

STANDARDS OF PRACTICE FOR THE VALUATION OF RETIREMENT PLANS (Adopted November 18, 2005)

These Guidelines replaced the following documents:

- (i) Recommendations for Valuation of Retirement Plans (November, 1991)
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I. GENERAL

1. **Scope.** These Standards of Actuarial Practice (henceforth referred to as “Standards”) set forth guidelines for members who perform actuarial valuations of defined benefit retirement plans covering persons in the Philippines. These Standards apply to:
 - a. Funding of defined benefit retirement plans;
 - b. Assignment of costs to time periods for defined benefit retirement plans;
 - c. Magnitude of defined benefit retirement plan obligations, even for plans which are not funded or expensed on an actuarial basis; and,
 - d. Comparison of actuarial present values among alternative benefit obligations.
2. **Acknowledgement.** These Standards have been based largely on the Actuarial Standard of Practice # 4 (Measuring Pension Obligations) issued by the Actuarial Standards Board of the American Academy of Actuaries.
3. **Purpose of the Valuation.** Actuarial valuations of retirement plans are performed for a number of purposes. The valuation report must state the purpose for the valuation.
4. **Approximations.** Approximations may be resorted to in cases where it may be advisable to do so as determined by the actuary. However, the use of approximations should not, in the actuary’s judgment, materially affect the results of the valuation.
5. **Materiality.** Materiality should be determined in relation to each normal user of the valuation report. A difference is material if knowledge or ignorance of such difference would influence the judgment of the user regarding the actuarial status of the retirement plan, with due regard given to the purpose or the intended use of the calculations.
6. **Documentation.** The actuary should at all times be prepared to support the procedures he followed in the valuation process by means of adequate written records.
7. **Disclosure.** There must be adequate disclosure in a valuation report. Adequate disclosure means that all material and relevant facts concerning the actuarial valuation should be communicated to the users of the valuation report.
8. **Definitions.** Terms used in these Standards have the definitions assigned to them in Appendix I.

II. VALUATION PROCEDURES

1. Procedures to be followed. In order to prepare actuarial valuations of retirement plans, the following procedures should be performed:
 - a. Select a calculation date;
 - b. Determine plan provisions applicable to the calculation;
 - c. Gather data necessary for the calculation including participant information and asset information;
 - d. Select actuarial assumptions pertinent to the determination of the actuarial present value of benefits applicable to the calculation; and,
 - e. Select a procedure to allocate costs to past and future periods. This procedure may include:
 - e.1. an actuarial cost method
 - e.2. an actuarial asset valuation method
 - e.3. an amortization period
2. Calculation Date. Cost calculations should be made as of a specific date, with an adjustment for interest if contributions or cost accruals are to be made at a different date.
 - a. Information as of a Different Date. Asset and participant information at the calculation date may be estimated on the basis of information furnished as of another date.
 - b. Events after the Calculation Date. The treatment of events that are subsequent to the calculation date and prior to the date of the actuarial communication should be appropriate to the purpose for which the valuation is being performed. Unless the purpose of the calculation requires the inclusion of such events, they need not be reflected until subsequent years. However, the actuary generally should disclose such events if the conclusions which would otherwise be reached would be significantly affected by such events.
3. Plan Provisions. All provisions of the plan adopted and effective on or before the start of the plan year should generally be taken into account in measuring benefit obligations, as should administrative practices with respect to matters not directly addressed in the plan. The treatment of prospective plan changes should be appropriate to the purpose for which the calculation is being performed. In general:
 - a. Provisions adopted on or before the calculation date and effective during the plan year should be reflected on at least a pro-rata basis.
 - b. Provisions adopted on or before the calculation date which are not effective until future years may, but need not, be reflected in current year funding or cost allocations.
 - c. Provisions adopted after the calculation date need not be reflected until the following year.
 - d. For purposes of projecting future years' funding or cost allocations, likely future changes in provisions, may, but need not, be reflected.
4. Asset and Other Required Data. The actuary should consider the following issues with respect to the quality of information used for calculations:
 - a. Types of Data. The actuary should obtain at least the following data / information to be able to perform the basic actuarial calculations:
 - a.1. Plan participant data
 - a.2. Retirement fund information
 - a.3. Retirement plan provisions and pertinent CBA provisions, company policies and Practices

a.4. Copy of the last valuation report, if available

Generally, all participants should be reflected in the actuary's calculations. Under appropriate circumstances, persons below a minimum age / service level may be excluded. Persons who are expected to become participants in the future, whether or not they are yet employed, may be reflected. Appropriate samples may be a satisfactory basis for the calculations.

