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January 2015 (Fourth Edition)

PROTECTING PENSION AND RETIREE HEALTH CARE BENEFITS:

A GLOSSARY OF ACTUARIAL AND ACCOUNTING TERMS AND CONCEPTS FOR RETIREMENT PLANS

NEA'S NEWLY REVISED GLOSSARY

Over the last decade, accounting standards for state and local governments' retirement plans have undergone major changes, and more are proposed related to both pensions and other postemployment benefits (OPEB), including retiree health care. To help NEA leaders, staff, and member trustees more effectively defend members' retirement benefits, the National Education Association (NEA) updates this glossary each time the Governmental Accounting Standards Board (GASB) proposes or finalizes new accounting standards.

If you think these proposals sound like déjà vu, you could be excused. Indeed, the GASB finalized major changes to OPEB standards in 2004 and to pension standards just two years ago. This time around, the GASB proposes substantial changes to its 2004 OPEB standards, amendments to its 2012 pension standards, and new standards for pensions that aren't administered through a trust. Of all the recent proposals, those related to OPEB are likely to have the greatest impact on NEA members and their plans.

In some respects, the GASB has been leapfrogging from one set of pension and OPEB standards to the next. It spent years developing a new framework for pensions, which it applied in new standards in 1994. Then, after considering how to apply the new framework to OPEB, the Board issued new OPEB standards in 2004. Next, the GASB turned back to pensions, issuing significant new standards in 2012. In 2014, the Board issued proposals that would apply to OPEB the revised framework finalized for pensions two years earlier.

THE GASB'S LEAPFROG APPROACH TO REVISING PENSION AND OPEB STANDARDS

1994-2014

1994 Pensions Accounting and Financial Reporting for Employers	2004 OPEB Accounting and Financial Reporting for Employers	2012 Pensions Accounting and Financial Reporting for Employers	2014 OPEB Accounting and Financial Reporting for Employers
Implementation of the funding-based approach. Employers' reported pension costs and liabilities are based on how well funding targets are met. Overall information about unfunded liabilities are included in notes to financial statements, not the statements themselves.	Application to OPEB of the funding-based approach applied to pensions in 1994. Funding-based approach: Employers' reported OPEB costs and liabilities are based on how well funding targets are met. Overall information about unfunded liabilities are included in notes to financial statements, not the statements themselves. Inclusion of a new concept: Lower discount rate if there are no plan assets.	Elimination of the funding-based approach for pensions. Employers report estimated costs and liabilities, not amounts based on how well funding targets (the annual required contribution) are met. Employers show unfunded liabilities in financial statements (not just notes). Actuaries no longer smooth assets to determine liabilities and must use a lower discount rate in case of projected asset shortfalls.	Proposed application to OPEB of the approach applied to pensions in 2012. Employers report estimated costs and liabilities, not amounts based on how well funding targets (the annual required contribution) are met. Employers show unfunded liabilities in financial statements (not just notes). Actuaries no longer smooth assets to determine liabilities and must use a lower discount rate in case of projected asset shortfalls.

PROPOSED OPEB STANDARDS

The proposed OPEB standards, released in June 2014, are not the GASB's only recent effort to change how state and local governments account for and report their OPEB obligations. In 2004, the GASB finalized what, at the time, was a radically new framework for OPEB-related accounting and financial reporting. Central to that change was the idea that these employers should calculate and report on the overall current and future expected costs associated with their OPEB plans. Those costs were measured in terms of how well employers funded their plans, while information about employers' unfunded liabilities remained in footnotes to their financial statements. The GASB's new OPEB proposals go much further, and they would have significant consequences for public employees' retiree health plans.

- **Unfunded Liabilities.** The proposed OPEB standards call for employers to incorporate their unfunded liability—and label it net OPEB liability instead of unfunded actuarial accrued liability—in their financial statements. As a result, financial statements of employers with unfunded liabilities would show an overall less-favorable financial condition than before. Employers participating in cost-sharing multiple-employer plans would show their proportionate share of the plan's net OPEB liability. Under the current standards, they only incorporate information about the amount they are legally obligated to contribute to the plan. A state government that is legally obligated to contribute to the local school district employees' OPEB plan would also include its proportionate share of the liability.

