Note: ACG No. 2 was repealed by the ASB, effective June 16, 2003.

ACTUARIAL STANDARDS BOARD

Actuarial Compliance Guideline No. 2

For Statement of Financial Accounting Standards No. 88

Developed by the
Pension Committee of the
Actuarial Standards Board

Adopted by the
Actuarial Standards Board
April 1989

(Doc. No. 016)

T A B L E O F C O N T E N T S

June 1989

TO: Members of the American Academy of Actuaries and Other Persons Interested in Statement of Financial Accounting Standards No. 88

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Compliance Guideline No. 2

This booklet contains the final version of Actuarial Compliance Guideline No. 2, *For Statement of Financial Accounting Standards No. 88*. Its purpose is to set forth generally accepted actuarial practices with respect to calculations for Statement of Financial Accounting Standards (SFAS) No. 88. Because it is guidance for compliance with an outside requirement (i.e., an accounting standard), calculations performed in accordance with the guideline may or may not be generally accepted for other actuarial purposes.

The guideline was developed by the Pension Committee of the ASB. It was exposed for comment in August 1988. Seventeen responses were received.

There have been some significant changes made to the exposure draft as a result of the comments received. In addition, the guideline has been reformatted in the uniform format adopted by the ASB since the exposure draft.

Appendix 1 was revised moderately to allow greater ease of use, and the numeric portions of appendix 2 (example A) were revised to ensure materiality of the curtailment event. Several comments were received regarding alternative proration techniques in the examples. These comments are addressed in notes within appendix 2 (example A) and appendix 2 (example B).

Text sections that contain significant modifications from the exposure draft as a result of the comments received are as follows:

Section 5.5, Approximations and Materiality (section 1.7 in exposure draft)—Comments received about this section suggested that more detail was needed. Accordingly, the paragraph has been expanded to address approximations for SFAS No. 88 calculations.

Section 5.7.2, Maximum (Gain) Loss Subject to Recognition in a Settlement (section 3.3 in exposure draft)—One respondent indicated that the original language was somewhat confusing. To address this situation, the committee modified the definition and added additional notes.

Section 5.7.5, Alternative Curtailment Ratio (section 3.6 in exposure draft)—This section was rewritten to address the calculation and application of the alternative ratio in a manner consistent with the Financial Accounting Standards Board (FASB) *Guide to Implementation*. In addition, the new language indicates that other approaches are possible and that adjustments to the alternative ratio may be warranted in certain situations.

Section 5.8.5, Prior Service Cost Recognized Due to Curtailment (section 4.6 in exposure draft)—The addition to this section was a result of the comments received with respect to section 5.9.4 (section 5.5 in exposure draft), and included an alternative approach if more detailed information is available.

Section 5.9.4, Amortization of Prior Service Cost (section 5.5 in exposure draft)—Comments on this section were concerned with the approaches to use if exact information were available regarding past prior service cost layers. The section has been modified and expanded to address these concerns.

As part of the reformatting, two sections were added: a new section 4 on historical issues, and a new section 6 on communications and disclosures. The latter was taken from the previously published actuarial standard of practice on communications related to SFAS No. 87 and SFAS No. 88.

The revised version of the guideline was adopted by the ASB on April 13, 1989. Its effective date was immediate, because of the pressing need for it in the field.

Pension Committee
(Present and Past Members Who Contributed to This Work)

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ACTUARIAL COMPLIANCE GUIDELINE NO. 2

FOR STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 88

PREAMBLE

Section 1. Purpose, Scope, and Effective Date

1.1 Purpose—The purpose of this actuarial compliance guideline is to set forth generally accepted actuarial practices with respect to calculations for Statement of Financial Accounting Standards (SFAS) No. 88, *Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits*. Because the guideline is for the purpose of compliance with an accounting standard, calculations performed in accordance with it may or may not be generally accepted for other actuarial purposes.

1.2 Scope—SFAS No. 88 and pronouncements of the Financial Accounting Standards Board (FASB) set forth required practices with respect to calculations for SFAS No. 88. This guide does not set forth actuarial practice standards, but is believed to accurately represent current understanding of SFAS No. 88 as it pertains to actuarial calculations. In the event of a conflict between this document and SFAS No. 88 or other formal pronouncements from FASB, the actuary should rely on FASB for a definitive determination.

1.3 Effective Date—This guideline was effective as of the date of its adoption by the Actuarial Standards Board, April 13, 1989.

Section 2. Definitions

2.1 Accumulated Benefit Obligation—The actuarial present value of benefits (whether vested or nonvested) attributed by the pension benefit formula to employee service rendered before a specified date and based on employee service and compensation (if applicable) prior to that date. The accumulated benefit obligation (ABO) differs from the projected benefit obligation (PBO) in that it includes no assumption about future compensation levels (SFAS No. 87, Glossary).

2.2 Curtailment—An event that significantly reduces the expected years of future service of present employees or eliminates for a significant number of employees the accrual of defined benefits for some or all of their future services (SFAS No. 88, ¶ 6). (Also see section 5.6.2.)