- b. Hypothetical Data. It may be appropriate to prepare models or illustrations based on hypothetical data.
 - c. Sources of Data and Check Procedures. The actuary will generally rely on the plan administrator, custodian of the assets of the retirement fund or some other officer of the plan sponsor for the necessary data who, in turn, may refer him to qualified third parties. The actuary should establish suitable check procedures to test the validity and verify the reasonableness of the data. If the actuary is not satisfied with the validity and reasonableness of the information, further inquiry should be made until he is so satisfied.
 - d. Accruals and Prepayments. Accrued contributions or prepayments should be reflected in assets on a basis consistent with the purpose and the reporting period for which costs are being determined, and costs should reflect interest equivalents on those accruals or prepayments.
 - e. Insufficient Data. The actuary should not perform an actuarial calculation if, in his judgment, the information available is substantially less than complete and cannot reasonably be approximated, i.e., there is sufficient uncertainty about the characteristics of the unknown information that would render the results of the calculations inadequate for the intended purpose.
 - f. Disclosure. The actuarial valuation report should mention the date as of which the data was compiled, the sources of the data, and any assumptions made with respect to unavailable information. A summary of statistics regarding plan participants should also be included in the report.
5. Actuarial Assumptions. The actuary must consider the following issues in the use of assumptions in his valuations:
- a. Appropriateness. The actuarial assumptions should reflect the actuary's judgment of future events affecting the retirement program while complying with statutory and other parameters relevant to the purpose of the valuation. The actuarial assumptions should recognize the actual experience of the covered group as well as reflect expected long term trends without giving undue emphasis to recent past experience.
 - b. Interrelationships. Actuarial assumptions should be independently reasonable. The actuary should be satisfied that the assumptions used are consistent and reasonable in the aggregate.
 - c. Selection of Assumptions and Factors. The actuary should make an assumption about every contingency which materially affects the valuation results. A conscious decision should be made to ignore a given contingency where it is appropriate to do so. Some contingencies which the actuary should consider in making assumptions are:

- c.1. investment return
 - c.2. inflation
 - c.3. salary increases
 - c.4. government-provided benefits
 - c.5. post-retirement benefit adjustments
 - c.6. incidence of retirement
 - c.7. mortality
 - c.8. disability
 - c.9. voluntary termination
 - c.10. involuntary termination
 - c.11. administrative expenses
 - c.12. modes of benefit payment
- d. **Effect of Changes on Assumptions.** The actuary should consider that changes in plan design or external circumstances may significantly alter the level and trend of expected future experience. For example, a liberalization of early retirement benefits or external early retirement incentives may make advisable a revision in the assumed incidence of retirement.
 - e. **Plan-specific Assumptions.** In choosing actuarial assumptions, the actuary should consider not only information on general trends but specific information related to the plan. As a result of this information, the actuary may develop actuarial assumptions which differ from plan to plan or from group to group within a plan.
 - f. **Past Experience.** Past experience of the covered group is reflected in current costs through actuarial gains and losses. It may also be useful in forming a judgment about future experience. The long-range, prospective nature of benefit costs, however, dictates that the assumptions be based on expected long-term future trends.
 - g. **Disclosure.** The actuarial assumptions used should be described in the valuation report. Assumptions which in the actuary's judgment could materially affect the valuation but were not made should be disclosed. Assumptions made that do not satisfy this standard should likewise be disclosed. Finally, the report should also disclose the changes in the assumptions since the previous valuation and should indicate the effect of the changes.
6. **Actuarial Cost Methods.** The actuary should consider the following items in selecting and applying actuarial cost methods:
- a. **Allocation Process.** The allocation process inherent in an actuarial cost method employs two parameters – pro-ration basis and period. The pro-ration basis is most commonly compensation, service, or a rate (imputed or plan-derived) of benefit accrual. The period is the time interval over which cost is allocated. Allocations may be done on an individual or aggregate basis.
 - b. **Allocation Methods.** Once the pro-ration basis and period parameters have been selected, an actuarial cost method defines the manner in which the actuarial present value of benefits is allocated over the period. Two fundamentally different ways in which this allocation has historically been made give rise to what can be characterized as the class of benefit allocation actuarial cost methods and the class of cost allocation actuarial cost methods. The primary difference between the two classes is whether the actuarial present value factors are applied before or after the allocation. The benefit allocation actuarial cost methods (primarily the family of unit credit actuarial cost methods) and cost allocation actuarial cost methods are acceptable classes of actuarial cost methods. There is no inherent reason to consider as automatically unacceptable any actuarial cost method that might not be characterizable under either of the two classes.