- **Market Value of Assets.** The proposed standards call for using the market value of assets to determine net OPEB liability. As a result, when OPEB plans are pre-funded through a trust, an employer's net OPEB liability would be more volatile than if asset values were smoothed, as is done under current OPEB standards. This could lead to more fluctuation in reported OPEB-related expenses. Policy makers would have to resist the urge to make short-term OPEB-related decisions instead of the long-term planning required for effective OPEB plan management.

- **OPEB Expense.** The proposed standards would create the term "OPEB expense," which would replace the current term "annual OPEB cost." However, the two terms would be substantively different. OPEB expense would be an annual measure of the estimated cost of the benefits for the year, adjusted to reflect over- or under-estimates from prior years, while annual OPEB cost is based on a measure of how much an employer should be contributing to its plan, adjusted to the extent that, in prior years, too much or too little was contributed. Overall, the GASB's intent is to shift from the funding-based approach inherent in "annual OPEB cost" to a measure that, for accounting purposes, captures what the Board refers to as the totality of "OPEB-related events each year" that affect the cost of providing government services. As a result, "OPEB-related events," like changes in benefits and interest on net OPEB liabilities, would show up in OPEB expense immediately.

  OPEB expense would more quickly factor in changes to net OPEB liability than is usual now, so it has the potential to fluctuate materially from year to year. As a result, it would be an unreliable budgeting tool. And, given that employers tend to prepare their OPEB-related accounting reports retrospectively, OPEB expense would tend to be a primarily backward-looking reporting measure based on the previous year, indicating little about what an employer's upcoming budget should look like. Keep in mind that public employers generally prepare budgets for upcoming fiscal years long before that fiscal year for the OPEB plan is even finished.

- **No More ARC.** The GASB intentionally proposes to move away from suggesting how much employers should contribute to their OPEB plans. Indeed, the GASB notes in its OPEB proposals: "The Board concluded that it is not within the scope of its activities to set standards that establish a specific method of financing OPEB (that being a policy decision for government officials or other responsible authorities to make) or to regulate a government's compliance with the financing policy or method it adopts." As a result, the proposed standards would eliminate the annual required contribution (ARC), annual OPEB cost (AOC), and net OPEB obligation (NOO), all of which are based on how well employers meet funding targets. Although the proposed standards would delink OPEB funding from OPEB accounting and financial reporting, employers could still develop an actuarially determined contribution for their OPEB plans. Having separate funding and OPEB expense measures could cause confusion.

- **Additional disclosure.** The proposed OPEB standards include a provision related to reporting in notes to financial statements detail about variations in the estimated cost of future health benefits for retirees. Notes would include information on alternative estimates based on eight different combinations of discount rate and health care cost trend rates or a total of nine projections of future costs. In addition to the combination of rates actually used by actuaries, the notes would include variations based on +1 and -1 percent on both rates.

  For example, if an actuary used a discount rate of 6.5 percent and a health care cost trend rate of 5.3 percent for the development of the estimates used for the employer's total OPEB liability, the notes would also include projections based on the following combinations:

Combinations of Discount Rate and Health Care Cost Trend Rate Reported in Notes to Financial Statements			
	Discount Rate		
	5.5%	6.5%	7.5%
Health Care Cost Trend Rate			
4.3%	✓	✓	✓
5.3%	✓		✓
6.3%	✓	✓	✓

  The huge variation in resulting numbers would certainly make it clear that valuations are subject to substantial fluctuation depending on the assumptions used, but they would also create confusion about what the "real" numbers are, and they would create the potential for arguments that employers should be planning based on the estimates from the worst-case scenario (the highest health care cost trend and lowest discount rate).

- **The Affordable Care Act's Excise Tax on High-Cost Plans.** The proposed OPEB standards call on employers to factor the Affordable Care Act's excise tax on high-cost plans into projected benefit costs for accounting and financial reporting. The proposed OPEB standards call for employers to put their OPEB obligations on their books beginning in fiscal years starting after December 15, 2016. Given that, the excise tax on high-cost plans would show up on employers' books before 2018, when the excise tax provision of the ACA is slated to become effective. Under the current OPEB standards (Statement No. 45), actuaries already make assumptions about how the excise tax will impact the cost of delivering health care benefits, and about who will pay for this increased cost (between employers, other plan sponsors, and plan members) so this should not impact the magnitude of the net OPEB liability. However, since the net OPEB liability will now appear in the financial statement of the sponsoring entity, the assumption made by the actuary may be more highly scrutinized—even before the tax itself is set to begin.