2.3 Net Periodic Pension Cost—The amount recognized in an employer's financial statements as the cost of a pension plan for a period. Components of net periodic pension cost are service cost, interest cost, actual return on plan assets, gain or loss, amortization of unrecognized prior service cost, and amortization of the unrecognized net obligation or asset existing at the date of initial application of SFAS No. 87 (SFAS No. 87, Glossary).

2.4 Projected Benefit Obligation—The actuarial present value as of a date of all benefits attributed by the pension benefit formula to employee service rendered prior to that date. The projected benefit obligation (PBO) is measured using assumptions as to future compensation levels if the pension benefit formula is based on those future compensation levels (SFAS No. 87, Glossary).

2.5 Settlement—A transaction that (1) is an irrevocable action, (2) relieves the employer (or the plan) of primary responsibility for a pension benefit obligation, and (3) eliminates significant risks related to the obligation and the assets used to effect the settlement (SFAS No. 88, ¶ 3). (Also see section 5.6.1.)

2.6 Termination Benefits—Benefits that may be provided by an employer to employees in connection with the termination of their employment. They may be either special termination benefits offered only for a short period of time, or contractual termination benefits required by the terms of a plan only if a specified event, such as a plant closing, occurs (SFAS No. 88, ¶ 15). (Also see section 5.6.3.)

Section 3. Background

The Financial Accounting Standards Board adopted SFAS No. 88, *Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits*, in December 1985. SFAS No. 88 is closely related to SFAS No. 87, *Employers' Accounting for Pensions*. In general, SFAS No. 87 pertains to the routine events of an ongoing plan, whereas SFAS No. 88 deals with the special circumstances named in its title, i.e., settlements, curtailments, and termination benefits. When these circumstances arise, the pension information needed for the employer's financial statements is significantly different from that prescribed in SFAS No. 87. Cost elements particular to the special circumstances are needed. In addition, adjustments in the pension expense for the year may also be required. As with SFAS No. 87, much of the information for SFAS No. 88 will have to be furnished by actuaries.

Users of this guide are assumed to be familiar with and have available the relevant FASB publications, viz., SFAS No. 87, SFAS No. 88, and the FASB *Guide to Implementation (Questions and Answers)* for each. Although the FASB *Guides to Implementation* are not promulgated as accounting standards, the Securities and Exchange Commission and the American Institute of Certified Public Accountants have stipulated that employer accounting be in compliance with such *Guides*. Users are also presumed to have *An Actuary's Guide to Compliance with Statement of Financial Accounting Standards No. 87*, published in December 1986 by the American Academy of Actuaries.

Section 4. Historical Practice

Prior to the issuance of SFAS No. 88, there was no comprehensive accounting standard addressing all of the special events covered under SFAS No. 88. Accounting Principles Board (APB) Opinion No. 8, *Accounting for the Cost of Pension Plans*, addressed pension accounting in general, including gains and losses arising from unusual events or events occurring at irregular intervals. However, for actuarial purposes, specific applications and methodology for such events were not defined.

Under APB Opinion No. 30, *Reporting the Results of Operations—Reporting the Effects of Disposal of a Segment of Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions*, additional pension costs were included as part of the expenses directly associated with such events. Again, no specific guidance on actuarial calculations was provided.

More specific guidance was provided in SFAS No. 74, *Accounting for Special Termination Benefits Paid to Employees*. The scope of this standard was limited to termination benefits; hence, it did not address curtailments or settlements. Furthermore, the procedures by which the "cost" of such benefits was to be determined, and by which their impact on other aspects of pension cost was to be measured, were not specified.

In the past, actuaries involved in situations of this nature have therefore produced calculations based on individual best judgment, which could lead to different results under similar circumstances.

ACTUARIAL COMPLIANCE GUIDELINE

Section 5. Actuarial Compliance Issues and Recommended Practices

5.1 Introduction—The events described under SFAS No. 88 generally require special calculations to determine the effect in the income statement for the accounting period in which the event occurred. Costs or credits which might otherwise be deferred for an ongoing plan are recognized instead at the time of the event. The special calculations are done in three steps:

a. updated valuation results as of the date of the event, as if the event had not taken place;

b. determination of costs or credits associated with the event; and

c. revised valuation results also as of the date of the event, fully reflecting the changes resulting from the event.

5.2 Updated Valuation—As of the date of the event an updated valuation should be performed as if this date were a measurement date. No changes associated with the event are to be reflected, but this valuation is to be based upon current data and the assumptions (in particular the discount rate) should be appropriate for the time at which the calculations are being performed.

5.3 Items Associated with the Event—For determining the costs of the event, various actuarial present values will need to be calculated. The actuarial present values will typically be of benefits before and after the event. The values may be of either the accumulated benefit obligation (ABO) or projected benefit obligation (PBO) type (as defined in SFAS No. 87). In addition, the event may be such that acceleration of certain unrecognized items may be required. This latter requirement may generate the need to make a new determination of the expected years of service rendered.

5.4 Revised Valuation—As of the date of the event, a revised valuation should be done as if this date were a measurement date. This revised valuation is based upon the employee census data and plan assets after the event has been recognized.