- c. **Acceptable Methods.** An acceptable actuarial cost method should meet the following criteria:
 - c.1. The period over which the allocation is made for an individual should begin no earlier than the date of employment and not substantially later than the date of entry into the plan (e.g. completion of one year of service and attainment of age 21) and should not extend beyond the last assumed retirement age. Normally, the period of allocation should not end before the end of the period during which the participant is accruing a benefit under the plan. The period could be on an individual or group basis.
 - c.2. The pro-ratio basis by which the allocation is made should usually have a logical relationship to some element of the plan's benefit formula. Acceptable bases include compensation, service, (rate of) benefit accrual, or any reasonable proxy for one or a combination of these. The pro-ratio basis could be applied on either an individual or group basis (e.g. the actuarial present value of plan benefits for each individual allocated by that individual's own compensation or the actuarial present value of plan benefits for the whole active life population allocated by the aggregated compensation).
 - d. **Relationship between Method and Policy.** Even where a plan sponsor's cost allocation or funding policy for a particular plan is based on an acceptable actuarial cost method, that method will, in most instances, influence the cost allocation or funding decision, but will not determine it. For example, an actuarial cost method's actuarial accrued liability at plan inception may define an unfunded actuarial accrued liability, but it will not define the amortization policy under which that amount is allocated or funded.
 - e. **Benefit Security.** In many cases, benefit security depends to a significant degree on the accumulation of sufficient plan assets. In these cases, concern about benefit security is an integral part of an actuarial cost method's acceptability as a basis for funding. Methods such as pay-as-you-go and terminal funding may not produce adequate benefit security.
 - f. **Purpose of the Valuation.** The purpose of valuation should be considered in the choice of the actuarial cost method.
 - g. **Disclosure.** The actuary should include in the valuation report:
 - g.1. a clear and concise description of the actuarial cost method;
 - g.2. changes in the actuarial cost method since the last valuation; and
 - g.3. the effect of the changes.
7. **Valuation of Assets.** Asset valuation is an integral part of the actuarial valuations of funded plans. In such cases, the valuation of assets and the valuation of liabilities are interdependent and one cannot be considered in isolation from the other.
- a. **Selection of Methods.** Since fund assets will be used to support eventual cash flows, their value should reflect realizable amounts in the future. In general, the actuarial value of assets used in the valuation should bear a reasonable relationship to market value. In valuing the fund's assets, the following methods may be used, to the extent consistent with the purposes for which the valuation is being made:
 - a.1. Market value;
 - a.2. A method which recognizes the long-term value of the assets in the context of the economic assumptions selected. This method may require smoothing out the effects of short term volatility in market value;
 - a.3. Amortized value for bonds and other debt instruments; and,

