counted in applying paragraphs (b) or (c) of this section. Also, an election under section 412(c)(2)(B) is not a change in funding method within the meaning of section 412(c)(5).

(3) *Money purchase pension plan.* A money purchase pension plan must value assets for the purpose of satisfying the requirements of section 412(c)(2)(A) solely on the basis of their fair market value (under paragraph (c) of this section).

(4) *Defined benefit plans.* (i) To satisfy the requirements of section 412(c)(2)(A), an actuarial method valuing assets of a defined benefit plan must meet the requirements of paragraph (b) of this section.

(ii) In general, the purpose of paragraph (b) of this section is to permit use of reasonble actuarial valuation methods designed to mitigate short-run changes in the fair market value of plan assets. The funding of plan benefits and the charges and credits to the funding standard account required by section 412 are generally based upon the assumption that the defined benefit plan will be continued by the employer. Thus, short-run changes in the value of plan assets presumably will offset one another in the long term. Accordingly, in the determination of the amount required to be contributed under section 412 it is generally not necessary to recognize fully each change in fair market value of the assets in the period in which it occurs.

(iii) The asset valuation rules contained in paragraph (b) produce a "smoothing" effect. Thus, investment performance, including appreciation or depreciation in the market value of the assets occurring in each plan year, may be recognized gradually over several

plan years. This "smoothing" is in addition to the "smoothing" effect which results, for example, from amortizing experience losses and gains over 15 or 20 years under section 412(b)(2 (B)(iv) and (3)(B)(ii).

(b) *Asset valuation method requirements*—(1) *Consistent basis.* (i) The actuarial asset valuation method must be applied on a consistent basis. Any change in meeting the requirements of this paragraph (b) is a change in funding method subject to section 412(c)(5).

(ii) A method may satisfy the consistency requirement even though computations are based only on the period elapsed since the adoption of the method or on asset values occurring during that period.

(2) *Statement of plan's method.* The method of determining the actuarial value (but not fair market value) of the assets must be specified in the plan's actuarial report (required under section 6059). The method must be described in sufficient detail so that another actuary employing the method described would arrive at a reasonably similar result. Whether a deviation from the stated actuarial valuation method is a change in funding method is to be determined in accordance with section 412(c)(5) and the regulations thereunder. A deviation to include a type of asset not previously held by the plan would not be a change in funding method.

(3) *Consistent valuation dates.* The same day or days (such as the first or the last day of a plan year) must be used for all purposes to value the plan's assets for each plan year, or portion of plan year, for which a valuation is made. For purposes of this section, each such day is a valuation date. A change in the day or days used is a change in funding method.

(4) *Reflect fair market value.* The valuation method must take into account fair market value by making use of the—

(i) Fair market value (determined under paragraph (c) of this section), or

(ii) Average value (determined under paragraph (b)(7) of this section) of the plan's assets as of the applicable asset valuation date. This is done either directly in the computation of their actuarial value or indirectly in the computation of upper or lower limits placed on that value.

(5) *Results above and below fair market or average value.* A method will not satisfy the requirements of this paragraph (b) if it is designed to produce a result which will be consistently above or below the values described in paragraph (b)(4) (i) and (ii). However, a method designed to produce a result which consistently falls between fair market value and average value will satisfy this requirement. See Example (5) in paragraph (b)(9) of this section for an illustration of a method described in the preceding sentence.

(6) *Corridor limits.* (i) Regardless of how the method reflects fair market value under paragraph (b)(4), the method must result in an actuarial value of the plan's assets which is not less than a minimum amount and not more than a maximum amount. The minimum amount is the lesser of 80 percent of the current fair market value of plan assets as of the applicable asset valuation date or 85 percent of the average value (as described in subparagraph (7)) of plan assets as of that date. The maximum amount is the greater of 120 percent of the current fair market value of plan assets as of the applicable asset valuation date or 115 percent of the average value of plan assets as of that date.

(ii) Under a plan's method, a preliminary computation of the expected actuarial value may fall outside the prescribed corridor. A method meets the requirements of paragraph (b)(6)(i) of this section is such a case only by adjusting the expected actuarial value to the nearest corridor limit applicable under the method. A plan may use an actuarial valuation method with a narrower corridor than the general corridor required under paragraph (b)(6)(i). The adjustment to the nearest corridor limit of such a method for purposes of this subdivision (ii) would be determined by the narrower corridor stated in the description of the plan's method.

(7) *Average value.* the average value of plan assets is computed by—

(i) Determining the fair market value of plan assets at least annually,

(ii) Adding the current fair market value of the assets (as of the applicable

valuation date) and their adjusted values (as described in paragraph (b)(8) of this section) for a stated period not to exceed the five most recent plan years (including the current year), and

(iii) Dividing this sum by the number of values (including the current fair market value) considered in computing the sum described in subdivision (ii).