5.5 Approximations and Materiality—SFAS No. 87 allows the use of reasonable approximations (SFAS No. 87, ¶ 10). This can also be presumed in making the determinations for SFAS No. 88. Since SFAS No. 88 events will usually occur on other than the annual measurement date, approximations are more likely to be used in determining their effect. Such approximations may take the form of adjustments to existing calculations required for SFAS No. 87. In addition, accounting materiality is always a consideration when deciding on the amount of effort to expend and expense to incur when complying with any accounting standard.

5.6 Events Covered and Timing—The events covered under SFAS No. 88 are considered as unusual, i.e., not the routine events of an ongoing plan, because the events result in either unexpected changes in plan obligations (settlement or curtailment), or increased benefits for certain employees involved in a defined limited action (termination benefits in an open window or plant closing).

5.6.1 Settlements—These events are essentially permanent reductions in plan obligations resulting from a transfer of the risk to an entity outside of the control of the plan sponsor. Examples provided are the purchase of nonparticipating annuities or the payment of lump sums. Structuring the plan assets in a manner designed to immunize against the effect of changes in investment rates is not a settlement.

5.6.2 Curtailments—Curtailment is an issue because ongoing plan costs often include an element of deferred costs (costs remaining to be amortized) for which the annual charge was determined reflecting the average expected working lifetime of the employee group at the time the deferred cost was established. When a covered event occurs which unexpectedly alters either the remaining deferred cost or the expected working lifetime, the curtailment calculations are required. Examples of a curtailment are a plan amendment resulting in elimination of future benefits, termination of significantly more employees than anticipated (such as in a plant closing), or spinoff of obligations.

5.6.3 Termination Benefits—Examples of these benefits given in SFAS No. 88 are open window or plant closing benefits. Costs for these benefits are given special treatment because they are not routine benefits of an ongoing plan, and may include benefits not covered by the pension plan.

5.6.4 Multiple Events—The events covered by SFAS No. 88 are not mutually exclusive. For example, if a plan is terminated and annuities are purchased, then both a curtailment and a settlement may occur. In general, the recognition should proceed chronologically. For simultaneous events it is permissible to establish the presumed sequence arbitrarily. Note that the sequence chosen can significantly affect the reported results, as to the amounts and even as to the fiscal year of recognition. Once a sequence has been selected, it must be followed in similar future events.

5.6.5 Timing of Recognition—The accounting period in, or method by which the event is recognized, is an accounting determination. Settlement gains or losses are recognized when realized, whereas a curtailment gain is recognized only when realized, and a curtailment loss is recognized when a commitment is made to take the action. If the action is in conjunction with the disposal of a business, the timing and method are governed by APB Opinion No. 30. Consequently, the charges or credits determined under SFAS No. 88 can be part of the disposal accounting as opposed to being part of the annual accounting costs.

For settlements, special gain or loss recognition is not required provided that in the year the following apply:

a. the cost of all settlements is no more than the sum of the service cost plus the interest cost component (note that the return on assets is *not* part of the interest cost component) of the net periodic pension cost; and

b. the policy is consistently followed.

5.7 Actuarial Calculations for SFAS No. 88—Depending on the circumstances, the actuary may need to do special calculations because of a settlement, a curtailment, a termination benefit, or the disposition of a business. For a settlement, no additional actuarial calculations other than the updated valuations are needed. For a curtailment, calculation of the gain or loss for the event is needed, and a determination of the expected years of service to be rendered will generally be required. If termination benefits are provided, the actuarial present value of these benefits will be determined. Note that for SFAS No. 88 calculations, a transition asset is generally treated like a gain and a transition obligation is generally treated like a prior service cost. The needed costs will come from the updated valuation and the revised valuation.

5.7.1 Settlement Ratio—When only a portion of the PBO is settled, a settlement ratio must be determined equal to the decrease in PBO divided by the PBO before settlement. This ratio is applied to any unrecognized net (gain) loss and to any unrecognized transition assett determine the amount of those items to be recognized in the company's earnings due to settlement.

5.7.2 Maximum (Gain) Loss Subject to Recognition in a Settlement—When a settlement occurs, the maximum (gain) loss subject to recognition must be determined as follows:

Unrecognized net (gain) loss at settlement, including items in the updated valuation identified as part of the remeasurement before settlement, plus the unrecognized transition (asset), if any. The (gain) loss due to remeasurement would reflect the actual impact of the settlement of the obligation.

Notes: (1) an unrecognized transition obligation is not included in the above calculation; (2) the amount of the asset transferred does not affect the amount of the settlement gain or loss; and (3) if a participating annuity has been purchased, the maximum gain (but not the maximum loss) must be reduced for the cost of the participation right.

5.7.3 Actuarial (Gain) Loss Due to Curtailment—This amount is determined from the results of the updated valuation and the revised valuation. The actuarial (gain) loss is equal to the PBO from the revised valuation less the PBO from the updated valuation. This defines the actuarially determined gain or loss associated with the curtailment. Additional calculations are needed to determine the accounting impact (section 5.8).

5.7.4 Curtailment Ratio—When only a portion of future service is curtailed, a curtailment ratio must be determined with respect to the unrecognized portion of (1) a net transition obligation (but not a net transition asset) and (2) the prior service cost for each amendment. For each item, the ratio is equal to (1) the reduction in expected remaining years of future service divided by (2) the number of such expected years just prior to curtailment, both determined as of the date of curtailment solely with respect to those individuals who were participants at the date of transition or amendment who remain participants as of the date of curtailment.