- a.4. A method which may involve the direct discounting of the expected investment income from all or some of the assets. The discount rate used should be consistent with the investment return assumption used in determining actuarial present values.
 - b. Market Value Not Determinable. Not all types of assets have a readily determinable current market value. Examples include certain insurance contracts and real estate. If market values are not available with respect to significant portions of the assets, the actuary should disclose this fact and the asset valuation method used for such assets.
 - c. Disclosure. The asset valuation method(s) used should be clearly stated in the valuation report. A comparison of the book and market values of assets, if available, should also be shown. Any changes made in the asset valuation method(s) since the last valuation and the effect of such changes should also be disclosed. Finally, any reliance on third parties as to the asset values must be disclosed.
8. Amortization – Factors Considered. Amortization may be required for such things as initial or unfunded actuarial liabilities, actuarial gains and losses and changes in actuarial liabilities due to plan amendments or changes in actuarial assumptions. The pattern of amortization during each selected period should be rational and systematic, such as a level annual peso amount or a level percentage of participants' payroll. The choice of an amortization period or range of periods should reflect:
 - a. Any known limitations in the continuing ability of the plan sponsor to fund the plan. For example, consideration should be given to the probable future careers of the firm's principals for the plan of a small professional corporation, or the probable future lifetime of the plan sponsor;
 - b. The period over which the sponsor is benefited by the plan provision giving rise to the actuarial present value being amortized;
 - c. The existing relationship between assets and actuarial liabilities;
 - d. Progress toward meeting cash flow needs or a desired funding goal; and,
 - e. Permissible smoothing of costs or contributions.

III. ACTUARIAL CALCULATIONS

1. Actuarial Present Value of Benefits Accrued to Date. The actuary may calculate actuarial present values of accrued benefits, where such calculations are supplemental to, and independent of, calculations made under the actuarial cost method used for determining pension cost or benefit recommendations. Frequently, the results of such calculations are compared to available assets as one measure of the funded status of the plan. Such supplemental calculations of actuarial present values would normally fall into three broad categories as set forth in the rest of this subsection. The procedures used to determine the actuarial present value of accrued benefits should reflect the actuary's best judgment as to the most meaningful figure for such actuarial present value in the light of the purposes for which the calculation is to be used. In presenting the results, the actuary's report should clearly indicate the treatment afforded to matters such as the following:
 - a. The manner in which benefits are calculated in the case of a plan which limits the number of years that may be credited or which has a non-uniform benefit accrual formula;
 - b. Whether a projection of future earnings was applied in calculating benefits accrued to the calculations date;
 - c. Whether recognition was given to any benefits which, if an employee continued in employment, could become payable before normal retirement age with an actuarial

- present value greater than the actuarial present value of the accrued normal retirement benefit;
- d. Whether benefit increases scheduled to occur after retirement were recognized;
 - e. Whether SSS or Pag-IBIG benefits, under an integrated offset plan, were reflected in full or pro-rated; and,
 - f. Whether average SSS or Pag-IBIG covered earnings, if applicable under an integrated step-rate plan, were related to past service only or were projected to normal retirement.
2. Actuarial Present Value of Benefits Payable upon Plan Termination. Where calculations are required to determine the actuarial present value of benefits payable in the event of a plan termination, the actuary may be required to calculate the actuarial present value of benefits payable for each relevant class of participants in accordance with termination priorities specified in the plan. The actuary should first determine the plan benefits for each covered participant as if the plan were terminating as of the calculation date. The actuary should then calculate the actuarial present value of such benefits by applying actuarial assumptions appropriate to a plan in the process of termination, such assumptions generally being limited to mortality, investment return, retirement age, election of optional forms and expense charges. For a retirement plan, however, that provides for the immediate payment of lump sum benefits upon plan termination, the actuarial present value of benefits payable upon plan termination would simply be the amount that would be payable if the plan were terminated on the calculation date.
3. Actuarial Present Value of Vested Benefits. Where calculations are required in the case of an active plan to determine the actuarial present value of vested benefits, the actuary should calculate the accrued benefit as of the calculation date. This benefit should then be multiplied by the vesting percentage defined under the plan. The actuary should then calculate the actuarial present value of such benefits by applying factors based on actuarial assumptions applicable to an active plan situation. The assumed investment return should be consistent with the plan's actuarial asset valuation method. The calculations should be made in accordance with the following procedures, to the extent they are applicable:
- a. No recognition should be given to any benefit to which a covered employee could, only through advancement in service or age while in active employment, become entitled.
 - b. Cost-of-living or other benefit increases specified by the plan and assumed to occur after retirement, death, or other termination should be recognized.
 - c. There should be no projection of SSS or Pag-IBIG benefits or SSS or Pag-IBIG covered earnings, other than as specified by the plan for the purpose of determining the benefit of a covered employee who retires or terminates service on the calculation date.
4. Actuarial Present Value of Accrued Benefits under an Active Plan. Under many retirement plans, benefits accrued to the calculation date are directly computed on the basis of historical employee records. In such cases the actuary generally should calculate the actuarial present value of accrued benefits on the basis of such directly computed accrued benefits. A substantial number of retirement plans contain features such that an actuary may wish to employ an alternative calculation. Examples of such plans are:
- a. Plans with maximum credited service provisions or other non-uniform benefit accrual formulas;
 - b. Plans with SSS or Pag-IBIG offset provisions where credited service used to compute such offsets is limited to a shorter period of credited service than that used to compute the gross pension benefit;