(8) *Adjusted value.* (i) the adjusted value of plan assets for a prior valuation date is their fair market value on that date with certain positive and negative adjustments. These adjustments reflect changes that occur between the prior asset valuation date and the current valuation date. However, no adjustment is made for increases or decreases in the total value of plan assets that result from the purchase, sale, or exchange of plan assets or from the receipt of payment on a debt obligation held by the plan.

(ii) In determining the adjusted value of plan assets for a prior valuation date, there is added to the fair market value of the plan assets of that date the sum of all additions to the plan assets since that date, excluding appreciation in the fair market value of the assets. The additions would include, for example, any contribution to the plan; any interest or dividend paid to the plan; and any asset not taken into account in a prior valuation of assets, but taken into account for the current year, in computing the fair market value of plan assets under paragraph (c) of this section.

(iii) In determining the adjusted value of plan assets for a prior valuation date, there is subtracted from the fair market value of the plan assets on that date the sum of all reductions in plan assets since that date, excluding depreciation in the fair market value of the assets. The reductions would include, for example, any benefit paid from plan assets; any expense paid from plan assets; and any asset taken into account in a prior valuation of assets but not taken into account for the current year, in computing the fair market value of plan assets under paragraph (c) of this section.

(9) *Examples.* This paragraph (b) may be illustrated by the following examples. In each example, assume that the pension plan uses a consistent actu-arial method of valuing its assets within the meaning of paragraph (b)(1), (2), and (3) of this section.

Example (1). Plan A considers the value of its assets to be initial cost, increased by an assumed rate of growth of X percent annually. Under the circumstances, the X-percent factor used by the plan is a reasonable assumption. Thus, this method is not designed to produce results consistently above or below fair market value as prohibited by paragraph (b)(5) of this section. Also, the method requires that the actuarial value be adjusted as required to fall within the corridor under paragraph (b) (6) and (7) of this section. Therefore, the method reflects fair market value as required by paragraph (b)(4) of this section.

Example (2). Plan B computes the actuarial value of its assets as follows: It determines the fair market value of the plan assets. Then the fair market value is adjusted to the extent necessary to make the actuarial value fall within a "5 percent" corridor. This corridor is plus or minus 5 percent of the following amount: the fair market value of the assets at the beginning of the valuation period plus an assumed annual growth of 4 percent with adjustments for contributions and benefit payments during the period. This method reflects fair market value in a manner prescribed by paragraph (b)(4) of this section. If the 4 percent factor used by the plan is a reasonable assumption, this method is not designed to produce results consistently above or below fair market value, and thus it satisfies paragraph (b)(5). However, this method is unacceptable because in some instances it may result in an actuarial value outside the corridor described in paragraph (b)(6) of this section. This method would be permitted if a second corridor were imposed which would adjust the value of the total plan assets to the corridor limits as required by paragraph (b)(6).

Example (3). Plan C values its assets by multiplying their fair market value by an index number. The use of the index results in the hypothetical average value that plan assets present on the valuation date would have had if they had been held during the current and four preceding years, and had appreciated or depreciated at the actual yield rates including appreciation and depreciation experienced by the plan during that period. However, the method requires an adjustment to the extent necessary to bring the resulting actuarial value of the assets inside the corridor described in the statement of the plan's actuarial valuation method. In this case, the stated corridor is 90 to 110 percent of fair market value, a corridor narrower than that described in paragraph (b)(7) of this section. This method is permitted.

Example (4). Plan D values its assets by multiplying their fair market value by 95

percent. Although the method reflects fair market value and the results of this method will always be within the required corridor, it is not acceptable because it will consistently result in a value less than fair market value.

Example (5). Plan E values its assets by using a five-year average method with appropriate adjustments for the period. Under the particular method used by Plan E, assets are not valued below 80 percent of fair market value or above 100 percent of fair market value. If the average produces a value that exceeds 100 percent of fair market value, the excess between 100 and 120 percent is recorded in a "value reserve account." In years after one in which the average exceeds 100 percent of fair market value, amounts are subtracted from this account and added, to

the extent necessary, to raise the value produced by the average for that year to 100 percent of fair market value. This method is permitted because it reflects fair market value under paragraph (b)(4) of this section by appropriately computing an average value, it satisfies paragraph (b)(5) by producing a result that falls consistently between fair market value and average value, and it properly reflects the corridor described in paragraph (b)(7).

Example (6). All assets of Plan F are invested in a trust fund and the plan year is the calendar year. The actuarial value is determined by averaging fair market value over 4 years. An actuarial valuation is performed as of December 31, 1988.