The proposals are still in draft form, so it's not entirely certain when the proposed standards would become effective. That said, the GASB has indicated that the new standards for trust funds would become effective for the first fiscal year starting after December 15, 2015, and that the new standards for state and local governments, including nonemployer contributing entities (such as a state government that contributes to the retiree health benefits of the local employees of a school district), would become effective for the first fiscal year beginning after December 15, 2016.

PROPOSED AMENDMENTS TO THE 2012 PENSION STANDARDS

The GASB has proposed amending some of the content in its final 2012 pension standards. The proposed amendments make technical changes and clarifications. For example, the final 2012 standards call on plans and employers to report on factors that significantly affect trends in the amounts in required supplementary information—such as changes in net pension liability; the proposed amendment would make it clear that employers would only have to report on the factors that are within their control (such as a change in investment policy), not external economic factors (such as changes in market prices).

The significant changes included in the final 2012 pension standards would not be amended by the proposals—inclusion of a pension plan's net pension liability on financial statements, the separation of accounting and financial reporting from funding, and many others. Given this situation, we included the proposed amendments in glossary entries as necessary, but we have not provided more detail in this introduction.

PROPOSED STANDARDS FOR PENSIONS NOT ADMINISTERED THROUGH A TRUST

The final 2012 pension standards focused exclusively on situations in which a trust was in place to administer a pension plan. When the GASB finalized those new standards, it left in place existing pension standards related to defined benefit and defined contribution plans in contexts in which no trust was in place. The proposed pension standards would apply the significant conceptual changes made in the final 2012 pension standards to the plans that were not included then. Of NEA members with defined benefit pensions, the vast majority—if not all—participate in plans that are administered through a trust. For that reason, we reflect the proposals related to defined benefit plans in glossary entries, but we have not provided more detail in this introduction.

TYPES OF PENSION AND OPEB PLANS

Standards issued by the GASB differ depending on the type of pension or OPEB plan to which they apply. As a result, understanding GASB standards starts with at least a basic understanding of plan types. This summary discusses four important ways to differentiate plans: whether it is a defined benefit or defined contribution; the number of employers participating in the plan, and how plan assets can be used; whether the plan receives funding from a government other than the one for whose benefit the plan is established; and whether the plan is administered by a trust.

DEFINED BENEFIT AND DEFINED CONTRIBUTION PLANS

Perhaps the most commonly made distinction among NEA leaders, staff, and member trustees is between defined benefit and defined contribution plans. At heart, the practical difference has to do with the degree to which promised benefits are based on a formula or on the results of individual account-related contributions.

From an accounting and financial reporting standpoint, the distinctions are significant. One of the key differences between defined benefit and defined contribution plans has to do with determining and reporting plan-related costs and liabilities. Under final 2012 pension standards and proposed OPEB standards, the pension expense or OPEB expense for a defined contribution plan is essentially the amount that a government contributes, while the liability is a function of any expense that the government fails to contribute. For defined benefit plans, the calculations are much more complicated, because they are based on a projection decades into the future of what the benefits will cost and the amount of assets that will be on hand to pay those benefits.

- A defined benefit plan provides benefits that an employee will receive at or after separation from employment and that are defined by the terms of the plan. The benefits can be specified as a specific dollar amount, an amount based on factors like age, years of service, and compensation, or, for defined benefit OPEB plans, as a type or level of coverage.

- A defined contribution plan provides benefits that an employee will receive at or after separation from employment that are based on terms that create an individual account for each employee, define the contributions or credits that will be made to the account while employees are active, and indicates that the benefit employees will receive will be based only on contributions/credits, investment earnings, forfeitures, and administrative costs.

SINGLE-EMPLOYER AND MULTIPLE-EMPLOYER DEFINED BENEFIT PLANS

Defined benefit retirement plans fall into one of three broad categories depending on the number of employers that participate in the plan and the way the plan's costs are addressed. GASB standards for accounting and financial reporting vary depending on which category a plan is in, so clarifying the key differences between plans is important for understanding how the final 2012 pension standards and proposed OPEB standards would affect a particular employer.