5.7.5 Alternative Curtailment Ratio—The curtailment ratio (section 5.7.4) may require extensive analysis of the computations of remaining expected years of future service, so that an alternative method may be desirable. One such method would be to divide (1) the decrease in expected years of future service by (2) the total expected future years of service just prior to the curtailment. Adjustments for this alternative may be appropriate to reflect the number and magnitude of the unamortized amounts just prior to the curtailment, as well as the time elapsed since establishment of such unamortized amounts.

5.7.6 Termination Benefit (Gain) Loss—The (gain) loss on account of termination benefits payable from the retirement plan is equal to (1) the PBO for terminating participants including termination benefits minus (2) the PBO for those same participants if they had terminated at the same time without termination benefits. If the termination benefits are payable in conjunction with a plan curtailment, as will usually be the case, the curtailment calculations must precede the termination benefit computations.

Termination benefits may be paid from other than an existing retirement plan. The actuarial present value of these benefits is to be added to those payable from the retirement plan to obtain the total value of the termination benefit.

5.8 Accounting Recognition of Settlement or Net Curtailment (Gain) Loss—A settlement requires special handling of deferred gains (including net unrecognized transition asset) and losses; no special prior service cost recognition is made. A curtailment requires consideration of both experience deviations and unrecognized prior service cost (including net unrecognized transition obligation). These are described in the items below. For a curtailment, a diagram is provided in appendix 1. Review of the examples in appendix 2 would also be helpful.

5.8.1 Settlement (Gain) Loss—The amount of (gain) loss recognized in earnings as a result of a settlement is the product of (1) the maximum (gain) loss subject to recognition (section 5.7.2) and (2) the settlement ratio (section 5.7.1).

5.8.2 Net Curtailment (Gain) Loss—The net curtailment (gain) loss recognized in earnings is the sum of (1) the (gain) loss recognized (sections 5.8.3 and 5.8.4) and (2) the prior service cost recognized (section 5.8.5).

5.8.3 Gain Recognized Due to Curtailment—The amount of the gain recognized in earnings as a result of a curtailment is (1) the actuarial gain due to curtailment (section 5.7.3) reduced by (2) the combined unrecognized net loss, if any. For this purpose, the net unrecognized transition asset is treated as an unrecognized gain, and is offset against the unrecognized net loss in determining the combined unrecognized net loss in (2) above.

5.8.4 Loss Recognized Due to Curtailment—The amount of the loss recognized in earnings as a result of a curtailment is (1) the actuarial loss due to curtailment (section 5.7.3) reduced by (2) the combined unrecognized net gain, if any. For this purpose, the net unrecognized transition asset is treated as an unrecognized gain, and is added to the unrecognized net gain in determining the combined unrecognized net gain in (2) above.

5.8.5 Prior Service Cost Recognized Due to Curtailment—The amount of prior service cost recognized in earnings as a result of a curtailment is the product of (1) the sum of the unrecognized prior service cost and the net unrecognized transition obligation, if any; and (2) the curtailment ratio (section 5.7.4 or 5.7.5). If the unrecognized prior service cost or transition obligation applicable to the affected group is known, an alternative cost equal to such unrecognized amounts may be used.

5.9 Effects on Income Statement Items—If APB Opinion No. 30 does not apply, the occurrence of the event results in the pension cost for the accounting period essentially consisting of the sum of the pro rata shares of two annualized net periodic pension costs (NPPCs) (defined in SFAS No. 87), plus the loss (gain) associated with the event. Review of the examples in appendix 2 would also be helpful.

5.9.1 Net Periodic Pension Cost—The NPPC for the accounting period is the sum of (a) plus (b), where (a) is the pro rata portion of the annual NPPC determined as of the beginning of the period, and (b) is the pro rata portion of the annual NPPC determined as of the date of the event.

5.9.2 Amortization Charges and Credits—The method for determining the annual charges and credits after an event varies depending upon the source of such amounts. Each type of amortization is discussed in sections 5.9.3–5.9.5.

5.9.3 Amortization of Transition Obligation or Asset—The remaining net transition obligation (asset) after the event is to be amortized over the balance of the initial amortization period.

5.9.4 Amortization of Prior Service Cost—A curtailment will result in the need to change the amount of the amortization, but the period will generally not change. The method of determining the new amount of amortization will be governed by the approach used to determine the portion of prior service cost recognized immediately as a result of the curtailment (section 5.8.5). For example, if the curtailment ratio approach were used and resulted in a reduction of 30% in the prior service cost due to the curtailment, the new amortization amount would be 70% of the old one.

5.9.5 Amortization of Net Gain or Loss—The procedure to determine the annual amount of the amortization, if any, is not affected by the event. The amount subject to consideration for amortization is the unrecognized net gain or loss determined in the revised valuation.

Section 6. Communications and Disclosures

6.1 Disclosure of Purpose—The actuarial communication for purposes of SFAS No. 88 must be identified as such, and should disclose that the results of calculations prepared for other purposes (e.g., plan reporting, government requirements, etc.) may differ significantly from the results for purposes of SFAS No. 88.