(i) The average value as of December 31, 1988, is computed as follows:

	1986	1986	1987	1987	1988	1988
Fair market value: Jan. 1	....	$150,000	....	$196,500	....	$238,000
Contributions	$65,000	....	$62,000	....	$66,000	....
Benefit payments	(22,000)	....	(24,000)	....	(25,000)	....
Expenses	(6,500)	....	(7,000)	....	(7,500)	....
Interest and dividends	8,000	44,500	7,500	38,500	7,000	240,500
Net realized gains (losses)		(2,000)		6,000		(8,000)
Balancing item [1]	....	4,000	....	(3,000)	....	(42,000)
Fair market value: Dec. 31	....	196,500	....	238,000	....	228,000

[1] This equals the increase (decrease) in unrealized appreciation.

Adjusted values	1985	1986	1987	1988
Fair market value: Dec. 31	$150,000	$196,500	$238,000	$228,000
Net adjustments:				
1988	40,500	40,500	40,500	....
1987	38,500	38,500	....	....
1986	44,500	....	....	....
Total	273,500	275,500	278,500	228,000

Average value: 1988=$273,500 + $275,500 + $278,500 + $228,000 ÷ 4=$263,875

(ii) Plan F properly determines an average value under paragraph (b)(7) of this section for use as an actuarial value. Therefore, the valuation method meets the requirements of this section.

Example (7). Plan G computes the actuarial value of the plan assets as follows: The current fair market value of the plan assets is averaged with the most recent prior adjusted actuarial value. This average value is adjusted up or down toward the current fair market value by 20 percent of the difference between it and the current fair market value of the assets. This value is further adjusted to the extent necessary to fall within the corridor described in the statement of the plan's actuarial valuation method. The lower end of the corridor is the lesser of 80 percent of the fair market value of the plan assets or 85 percent of the average value of the plan assets. The higher end of the corridor is the greater of 120 percent of the fair market

value of plan assets or 115 percent of the average value of plan assets. Average value for purposes of the corridor is determined under paragraph (b)(7) of this section. Assuming the numerical data of Example (6), the application of the corridor is as follows. The actuarial asset value as of December 31, 1988, must not be less than $182,400 (80 percent of current fair market value, $228,000) nor greater than $303,456 (115 percent of average value, 263,875). This method is permitted because it reflects fair market value in a manner permitted by paragraph (b)(4) of this section, it produces an actuarial value which is neither consistently above nor consistently below fair market or average value to satisfy paragraph (b)(5), and it is appropriately limited by the corridor described in paragraph (b)(6).

(c) *Fair market value of assets*—(1) *General rules.* Except as otherwise provided

in this paragraph (c), the fair market value of a plan's assets for purposes of this section is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts.

(d) *Methods for taking into account the fair market value of certain agreements.* [Reserved]

(e) *Effective date and transition rules—* (1) *Effective date.* This section applies to plan years to which section 412, or section 302 of the Employee Retirement Income Security Act of 1974, applies.

(2) *Special rule for certain plan years.* For plan years beginning prior to November 12, 1980, the amounts required to be determined under section 412 may be computed on the basis of any reasonable actuarial method of asset valuation which takes into account the fair market value of the plan's assets, even if the method does not meet all of the requirements of paragraphs (a) through (c) of this section.

(3) *Plan years beginning on or after November 12, 1980.* Paragraphs (a) through (c) of this section apply beginning with the first valuation of plan assets made for a plan year to which section 412 applies that begins on or after November 12, 1980. The statement of the plan's actuarial asset valuation method required by paragraph (b)(2) of this section must be included with the plan's actuarial report for that year, in addition to any subsequent reports.

(4) *Effect of change of asset valuation method.* A plan which is required to change its asset valuation method to comply with paragraphs (a) through (c) of this section must make the change no later than the time when the plan is first required to comply with this section under paragraph (e)(3). A method of adjustment must be used to take account of any difference in the actuarial value of the plan's assets based on the old and new valuation methods. The plan may use either—

(i) A method of adjustment described in paragraph (e)(5) or (e)(6) of this section without prior approval by the Commissioner, or

(ii) Any other method of adjustment if the Commissioner gives prior approval under section 412(c)(5).

(5) *Retroactive recomputation method.* (i) Under this method of adjustment, the plan recomputes the balance of the funding standard account as of the beginning of the first plan year for which it uses its new asset valuation method to comply with paragraphs (a) through (c) of this section. This new balance is recomputed by retroactively applying the plan's new method as of the first day of the first plan year to which section 412 applies.