The three broad types of plan are:

- Single employer plan: an employee benefit plan in which only one employer participates. Employers in such plans are referred to as sole employers. If a school district maintains its own plan, it likely falls into this category.

- Cost-sharing multiple-employer plan: a single benefit plan that pools all risks, rewards, and costs associated with providing benefits for more than one employer. Plan assets can pay for the benefits of any plan participant. Employers in such plans are called cost-sharing employers. States that create plans covering all school districts under a single plan often fall into this category. Indeed, almost all pension plans in which NEA members participate are cost-sharing multiple-employer plans. The local nature of many retiree health plans means that, compared to pensions, proportionately fewer OPEB plans for NEA members are cost-sharing plans.

- Agent multiple-employer plan: a group of single-employer plans that have joined together to pool their administrative and investment-related activities. The plan maintains separate accounts for each employer (called an agent employer) so that the account pays only for the benefits for that employer's workers (and administrative costs for the plan). If a statewide plan allocates assets and liabilities by school district, it might fall into this category.

When One Government Pays for Employees of Another Government

Another important distinction between plans relates to whether an employer or a different governmental entity pays for some or all of the employer's benefits. For NEA members, this situation (which the GASB calls a "special funding situation") can arise when a state government, for example, contributes toward the pensions or retiree health benefits of local school districts. Under final 2012 pension standards and proposed OPEB standards, a government that contributes on behalf of another employer (a "nonemployer contributing entity," in GASB terms) must show on its books its proportionate share of the employer's expense and liability. In practice, that could incent nonemployer contributing entities to attempt to shift legal responsibility for payments to local governments.

Plans Administered through Trusts

A final important distinction to make with respect to pension and OPEB plans has to do with whether a trust is in place to administer the plan. This matters for several reasons. First, if there's no trust, then there are no plan assets ("plan fiduciary net position," in GASB terms) to be factored into accounting measures. That means, for example, that total pension liability would be essentially the same as the plan's net liabilities, its expense would not factor in investment-related information.

From a practical and technical perspective, trusts also matter to defined benefit plans because the discount rate used by actuaries to discount the projected cost of benefits will be lower—meaning reported liabilities will be higher—to the extent that actuaries estimate that plan assets will not be on hand to pay for benefits in the future. If an employer sets assets aside to pay for future OPEB but does not use a trust, the current and proposed standards say that actuaries should use a lower discount rate than if the assets were in a trust. The reason is that assets in a trust must generally be used to pay for the OPEB and couldn't be diverted into covering unrelated government expenses.

Standards for State and Local Government Employers' Accounting and Financial Reporting for Pension and OPEB Plans

Special Funding Situations—Standards for accounting and financial reporting vary depending on whether an employer has a "special funding situation," which means that a governmental entity other than the employer covers the cost of at least some of the employer's benefit obligations.

Defined Benefit or Defined Contribution Plans—Regardless of whether an employer has a special funding situation, employers' plans are either defined benefit or defined contribution.

Defined Benefit (DB) Plans

In a defined benefit plan, benefits are defined by the terms of the plan and expressed in terms of a dollar amount, an amount calculated on factors such as age, years of service and compensation, or (for a health plan) a particular level of coverage.

Defined Contribution (DC) Plans

Benefits are defined in terms of a contribution to employees' accounts.

Particular standards are applied to DC plans (with variations for special funding situations).

Defined benefit plans are either insured or non-insured.

Insured DB Plans

Insurance is pre-paid while employees are active; an insurer assumes the risk of providing benefits in the future.

Particular standards are applied to insured defined benefit plans (with variations for special funding situations).

Non-Insured DB Plans

Insurance is not pre-paid while employees are active.

Non-insured defined benefit plans are distinguished by how many employers participate in the plan.

Single-Employer DB Plans

Only one employer participates in the plan.

Particular standards are applied to non-insured, single-employer, defined benefit pension plans (with variations for special funding situations and if there's a trust).

Multiple-Employer DB Plans

More than one employer participates in the plan.

Non-insured, multiple-employer, defined benefit plans are distinguished by how plan assets can be used.

Agent Multiple-Employer DB Plans

Plan assets are segregated for use only by the employer that contributed them, but administrative costs are shared.