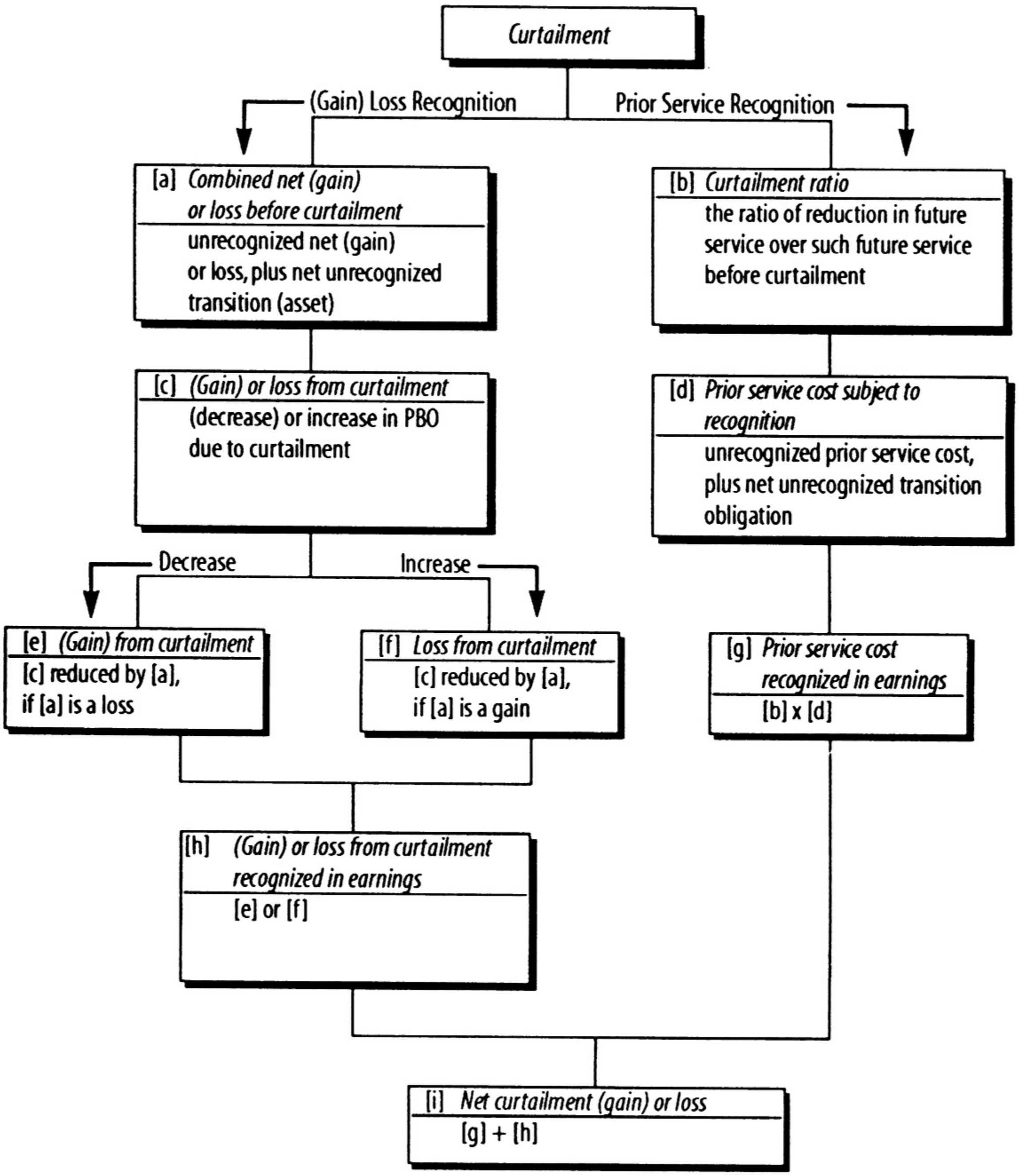
6.2 Disclosure of Exceptions—The actuarial communication should disclose any basis of calculations that is inconsistent with the actuary's understanding of the basis prescribed by SFAS No. 88.

6.3 Sample Disclosure—In the absence of exceptions or other special circumstances, the following sample disclosure is suggested:

> Actuarial computations under Statement of Financial Accounting Standards No. 88 (SFAS No. 88) are for purposes of fulfilling certain employer accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of SFAS No. 88. Determinations for purposes other than meeting the employer financial accounting requirements of SFAS No. 88 may differ significantly from the results reported herein.

Appendix 1

Flow Chart for Curtailments



Appendix 2

Examples of Calculations

The examples in this appendix explore many of the ramifications of special events under SFAS No. 88, including changes in the employee population and the assumed discount rate as of the date of the event. In actual practice, timing might not allow, and materiality might not require, the collection of new employee data, revised asset information, etc. In these cases, a reasonable approximation might be to assume that no such changes have occurred. Interest on the service cost has been included as part of the interest cost, although alternative treatment is permissible (refer to section 2.7 of *An Actuary's Guide to Compliance with SFAS No. 87*).

