

A. **Level Cost of Services Model** for public and other pension and OPEB plans

1. Basic model applies to a single, static and perpetual benefit structure or “tier”
 - a. Generally includes reliably durable public and multiemployer plans
 - b. Benefit structure can have different accrual rates for different ages or service levels
 - i. Key is the PV Future Benefits is stable under open group demographics
 - c. Special case: multiple tiers within a single plan
 - d. Special case: amendment to change future accruals for current active members
2. Purpose of model is to develop contribution stream (vector) sufficient to provide for closed group benefit stream (vector).
 - a. First step is construction of Normal Cost vector for each active member, determined as a level percentage of that member’s pay
 - b. Contribution is summation of Normal Costs, adjusted for variations in plan design, experience and measurement
 - c. Model is equally applicable to both level funding cost and level accounting cost, with contribution vector replaced by expense vector
(See Appendix: Excerpt from AAA PPSC Response to GASB PV)
3. This results in three elements of Level Cost Model
 - a. An **actuarial cost method**, which allocates the total present value of future benefits to each year (Normal Cost) and thereby to all past years (AAL/TPL).
 - b. An **asset smoothing method**, which reduces the effect of short term market volatility while still tracking the overall movement of the market value of plan assets. This defines the UAAL/NPL.
 - c. An **amortization policy**, which determines the length of time and the structure of the payments for the contributions required to systematically pay off the UAAL.
 - d. Note special treatment of asset volatility; see CCA PPC GASB PV response for discussion
4. Key features are the use of a “cost allocation” funding method and a long term earnings based discount rate
 - a. In contrast to “benefit allocation” cost methods like PUC and Unit Credit.
 - b. In contrast to market pricing discount rate(s)
5. Discussion has several aspects
 - a. Identify “model” practices
 - b. Identify acceptable and unacceptable variations from model practices
 - c. Asset smoothing and UAAL amortization involve tradeoff between and short term accountability and longer term volatility management
 - i. see CCA PPC GASB PV response for discussion, also see AAA PPSC in Appendix

B. Actuarial Cost Method determines Normal Cost (aka Service Cost)

1. Two constraints lead to choice of Entry Age method.
 - a. Demographically stable level cost requires seriatim level cost (member-by-member)
 - i. Precludes PUC as model practice; PUC still acceptable for funding policy (?)
 - b. Long term Normal Cost separable from accrued costs requires “immediate gain” method
 - i. Precludes Aggregate and Frozen Liability methods; both still acceptable for funding
2. Normal Cost (and AAL) developed on a seriatim basis
 - a. Project benefits for closed group of current members
 - b. Discount at assumed long term earnings rate to obtain PVFB
 - c. Allocate active PVFB to years of service
3. What about multiple tiers in a single plan?
 - a. Model practice bases Normal Cost on each member’s benefit
 - b. Alternative “Ultimate Normal Cost” bases all Normal Costs on current open tier
 - i. Cost impact depends on amortization periods
 - ii. Is this an acceptable funding method?
 - A) Arguments in favor include plan-wide Normal Cost stability, policy issues
 - B) Arguments against include reallocation of NC vs AAL unrelated to benefit, loss of separation between cost method and amortization policy.
4. What about changes in future benefit accruals for current active members?
 - a. Model practice uses “replacement life” Normal Cost based on current benefit structure for each member
 - i. Produces stable Normal Cost, minimizes changes in AAL
 - ii. Consistent with expectation of impact future benefit change on Normal Cost
 - b. Alternative, acceptable practice uses “career average” or “aggregated” Normal Cost based on full career level cost for each member’s projected benefit
 - i. Fails to fully recalibrate Normal Cost for change in PVFB
 - A) Commingles pure past and future Normal Cost rates
 - B) Also substantially reallocates PVFNC vs AAL
 - ii. Normal Cost is no longer stable within tier of benefits, varies by member
 - c. Note this is a separate issue from static benefit structure with non-level accrual rates
 - i. PVFB generally unaffected when individual member reaches service breakpoint,
5. What about “funding to decrement “ version of Entry Age method ?
(discussion placeholder)

C. Asset Smoothing Method is used to determine UAAL

1. Model practice compares total return to assumed return, defers difference over a fixed period to determine smoothed or actuarial value (AVA)
 - a. Rolling or asymptotic asset smoothing is acceptable alternative (?)
2. Model practice includes consideration of market value corridor structure
 - a. ASOP 44 provides framework for relationship between smoothing period and corridor.
 - i. AVA must be likely to return to market in a reasonable period
 - ii. AVA must be likely to stay within a reasonable range of MVA
 - iii. Exception if AVA “(i) produces values within a sufficiently narrow range around market value or (ii) recognizes differences from market value in a sufficiently short period.”
 - b. Model practice concludes that 5 years is “sufficiently short”, so no corridor required.
 - i. For expensing, both CCA PPC and AAA PPSC recommended 5 year smoothing with wide or no corridor.
3. Empirically based discussion framework for acceptable period/corridor combinations
 - a. 5 years, 50%/150% corridor
 - b. 7 years, 60%/140% corridor
 - c. 10 years, 70%/130% corridor
 - d. 15 years, 80%/120% corridor
 - e. Unlimited, 85%/115% corridor (see GASB PV!)
4. Bright line questions: how long a period (beyond 5 years) - if any - would require a corridor?
 - a. For example, is 10 year smoothing with no corridor acceptable?