Particular standards are applied to non-insured, agent multiple-employer, defined benefit plans (with variations for special funding situations and if there's a trust).

Cost-Sharing Multiple-Employer DB Plans

Plan assets are used to pay for the benefits and administrative costs of any participating employer.

Particular standards are applied to non-insured, cost-sharing multiple-employer, defined benefit plans (with variations for special funding situations and if there's a trust).

Standards vary depending on whether a non-insured defined benefit plan or any defined contribution plan is administered through a trust.

Using this Glossary

Throughout this document, hyperlinks, which can be identified because they are underlined, connect terms and concepts to their definitions. Even though the terms and concepts in the table of contents are not underlined, they are also hyperlinked to their definitions.

If you're reading the PDF version of the glossary and want to return to where you were before clicking a hyperlink, try hitting the Alt and the left arrow keys.

Additional Information on OPEB and Pension Standards

For general information on the proposed OPEB standards, see the NEA fact sheet "Questions and Answers on the Proposed OPEB Standards." For more on the final pension standards, see the NEA fact sheets "A Short Guide to the New GASB Standards for Employers' Pension-Related Accounting and Financial Reporting," "Questions and Answers on the New GASB Pension Standards," and "New Public Pension Accounting Standards To Cause Unnecessary Confusion and Volatility."

Acknowledgments

The National Education Association is deeply appreciative of the experts who reviewed prior versions of this glossary. Tom Lowman, chief actuary at Bolton Partners, reviewed the third edition, which was released in 2012. Tom Lowman and Keith Brainard, research director of the National Association of State Retirement Administrators (NASRA), commented on the second edition, which we published in 2011. Lou Filliger of the actuarial firm Demsey, Filliger & Associates and Randy Barber of the Center for Economic Organizing gave us feedback on the first edition, which we released in 2008. Responsibility for the glossary's content rests with the NEA Collective Bargaining and Member Advocacy Department.

To Contact the NEA Collective Bargaining and Member Advocacy Department

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ACTUARIAL TERMS AND CONCEPTS FOR PUBLIC EMPLOYEE RETIREMENT PLANS

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* Indicates a term or concept stemming from the 2014 proposed standards for OPEB or pensions.

LIST OF ACRONYMS

AAL—Actuarial accrued liability
ADC—Actuarially determined contribution
AOC—Annual OPEB cost
APC—Annual pension cost
ARC—Annual required contribution
AVA—Actuarial value of assets
COLAs—Cost-of-living adjustments
EAN—Entry age normal actuarial cost method
GAAP—Generally accepted accounting principles
GASB—Governmental Accounting Standards Board
NOL—Net OPEB liability
NOO—Net OPEB obligation
NPL—Net pension liability
NPO—Net pension obligation
OPEB—Other postemployment benefits
PUC—Projected unit credit actuarial cost method
RSI—Required supplementary information
TOL—Total OPEB liability
TPL—Total pension liability
UAAL—Unfunded actuarial accrued liability