Example A for Curtailment

A.1 Company E sponsors a final pay noncontributory defined benefit plan. On January 1, 1988, the plan's financial status is as follows:

Vested benefit obligation	$(1,300)
Nonvested benefit obligation	(200)
Accumulated benefit obligation	$(1,500)
Effects of projected future compensation levels	(500)
Projected benefit obligation	$(2,000)
Plan assets at fair value	1,400
Unrecognized net transition obligation (asset)	450
Unrecognized prior service cost	600
Unrecognized net loss (gain) subsequent to transition	(150)
(Accrued) prepaid pension cost	$300

A.2 The discount rate used at January 1, 1988, is 8%, and the long-term rate on assets is 8%. No contribution or benefit payments are assumed; all amortization amounts are based upon a 15-year period. The 1988 net periodic pension cost (NPPC) is $334, determined as follows:

Service cost		200
Interest cost: • on service cost • on PBO	 16 160	 176
Expected return on assets (market-related value is the market value)		(112)
Amortization of unrecognized: • transition obligation • prior service cost • (gain) loss (a 10% corridor is used)	 30 40 0	 70
Net Periodic Pension Cost		$334

A.3 On July 1, 1988, Company E committed to a formal plan to dispose of a segment of its business. In connection with the disposal, the number of employees accumulating benefits under the plan would be reduced significantly. Because of the curtailment, a remeasurement is necessary.

The NPPC for the period from January 1 to June 30, 1988, is $167 (6/12 of the amounts previously determined for the full year).

	NPPC for 1988 (in dollars)	**NPPC for 1/1/88–6/30/88* (in dollars)**
Service cost	200	100
Interest cost	176	88
Expected return on assets	(112)	(56)
Amortization: • transition obligation • prior service cost • (gain) loss	 30 40 0	 15 20 0
Net Periodic Pension Cost	334	167

* 6/12 of the NPPC for 1988. Note: Actuarially, some items could be calculated differently. However, the method used here is that expected to be followed by most plan sponsors who book plan costs ratably throughout the year.

A.4 The appropriate discount rate as of July 1 has decreased to 7% from 8% as of January 1. An updated valuation as of July 1 reveals the plan's financial status before the curtailment as follows:

	July 1
Vested benefit obligation	$(1,500)
Nonvested benefit obligation	(400)
Accumulated benefit obligation	$(1,900)
Effects of projected future compensation levels	(600)
Projected benefit obligation	$(2,500)
Plan assets at fair value	2,000
Unrecognized net transition obligation (asset)	435
Unrecognized prior service cost	580
Unrecognized net loss (gain) subsequent to transition	(382)
(Accrued) prepaid pension cost	$133

A.5 The unrecognized net transition obligation of $435 at July 1 is developed from the $450 at January 1, reduced by the $15 amortization amount component of the NPPC for the period ending June 30, 1988. Similarly, the unrecognized prior service cost at July 1 of $580 is the January 1 amount of $600 less the amortization amount of $20.

A.6 Actual experience during the six-month period resulted in a net gain of $232. The expected PBO at July 1 is the PBO at January 1 increased by the service cost and the interest cost for the 6-month period. The expected market value is the January 1 market value increased by the expected return on assets and the net cash flow.

[a] January 1 PBO	$2,000
[b] Service cost	100
[c] Interest cost	88
[d] Expected July 1 PBO	2,188
[e] Actual July 1 PBO	2,500
[f] Experience gain/(loss) = [d] ~ [e]	$(312)
[g] January 1 market value	1,400
[h] Expected return	56
[i] Cash flow	0
[j] Expected July 1 market value	$1,456
[k] Actual July 1 market value	2,000
[l] Experience gain/(loss) = [k] - [j]	$544
[m] Total gain/(loss) = [f] + [l]	232

The unrecognized net gain at July 1 is as follows:

[a] Unrecognized gain at January 1	$150
[b] Amortization	0
[c] Gain during the six-month period	232
[d] Unrecognized gain at July 1	$382

A.7 The prepaid pension cost at July 1 before the curtailment shown in A.4 can also be derived as follows:

Prepaid as of January	$300
Pension (cost) income for the six-month period	(167)
Contribution	0
Prepaid as of July 1	$133

A.8 From the updated valuation, certain values for the terminated employees are determined. The reduction in PBO is $440, consisting of $360 held for expected future compensation levels and $80 for nonvested benefits.

A.9 The prior service cost recognized in earnings as a result of the curtailment is based upon the reduction in future service years (curtailment ratio). The remaining expected future years of service associated with those employees present when prior service costs were increased (typically at plan amendments) was reduced by 30% due to the termination of employees at curtailment. Therefore, the unrecognized prior service cost associated with the previously expected years of service of the terminated employees that will not be rendered is $174 (30% of $580).

In a curtailment, the unrecognized net transition obligation is treated in a manner similar to the prior service cost. The remaining expected future years of service associated with those employees present at the date of transition was reduced by 35% due to the termination of employees at curtailment. Therefore, the unrecognized net obligation remaining at the date of the curtailment recognized is $152 (35% of $435).