- c. Plans providing early retirement benefits with an actuarial present value greater than the actuarial present value of the accrued benefit to which the participant would be entitled commencing at normal retirement date;
 - d. Plans with automatic cost-of-living increases; and,
 - e. Contributory plans under which the plan's accrued benefit may have an actuarial present value less than that of accumulated employee contributions.
5. **Approximations.** The actuary may use appropriate approximations consistent with the intent of these Standards. Approximations, including the use of samples, are only acceptable if the results can reasonably be expected not to differ significantly from the results of detailed calculations, given the intended use of the calculations.
6. **Margins.** Margins may be imputed in the actuarial valuation of retirement plans for the following reasons:
- a. Insufficiency / unavailability of data;
 - b. Unreliability of data;
 - c. Use of approximations;
 - d. Anticipated fluctuations in assets and liabilities;
 - e. Uncertainty in the assumptions; and,
 - f. Anticipated benefit improvements.

It must, however, be understood by the actuary that margins are meant to be temporary and that maximum effort should be exerted to obviate the need for margins in future valuations. The actuary should identify in the valuation report the margins imputed in the calculations, their purpose and any changes made since the last valuation.

7. **Adjustment of Prior Calculation.** In deciding whether an approximation based on a prior calculation may be used in lieu of a detailed calculation, the actuary should consider such items as:
- a. Changes in number of participants;
 - b. Changes in covered payroll;
 - c. Changes in the average age and service of participants;
 - d. Amendments to plan provisions;
 - e. Changes in external factors; and,
 - f. Length of period since a detailed actuarial valuation was performed.

In approximating results based on prior actuarial calculations, the actuary should project assets and actuarial liabilities in a consistent manner.

8. **Ancillary Benefits.** In deciding whether an approximation may be used in lieu of a detailed calculation for ancillary benefits, the actuary should consider such items as:
- a. The magnitude of the benefit and its associated actuarial liabilities; and,
 - b. The pattern of cost allocation in the approximation.

IV. ACTUARY'S RESPONSIBILITY

A fundamental consideration in a funding program is the extent to which assets can reasonably be expected to ultimately exceed or fall short of the value of accrued benefits. This standard indicates that the actuary does not have complete responsibility for each element of the pension funding and cost allocation decisions, but shares responsibility for certain elements with the plan sponsor, attorney, accountant, and statutory authorities. Nevertheless, the actuary remains responsible for assessing the implications of the overall results, in terms of short- and long-range benefit security and expected cost progression. The extent to which benefits of a plan should be funded in advance of the date when they must be paid is a decision to be made by the plan sponsor, with the assistance of the actuary, in light of many factors, including regulatory requirements, collective bargaining considerations and alternative uses of money.