(ii) Beginning with the first plan year for which it uses its new method, the plan computes the normal cost and amortization charges and credits to the funding standard account based on the retroactive application of its new method as of the first day of the first plan year to which section 412 applies.

(iii) If the recomputed aggregate charges exceed the recomputed aggregate credits to the funding standard account as of the end of the first plan year for which the plan uses its new method, an additional contribution to the plan may be necessary to avoid an accumulated funding deficiency in that year. The use of the retroactive recomputation method may also result in an accumulated funding deficiency for years prior to that first year. In such cases, the rules of section 412(c)(10), relating to the time when certain contributions are deemed to have been made, apply.

(6) *Prospective gain or loss adjustment method.* (i) Under this method of adjustment the plan values its assets under its new method no later than the valuation date for the first plan year beginning after [the publication date of this section]

(ii) Regardless of the type of funding method used by a plan, the difference in the value of the assets under the old and the new asset valuation methods may be treated as arising from an experience loss or gain; or alternatively it may be treated as arising from a change in actuarial assumptions.

(iii) The treatment of this difference as an experience gain or loss or as a change in actuarial assumptions must be consistent with the treatment of such gains, losses, or changes under the funding method used by the plan. Thus, if a plan uses a spread gain type funding method other than the aggregate

cost method, the difference in the value of assets under the old and the new asset valuation methods may be either amortized or spread over future periods as a part of normal cost. Examples of this type of funding method are the frozen initial liability cost method and the attained age normal cost method. With an aggregate method, the difference in the value of assets under the old and the new asset valuation methods must be spread over future periods as a part of normal cost.

(Secs. 412(c)(2) and 7805 of the Internal Revenue Code of 1954 (88 Stat. 916 and 68A Stat. 917; 26 U.S.C. 412(c)(2) and 7805))

[T.D. 7734, 45 FR 74718, Nov. 12, 1980]

§ 1.412(c)(3)–1 Reasonable funding methods.

(a) *Introduction*—(1) *In general.* This section prescribes rules for determining whether or not, in the case of an ongoing plan, a funding method is reasonable for purposes of section 412(c)(3). A method is unreasonable only if it is found to be inconsistent with a rule prescribed in this section. The term "reasonable funding method" under this section has the same meaning as the term "acceptable actuarial cost method" under section 3(31) of the Employee Retirement Income Security Act of 1974 (ERISA).

(2) *Computations included in method.* See § 1.412(c)(1)–1(b) for a discussion of matters that are, and are not, included in the funding method of a plan.

(3) *Plans using shortfall.* The shortfall method is a method of determining charges to the funding standard account by adapting the underlying funding method of certain collectively bargained plans in the manner described in § 1.412(c)(1)–2. As such, the shortfall method is a funding method. The underlying method of a plan that uses the shortfall method must be a reasonable funding method under this section. The rules contained in this section, relating to cost under a reasonable funding method, apply in the shortfall method to the annual computation charge under § 1.412(c)(1)–2(d).

(4) *Scope of funding method.* Except for the shortfall method, a reasonable funding method is applied to the computation of—

(i) The normal cost of a plan for a plan year; and, if applicable,

(ii) The bases established under section 412(b)(2)(B), (C), and (D), and (3)(B) ("amortizable bases").

(b) *General rules for reasonable funding methods*—(1) *Basic funding formula.* At any time, except as provided by the Commissioner, the present value of future benefits under a reasonable funding method must equal the sum of the following amounts:

(i) The present value of normal costs (taking into account future mandatory employee contributions, within the meaning of section 411(c)(2)(C), in the case of a contributory plan) over the future working lifetime of participants;

(ii) The sum of the unamortized portions of amortizable bases, if any, treating credit bases under section 412(b)(3)(B) as negative numbers; and

(iii) The plan assets, decreased by a credit balance (and increased by a debit balance) in the funding standard account under section 412(b).

(2) *Normal cost.* Normal cost under a reasonable funding method must be expressed as—

(i) A level dollar amount, or a level percentage of pay, that is computed from year to year on either an individual basis or an aggregate basis; or

(ii) An amount equal to the present value of benefits accruing under the method for a particular plan year.

(3) *Application to shortfall.* Paragraph (b)(2) will not fail to be satisfied merely because an amount described in (i) or (ii) is expressed as permitted under the shortfall method.

(c) *Additional requirements*—(1) *Inclusion of all liabilities.* Under a reasonable funding method, all liabilities of the plan for benefits, whether vested or not, must be taken into account.

(2) *Production of experience gains and losses.* If each actuarial assumption is exactly realized under a reasonable funding method, no experience gains or losses are produced.

(3) *Plan population*—(i) *In general.* Under a reasonable funding method, the plan population must include three classes of individuals: participants currently employed in the service of the