PROTECTING PENSION AND RETIREE HEALTH CARE BENEFITS

A GLOSSARY OF KEY ACTUARIAL AND ACCOUNTING TERMS AND CONCEPTS FOR PUBLIC EMPLOYEE PLANS

Term and Definition	Observations
ACCRUAL ACCOUNTING—in the context of pension and retiree health care benefits, an accounting method that recognizes an employer's costs when they are incurred (that is, over the active working lifetime of employees), not when benefit payments are actually made for those employees. The financial statements of a school district that uses accrual accounting will show the cost of the pension and retiree health care benefits that its active employees have earned a right to in the future (accrued), not just payments actually made during the year.	The Governmental Accounting Standards Board (GASB) calls for state and local government employers to use accrual accounting for pension and retiree health care benefits. This is relatively new for retiree health benefits—being finalized in 2004—but not pensions. Here's how the concept applies in the OPEB context: Benefits "are part of an exchange of salaries and benefits for employee services rendered," the GASB noted in making the OPEB change in 2004. "From an accrual accounting perspective, the cost of OPEB, like the cost of pension benefits, generally should be associated with the periods in which the exchange occurs."
ACCRUED BENEFITS—the future benefits to which current employees earn a right by virtue of working. Even to get an accrued benefit, an employee might have to work a certain number of years to fully vest (earn a non-forfeitable right to benefits).	School districts, county governments, or other entities often promise employees that for each year they work, they will accrue certain benefits—for example, a pension benefit based on a percentage of final average salary. After working for a certain number of years, the employees vest in those benefits and eventually they reach an age when payments can begin. From an accounting perspective, each year that an active employee works, the employee earns (accrues) a portion of the total future benefit even if the employee is not yet vested.
ACTUARIAL ACCRUED LIABILITY (AAL)—the value of workers' and retirees' future retiree benefits that an actuarial valuation allocates to periods of time prior to the "as of" date of the valuation. This term is being phased out for pensions, and the GASB has proposed phasing it out for OPEB. The amount of the AAL is reported without subtracting any funding set aside to pay for the benefits. The unfunded actuarial accrued liability (UAAL) is equal to the AAL minus plan assets, if any, and represents the amount of the AAL for	Keep in mind that in addition to active and retired employees, benefit costs for workers who left the job before retiring might also be included in valuations. The AAL can vary depending on the method used by an actuary to allocate the value of the benefits to different time periods. There are six overall allocation methods that actuaries can use for this purpose, although the final 2012 pension standards require the use of just one of those methods—the entry age actuarial cost method—for reporting purposes for pensions. The AAL for retirees is the same under all methods but does depend on mortality

Term and Definition	Observations
which appropriate funding has not been set aside. The UAAL is sometimes called the legacy cost. If no money has been set aside, the AAL will be equal to the UAAL. The AAL is sometimes referred to as the "past service liability." The final 2012 pension standards use the term "total pension liability" instead of "actuarial accrued liability." The term "actuarial accrued liability" has not changed for OPEB plans, but, in an exposure draft finalized in May 2014, the GASB proposed eliminating it in favor of the term "total OPEB liability."	and interest assumptions. Proposed OPEB standards would eliminate all but the entry age normal actuarial cost method for purposes of reporting total OPEB liability, although not for purposes of funding.
ACTUARIAL ASSUMPTIONS—the set of assumptions about future occurrences that will affect the calculation of the amount and cost of the benefits the plan provides and the amount of funding available to pay for those benefits. Demographic assumptions include those related to when plan participants will die (mortality); when they will stop working (retirement, disablement, and withdrawal); the age difference between spouses; and their marriage patterns. Economic assumptions include the investment rate of return, discount rate, health care trend (for retiree health plans), future salary changes (for pension plans with formulas based on salary), and expected inflation rates.	These assumptions play a crucial role in determining funding-related measures, and even small variations in assumptions can dramatically affect the outcome of an actuary's work. Changing a retiree health care plan's discount rate from 4.5 percent to 5.5 percent, for example, could decrease reported liabilities by 15 percent, while dropping that assumption from 7.75 percent to 4 percent could double reported liabilities. For specific examples, see "investment rate of return." Similar results can be seen in the "health care cost trend" entry of this glossary.
ACTUARIAL COST METHOD—the process used by an actuary to allocate the estimated total cost of a benefit plan to past years (the actuarial accrued liability or, under the final 2012 pension standards and proposed OPEB standards, the total pension liability or total OPEB liability), the current year (the normal cost), and future years (the future normal cost). The past, the present, and the future are the three time periods of interest to actuaries. The process of allocation lets the valuation's	The ultimate amount that a plan pays out in benefits will not vary by cost method, but the unfunded accrued actuarial liability (net pension liability or net OPEB liability`) normal cost, and annual required contributions (ARC) could. As a result, the amount and timing of required employer contributions could also vary. For example, one state in 2007 calculated the sensitivity of its liability to changes in cost method, finding that using three different cost methods led to