V. REPORTING REQUIREMENTS

1. General Requirements. The actuary should prepare an actuarial valuation report containing sufficient information so that it will be clearly understood and properly interpreted by its intended user. The report should be so written as to permit another actuary to form an objective appraisal of the valuation. It must contain all actuarially computed items necessary for the purposes for which the valuation is made.
2. Specific Requirements. In addition to the disclosure items set out in the preceding portions of these Standards, every actuarial valuation report should contain:
 - a. The name, signature and professional affiliation of the actuary responsible for its content;
 - b. The name of the person or firm retaining the actuary for the report;
 - c. An outline of the benefits being valued and of any benefits not considered in the actuarial calculations;
 - d. The valuation date or the effective date of the calculations;
 - e. A statement of the findings, conclusions, or recommendations necessary to satisfy the purpose of the valuation;
 - f. A statement of opinion by the actuary regarding:
 - f.1. the sufficiency and reliability of the data
 - f.2. the adequacy and appropriateness of assumptions
 - f.3. adherence to sound actuarial principles in the choice of methods for the valuation of assets and liabilities
 - g. A statement by the actuary that the report has been prepared and opinions given are in accordance with generally accepted actuarial principles. (This statement can only be given if the actuary has followed the principles set out in these Standards);
 - h. A disclosure of deviations from these Standards, if any, in the preparation of the material presented in the actuarial valuation report; and,
 - i. A disclosure of any facts which, if not disclosed, might reasonably be expected to lead to an incomplete understanding of the report.

3. **Actuarial Communications Related to Accounting Standards.** The Accounting Standards Council prescribes the accounting standards for use in accounting for the costs of providing retirement benefits for employees in the employer's financial statements. An actuarial communication for purposes of these accounting standards must be identified as such. The results of calculations prepared for other purposes (e.g. funding, plan reporting, government requirements, plan terminations, etc.) are likely to be significantly different and the actuary should disclose this fact.

Appendix I – DEFINITION OF TERMS

Accrued Benefit or Accumulated Plan Benefit

The amount of an individual's benefit (whether or not vested) as of a specified date, determined in accordance with the terms of a retirement plan and based on compensation (if applicable) and service to that date.

Actuarial Accrued Liability, Actuarial Liability, Accrued Liability, or Actuarial Reserve

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of retirement plan benefits and expenses which is not provided for by future Normal Costs.

Note: The presentation of an Actuarial Accrued Liability should be accompanied by reference to the Actuarial Cost Method used; for example, by hyphenation ("Actuarial Accrued Liability – XYZ," where "XYZ" denotes the Actuarial Cost Method) or by a footnote.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting benefit costs, such as: mortality, withdrawal, disability and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

Actuarial Cost Method or Funding Method

A procedure for determining the Actuarial Present Value of retirement plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Note: An Actuarial Cost Method is understood to be a Closed Group Actuarial Cost Method unless otherwise stated.

Actuarial Gain (Loss) or Experience Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Note 1: The effect on the Actuarial Accrued Liability and/or the Normal Cost resulting from changes in the Actuarial Assumptions, the Actuarial Cost Method or retirement plan provisions should be described as such, not as an Actuarial Gain (Loss).

Note 2: The manner in which the Actuarial Gain (Loss) affects future Normal Cost and Actuarial Accrued Liability allocations depends upon the particular Actuarial Cost Method used.

Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of these Standards, each such amount or series of amounts is:

- a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, SSS or Pag-IBIG, marital status, etc.);
- b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and,
- c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a retirement plan.

Actuarial Value of Assets or Valuation Assets

The value of cash, investments and other property belonging to a retirement plan, as used by the actuary for the purpose of an Actuarial Valuation.

Note: The statement of Actuarial Assumptions should set forth the particular procedures used to determine this value.

Actuarially Equivalent

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

Amortization Payment

That portion of the retirement plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability or the Unfunded Frozen Actuarial Accrued Liability.

Normal Cost or Normal Actuarial Cost

That portion of the Actuarial Present Value of retirement plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Note 1: The presentation of Normal Cost should be accompanied by reference to the Actuarial Cost Method used.

Note 2: Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment).

Note 3: For retirement plan benefits which are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated.

One-Year Term Cost

The Actuarial Present Value, as of a valuation date, of all benefits expected to become payable in the future as a result of an event or events expected to occur during a valuation year.

Open Group / Closed Group

Terms used to distinguish between two classes of Actuarial Cost Methods. Under an Open Group Actuarial Cost Method, Actuarial Present Values associated with expected future entrants are considered; under a Closed Group Actuarial Cost Method, Actuarial Present Values associated with future entrants are not considered.