A.10 The curtailment also requires recognition of the deferred gains or losses. The gain from the decrease in the projected benefit obligation resulting from the curtailment is first reduced by the combined unrecognized net loss, if any. (For this purpose, an unrecognized transition asset is treated as a gain.) Because the unrecognized amount in this case is a gain, the $440 gain from the curtailment is fully recognized.

A.11 As a result of the commitment to dispose of a segment, Company E estimated that an overall *loss* from the disposal would be incurred (including effects on the plan). Accordingly, the effects of the curtailment are recognized as of July 1, 1988, whether the curtailment results in a gain or loss for the plan. In this case, Company E recognized a curtailment gain of $114, determined as follows:

	July 1, 1988		
	Before Curtailment (in dollars)	**Effect of Curtailment (in dollars)**	**After Curtailment (in dollars)**
Vested benefit obligation	(1,500)	0	(1,500)
Nonvested benefit obligation	(400)	80	(320)
Accumulated benefit obligation	(1,900)	80	(1,820)
Effects of projected future compensation levels	(600)	360	(240)
Projected benefit obligation	(2,500)	440	(2,060)
Plan assets at fair value	2,000	0	2,000
Unrecognized net transition obligation or (asset)	435	(152)	283
Unrecognized prior service cost	580	(174)	406
Unrecognized net (gain) subsequent to transition	(382)	0	(382)
(Accrued) prepaid pension cost	133	114	247

If there had been an overall gain from the disposal (including effects on the plan), recognition of the gain of $114 would be deferred until the actual date of disposal.

A.12 The remaining unrecognized transition obligation of $283 after the curtailment is amortized over the remaining 14.5-year period, resulting in an annual amortization of $20. Similar treatment of the remaining unrecognized prior service cost results in an amortization payment of $28. An amount of $206 of the net unrecognized gain of $382 is excluded for amortization due to the 10% corridor. The $176 gain subject to amortization produces an amortization amount of $12.

The NPPC determined as of July 1 for the period July 1, 1988, to December 31, 1988, is $80 (discount rate is 7%):

		Annual NPPC (in dollars)	NPPC, 7/1/88–12/31/88* (in dollars)
Service cost		130	65
Interest cost:			
• on service cost	9		
• on PBO	144	153	77
Expected return on assets		(160)	(80)
Amortization:			
• transition obligation	20		
• prior service cost	28		
• (gain) loss	(12)	36	18
Net Periodic Pension Cost		159	80

* 6/12 of the annual NPPC. Note: Actuarially, some items could be calculated differently. However, the method used here is that expected to be followed by most plan sponsors who book plans ratably throughout the year.

A.13 The NPPC for the year is the sum of the NPPC for the two periods:

	NPPC for 1988 (in dollars)		
	1/1–6/30 [1]	7/1–12/31 [2]	Cost for the Year [3] = [1] + [2]
Service cost	100	65	165
Interest cost	88	77	165
Expected return on assets	(56)	(80)	(136)
Amortization:			
• transition obligation	15	10	25
• prior service cost	20	14	34
• (gain) loss	0	(6)	(6)
Net Periodic Pension Cost	167	80	247

A.14 The prepaid pension cost at the end of the year is $167:

(Accrued) prepaid as of July 1 (after curtailment)	$247
Pension (cost) income for July 1 to December 31	(80)
Contribution	0
Accrued) prepaid as of December 31	$167

Example B for Settlement

B.1 Company A sponsors a final pay noncontributory defined benefit plan. On January 1, 1988, the plan's financial status is as follows:

Vested benefit obligation	$(1,300)
Nonvested benefit obligation	(200)
Accumulated benefit obligation	$(1,500)
Effects of projected future compensation levels	(500)
Projected benefit obligation	$(2,000)
Plan assets at fair value	2,100
Unrecognized net transition obligation (asset)	(210)
Unrecognized prior service cost	600
Unrecognized net loss (gain) subsequent to transition	(300)
(Accrued) prepaid pension cost	$190

B.2 The discount rate used at January 1, 1988, is 8%, and the long-term rate on assets is 9%. No contribution or benefit payments are assumed; all amortization amounts are based upon a remaining 15-year period. The 1988 net periodic pension cost (NPPC) is $99, determined as follows (in dollars):

Service cost		100
Interest cost:		
• on service cost	8	
• on PBO	160	168
Expected return on assets (market-related value is the market value)		189
Amortization:		
• transition asset	14	
• prior service cost	40	
• (gain) loss (a 10% corridor is used)	6	20
Net Periodic Pension Cost		99

B.3 On October 1, 1988, Company A settled the vested benefit obligation through the purchase of nonparticipating annuity contracts at $1,600. A remeasurement of the pension cost and the plan's obligations is necessary as a result of the settlement.

The NPPC for the period from January 1 to September 30, 1988, is $74 (9/12 of the amounts previously determined for the full year).

	NPPC for 1988 (in dollars)	**NPPC for 1/1/88–9/30/88* (in dollars)**
Service cost	100	75
Interest cost	168	126
Expected return on assets	189	142
Amortization:		
• transition asset	14	11
• prior service cost	40	30
• (gain) loss	6	4
Net Periodic Pension Cost	99	74

* 9/12 of the NPPC for 1988. Note: Actuarially, some items could be calculated differently. However, the method used here is that expected to be followed by most plan sponsors who book plan costs ratably throughout the year.