D. UAAL amortization policy

1. Many interrelated components and alternatives
 - a. Source of UAAL change: plan amendments, gains/losses, assumption changes
 - b. Level percentage vs level dollar
 - c. Single UAAL or layered amortization
 - d. Fixed or rolling amortization periods
2. Model practice balances demographic matching and volatility control (except for plan amendments)
 - a. With “negative amortization” as constraint for level percentage amortization
 - b. See CCA PPC GASB PV response for discussion and possible framework
 - i. Fixed layers, level percentage of open payroll
 - ii. Expense is short end of acceptable range for funding

Source	Expensing	Funding
Active Plan Amendments	Demographic	Demographic
Inactive Plan Amendments	1 year	Demographic
Experience Gain/Loss	15	15 to 20
Assumption Changes	15	15 to 25
Early Retirement Incentives	5 or less	5 or less

Minimum expense/funding: Normal Cost less asset surplus (if any) amortized over a 30 year period.

3. Open discussion items
 - a. For gain/loss: annual layers or single layer
 - i. Annual layers provide more accountability but also more “tail” volatility
 - A) Active management of layers can address “tail” volatility
 - ii. Single layer provides less volatility but less accountability
 - A) Constrain to 15 years (to avoid negative amortization)
 - b. Should assumption change amortization be longer or shorter than gains/loss?
 - i. Assumption changes are long term remeasurements, so get longer amortization
 - ii. Gains/losses average out to zero, so get longer amortization

Appendix: Excerpt from AAA PPSC Response to GASB Preliminary Views

Attachment: CCA Public Plans Committee Response to GASB Preliminary Views
 (separate document)

Appendix: Excerpt from AAA PPSC Response to GASB PV:

2. *Accounting vs. Funding and Interperiod Equity.* The PV addresses one aspect of interperiod equity (IPE), the matching of current period inflows of resources with current period costs of services. We suggest the GASB consider the volatility of measurements when attributing pension cost over reporting periods as another aspect of IPE.

a. The matching of current period inflows and costs in a career context addresses what is often called *intergenerational equity*. There is another aspect of IPE, however, a period-to-period IPE, that will be violated by the proposals in the PV. Period-to-period IPE should provide that the cost attributed to a period does not affect that period inequitably compared to periods just before and after.

b. The PV treatments of certain changes in actuarial assumptions lead to an expense measure that could be extraordinarily volatile from period to period. For example, updating the mortality assumption for retirees would cause an extraordinary increase in pension expense for the single year of adoption for a component of cost that actually changes over a long period of time; a series of market gains could lead to greatly reduced or even negative pension expense, again for a single period, possibly to be reversed shortly thereafter. Even for an expense measure, given the long-term nature of the pension obligation, this could produce a clearly inequitable allocation of cost from one period to the next.

c. The GASB could address this interperiod inequity by explicitly incorporating volatility management into its recognition of changes in NPL. This will lead to a balancing of demographic measures (for intergenerational IPE) with longer recognition periods (for period-to-period IPE). This is discussed in detail in our response to *Issue 4a* and *4b*.

3. *Accounting vs. Funding and the level cost of services model.* Aside from these practical points, there is a strong theoretical basis for maintaining a relationship between funding and expense in that both are intended to produce a level cost of service. This concept, as discussed below, is also consistent with the long-term nature of the pension obligation as described in the PV.

a. The service cost and liability measures that the GASB has proposed for plans with an expectation of sufficient future funding (Entry Age method with long term earnings discount rate) are also consistent with the model approach most frequently applied for funding purposes among public plans, because both expense and funding are intended to maintain a consistent relationship to compensation levels. This means the level-cost method is equally appropriate for accounting cost (expense) and funding cost (contributions).

b. As a result, expense and funding start out from the same level cost of services (service cost). The GASB PV expense differs from funding in how it recognizes *variations around that level cost*, variations caused by investment return and by changes in the TPL through benefit changes, experience gains/losses, and assumption changes.

c. We recognize that there may be reasons to recognize such variations differently for expensing vs. funding. The need to balance demographically based cost attribution with volatility management (discussed in 2 above), however, applies equally to expensing and funding. This means that any differences should be limited.

d. Addressing these issues will greatly facilitate reconciling and understanding any difference between expensing and funding. It also could allow employers to consider funding at the same level as expensing.