Pay-As-You-Go

A method of financing a retirement plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Projected Benefits

Those retirement plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits. That portion of an individual's Projected Benefit allocated to service to date, determined in accordance with the terms of a retirement plan and based on future compensation as projected to retirement, is called the Credited Projected Benefit.

SSS or Pag-IBIG Benefits

Mandated benefits from the two public retirement plans: Social Security System and the Home Development Mutual Fund, respectively.

Terminal Funding

A method of funding a retirement plan under which the entire Actuarial Present Value of benefits for each individual is contributed to the plan's fund at the time of withdrawal, retirement or benefit commencement.

Unfunded Actuarial Accrued Liability, or Unfunded Actuarial Reserve

The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

Note: This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, the excess of the Actuarial Value of Assets over the Actuarial Accrued Liability, or the Funding Excess.

Unfunded Frozen Actuarial Accrued Liability or Unfunded Frozen Actuarial Liability

An Unfunded Actuarial Accrued Liability which is not adjusted ("frozen") from one Actuarial Valuation to the next to reflect Actuarial Gains (Losses) under certain Actuarial Cost Methods. Generally, this amount is adjusted by any increments or decrements in Actuarial Accrued Liability due to changes in retirement plan benefits or Actuarial Assumptions subsequent to the date it is frozen. Adjustments are made from one Actuarial Valuation to the next to reflect the addition of interest and deduction of Amortization Payments.

Appendix II – ACTUARIAL COST METHODS

Unit Credit Actuarial Cost Method

A method under which the benefits (projected or unprojected) of each individual included in an Actuarial Valuation are allocated by a consistent formula to valuation years. The Actuarial Present Value of benefits allocated to a valuation year is called the Normal Cost. The Actuarial Present Value of benefits allocated to all periods prior to a valuation year is called the Actuarial Accrued Liability.

Note 1: The description of this method should state the procedures used, including:

- a. How benefits are allocated to specific time periods;
- b. The procedures used to project benefits, if applicable; and,
- c. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, generally reduce (increase) the Unfunded Actuarial Accrued Liability.

Entry Age Actuarial Cost Method or Entry Age Normal Actuarial Cost Method

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service;
- b. Where aggregation is used in the calculation process;
- c. How entry age is established;
- d. What procedures are used when different benefit formulas apply to various periods of service; and,
- e. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Attained Age Actuarial Cost Method

A method under which the excess of the Actuarial Present Value of Projected Benefits over the Actuarial Accrued Liability in respect of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between the valuation date and assumed exit. The portion of this Actuarial Present Value which is allocated to a valuation year is called the Normal Cost. The Actuarial Accrued Liability is determined using the Unit Credit Actuarial Cost Method.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service;
- b. Where aggregation is used in the calculation process; and,

- c. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Note 3: The differences which regularly arise between the Normal Cost under this method and the Normal Cost under the Unit Credit Actuarial Cost Method will affect the determination of future Actuarial Gains (Losses).

Aggregate Actuarial Cost Method

A method under which the excess of the Actuarial Present Value of Projected Benefits of the group included in an Actuarial Valuation over the Actuarial Value of Assets is allocated on a level basis over the earnings or service of the group between the valuation date and assumed exit. This allocation is performed for the group as a whole, not as a sum of individual allocations. That portion of the Actuarial Present Value allocated to a valuation year is called the Normal Cost. The Actuarial Accrued Liability is equal to the Actuarial Value of Assets.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service;
- b. How aggregation is used in the calculation process; and,
- c. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) future Normal Costs.

Frozen Entry Age Actuarial Cost Method

A method under which the excess of the Actuarial Present Value of Projected Benefits of the group included in an Actuarial Valuation, over the sum of the Actuarial Value of Assets plus the Unfunded Frozen Actuarial Accrued Liability, is allocated on a level basis over the earnings or service of the group between the valuation date and assumed exit. This allocation is performed for the group as a whole, not as a sum of individual allocations. The Frozen Actuarial Accrued Liability is determined using the Entry Age Actuarial Cost Method. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service;
- b. How aggregation is used in the calculation process; and,
- c. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) future Normal Costs.