B.4 The appropriate discount rate as of October 1 has decreased to 7% from 8% as of January 1. An updated valuation as of October 1 reveals the plan's financial status before the settlement as follows:

	October 1
Vested benefit obligation	$(1,600)
Nonvested benefit obligation	(300)
Accumulated benefit obligation	$(1,900)
Effects of projected future compensation levels	(600)
Projected benefit obligation	$(2,500)
Plan assets at fair value	3,000
Unrecognized net transition obligation (asset)	199
Unrecognized prior service cost	570
Unrecognized net loss (gain) subsequent to transition	(755)
(Accrued) prepaid pension cost	$116

B.5 The unrecognized net transition asset of $199 at October 1 is developed from the $210 at January 1, reduced by the $11 amortization amount component of the NPPC for the period ending September 30, 1988. Similarly, the unrecognized prior service cost at October 1 of $570 is the January 1 amount of $600 less the amortization amount of $30.

B.6 Actual experience during the nine-month period resulted in a net gain of $459. The expected PBO at October 1 is the PBO at January 1 increased by the service cost and the interest cost for the period. The expected market value is the January 1 market value increased by the expected return on assets and the net cash flow.

[a] January 1 PBO	$2,000
[b] Service cost	75
[c] Interest cost	126
[d] Expected October 1 PBO	2,201
[e] Actual October 1 PBO	2,500
[f] Experience gain/(loss) = [d] ~ [e]	$(299)
[g] January 1 market value	2,100
[h] Expected return	142
[i] Cash flow	0
[j] Expected October 1 market value	$2,242
[k] Actual October 1 market value	3,000
[l] Experience gain/(loss) = [k] - [j]	$758
[m] Total gain/(loss) = [f] + [l]	459

The unrecognized net gain at October 1, therefore, is $755:

[a] Unrecognized gain at January 1	$300
[b] Amortization	(4)
[c] Gain during the nine-month period	459
[d] Unrecognized gain at October 1	$755

B.7 The prepaid pension cost at October 1 before the settlement shown in B.4 can also be derived as follows:

Prepaid as of January 1	$190
Pension (cost) income for the 9-month period	(74)
Contribution	0
Prepaid as of October 1	$116

B.8 The maximum gain subject to recognition is the sum of the unrecognized net transition asset of $199 and the unrecognized net gain of $755. The amount of the gain recognized as a result of the settlement is based upon the proportion settled ($1,600 over $2,500, or 64%). The net asset and net gain recognized are $127 (64% of $199) and $483 (64% of $755), respectively. Unrecognized prior service cost is unaffected by the settlement.

B.9 As a result of the annuity purchase, Company A recognized a settlement gain of $610, determined as follows:

	October 1, 1988		
	Before Settlement (in dollars)	**Effect of Settlement (in dollars)**	**After Settlement (in dollars)**
Vested benefit obligation	-1600	1600	0
Nonvested benefit obligation	-300	0	-300
Accumulated benefit obligation	-1900	1600	-300
Effects of projected future compensation levels	-600	0	-600
Projected benefit obligation	-2500	1600	-900
Plan assets at fair value	3000	-1600	1400
Unrecognized net transition (asset)	-199	127	-72
Unrecognized prior service cost	570	0	570
Unrecognized net (gain) subsequent to transition	-755	483	-272
(Accrued) prepaid pension cost	116	610	726

B.10 The remaining unrecognized transition asset of $72 after the settlement is amortized over the remaining 14.25-year period, resulting in an annual amortization of $5. An amount of $140 of the net unrecognized gain of $272 is excluded for amortization due to the 10% corridor. The $132 gain subject to amortization produces an amortization amount of $9.

The NPPC determined on October 1, for the period October 1, 1988, to December 31, 1988, is $24 based on a 7% discount rate:

		Annual NPPC (in dollars)	NPPC for 10/1/88–12/31/88* (in dollars)
Service cost		125	31
Interest cost:			
• on service cost	9		
• on PBO	63	72	18
Expected return on assets		-126	-32
Amortization			
• transition (asset)	-5		
• prior service cost	40		
• (gain)/loss	-9	26	7
Net Periodic Pension Cost		97	24

* 3/12 of the annual NPPC. Note: Actuarially, some items could be calculated differently. However, the method used here is that expected to be followed by most plan sponsors who book plan costs ratably throughout the year.

B.11 The NPPC for the year is the sum of the NPPC for the two periods:

	NPPC for 1988 (in dollars)		
	1/1–9/30 [1]	10/1–12/31 [2]	Cost for the Year [3] = [1] + [2]
Service cost	75	31	106
Interest cost	126	18	144
Expected return on assets	-142	-32	-174
Amortization:			
• transition (asset)	-11	-1	-12
• prior service cost	30	10	40
• (gain) loss	-4	-2	-6
Net Periodic Pension Cost	74	24	98

B.12 The prepaid pension cost at the end of the year is $702:

Prepaid (accrued) as of October 1, 1988 (after settlement)	$726
Pension (cost) income for October 1 to December 31, 1988	(24)
Contribution	0
Prepaid (accrued) as of December 31, 1988	$702