Frozen Attained Age Actuarial Cost Method

A method under which the excess of the Actuarial Present Value of Projected Benefits of the group included in an Actuarial Valuation, over the sum of the Actuarial Value of Assets plus the Unfunded Frozen Actuarial Accrued Liability, is allocated on a level basis over the earnings or service of the group between the valuation date and assumed exit. This allocation is performed for the group as a whole, not as a sum of individual allocations. The Unfunded Frozen Actuarial Accrued Liability is determined using the

Unit Credit Actuarial Cost Method. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service;
- b. How aggregation is used in the calculation process; and
- c. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) future Normal Costs.

Individual Level Actuarial Cost Method or Individual Level Premium Actuarial Cost Method

A method under which the Actuarial Present Value of each increment of an individual's Projected Benefits is allocated on a level basis over the future earnings or service of the individual between the age at which such increment is first recognized and the exit age(s). The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. Each individual's portion of the Actuarial Accrued Liability should be determined on a consistent basis, usually as the retrospective accumulation of the individual's prior Actuarial Accrued Liability and prior Normal Cost, using the valuation Actuarial Assumptions.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service; and
- b. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, Actuarial Gains (Losses), as they occur, result in amortization credits (debits) which offset (supplement) Normal Cost. Increases (decreases) in Projected Benefits from one valuation date to the next usually produce Normal Cost increments (decrements) rather than Actuarial Losses (Gains).

Individual Spread Gain Actuarial Cost Method or Individual Aggregate Actuarial Cost Method

A method under which the Actuarial Present Value of each increment of an individual's Projected Benefits is allocated on a level basis over the future earnings or service of the individual between the age at which such increment is first recognized and the exit age(s). The portion of this Actuarial

Present Value allocated to a valuation year is called the Normal Cost. The Actuarial Value of Assets is deemed to be assigned to individuals on a reasonable and consistent basis; for example, each individual's share may be the accumulation of his or her prior Normal Costs and any prior Actuarial Gains (Losses) allocated to the individual. Actuarial Gains (Losses) are allocated to individuals in proportion to the assigned Actuarial Value of Assets, or on any other reasonable and consistent basis. The Actuarial Accrued Liability for an individual equals the assigned portion of the Actuarial Value of Assets.

Note 1: The description of this method should state the procedures used, including:

- a. Whether the allocation is based on earnings or service; and
- b. A description of any other method used to value a portion of the retirement plan's benefits.

Note 2: Under this method, the Actuarial Gains (Losses), as they occur, reduce (increase) future Normal Costs.

Note 3: This method has the effect of applying the Aggregate Actuarial Cost Method separately for each individual

Projection Actuarial Cost Method or Forecast Actuarial Cost Method

A method under which the excess of the Actuarial Present Value of the sum of Projected Benefit Payments for a specified period plus a funding objective as of the end of the period over the Actuarial Value of Assets is allocated on a level basis over the earnings or service of the group during the specified period, including earnings or service for any future entrants assumed. The allocation is performed for the group as a whole, not as a sum of individual allocations. The portion of this Actuarial Present Value allocated to a valuation year is called the “Annual Cost Allocation.”

Note 1: The description of this method should:

- a. Explain the funding objective, and describe any anticipated benefit increases which have been taken into account;
- b. Specify the period involved, and any scheduled changes to that period for future valuations;
- c. State the procedure used to allocate the excess and whether the allocation is based on earnings or service; and,
- d. State the Actuarial Cost Method to be used to determine future allocations when the end of the specified period is reached.

Note 2: The funding objective will usually be expressed as the Actuarial Accrued Liability as projected to exist under another Actuarial Cost Method at the end of the specified period.

Note 3: Under this method, Actuarial Gains (Losses), as they occur, reduce (increase) the Annual Cost Allocation.

Note 4: Only a Projection Actuarial Cost Method with an Open Group assumption should be so labeled; if an Open Group assumption is used with any other Actuarial Cost Method, the method should be named and the Open Group assumption described.