Term and Definition	Observations
readers know how much of the future benefit costs are from work already done by the employee, how much is from the current year, and how much from expected future work. There are six major actuarial cost methods that the GASB permits to be used for pension and retiree health benefit valuations. The final 2012 pension standards require that actuaries use just one—the entry age actuarial cost method—for purposes of allocating employers' total pension costs to the three time periods of interest to actuaries. The final 2012 pension standards also require actuaries to allocate costs to periods of employee service as a level percentage of projected payroll. The GASB indicated that it made this change in order to eliminate a source of variation in financial reporting based solely on accounting standards. The proposed OPEB standards would establish a framework for OPEB-related actuarial cost methods similar to the one created by the final 2012 pension standards. For purposes of determining how much an employer should contribute to its pension fund, actuaries may use any of the six actuarial cost methods, as the final 2012 pension standards are silent with respect to how employers actually fund their plans. The same would be true under the proposed OPEB standards.	liabilities of $4.1 billion, $3.8 billion, or $3.8 billion (two were the same), and to normal costs of $193.3 million, $184.5 million, or $172.9 million. The ARC changed from $322.8 million, to $314 million, to 313.8 million. Some of the differences between cost methods have to do with whether benefit costs are estimated for each individual and then added together or estimated for the entire group as a whole (individual or aggregate, respectively); whether the method allocates future benefit costs for employees over the number of years they have yet to work or over the years between when they started work for the employer and when they are expected to stop working (attained age or entry age, respectively); whether the allocation is done by dividing the costs into equal-sized pieces or into pieces that vary in relation to the expected size of the employer's payroll (level dollar or percentage of payroll, respectively); and how the components of the benefit costs to be allocated are determined. In most cases, the actuary must also decide whether to allocate over the earnings or service of the individual or group.
ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION—under the final 2012 pension standards, the recommended or target employer-contribution amount calculated by an actuary. In an exposure draft finalized in May 2014, the GASB proposed the same term be used for OPEB plans.	The actuarially determined contribution is not well defined, and actuarial groups and others are working to try to fill the void with respect to what constitutes appropriate approaches to, and levels of, funding. If an actuarially determined contribution is calculated, required supplementary information will include a 10-year schedule providing details about

Term and Definition	Observations
The final 2012 pension standards and proposed OPEB standards make clear that the GASB is not interested in suggesting to employers how much they should be contributing to their plans. For example, the annual required contribution (ARC), a key calculation made by actuaries under pre-revision standards, disappears in the final 2012 pension standards and would also disappear in proposed OPEB standards. Similarly, the actuarially determined contribution, if calculated at all, is to show up only in required supplementary information for pensions (and would be similarly treated by proposed OPEB standards). Unlike the ARC, it plays no direct role in determining the liabilities recognized in employers' government-wide financial statements.	the amount of the contribution, the difference between the actuarially determined contribution and the amount of contributions recognized by the pension plan in relation to that contribution, and the amount recognized in relation to the actuarially determined contribution as a percentage of covered-employee payroll.
ACTUARIAL GAIN (OR LOSS)—a measure of the difference between expected experience as reported in the prior actuarial valuation and the experience as reported in the new valuation, as calculated based on a set of actuarial assumptions and methodological choices. The final 2012 pension standards change how actuarial gain (or loss) is handled on employers' financial statements, generally requiring faster recognition of the gains or losses than under the pre-revision standards. For more information, see "pension expense." The proposed OPEB standards would similarly treat gains or losses related to OPEB plans.	This is different from the real gain or loss on investments, which would be measured by comparing the absolute dollars earned through investments. For example, if a fund earned 10 percent and the expected return was 7.5 percent, the real gain is 10 percent but the actuarial gain is 2.5 percent. Actuarial gain or loss could result from investment experience, a change in assumptions or methods, salary increases different from those expected, or actual retirements, terminations, deaths, or disabilities of plan participants that are different from those assumed by the actuary.
ACTUARIAL PRESENT VALUE—the current value of a future dollar amount. To obtain the present value of future benefit payments, an actuary will first apply assumptions to determine how much the benefits will cost in the future and the probability that the payment will be made. Then,	Determining the actuarial present value is a bedrock calculation done by actuaries. It is how future costs are translated into comparable figures for current costs. From an actuarial perspective, the actuarial present

Term and Definition	Observations
that future amount or payment is "discounted" to take account of the time value of money, or the idea that a dollar today is more valuable than the same dollar if it were to be received in the future (because it could be invested today to grow to be worth more than a dollar, for example). For further information, see "discount rate" and "time value of money."	value of an amount is worth the exact same thing as the future amount that it is based on, even though in absolute terms the future amount is larger. The greater the discount rate, the larger the difference between the future amount and its present value.
ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS—the cumulative value of benefits to be paid by the plan over the decades into the future included in the actuarial analysis, but discounted to show the current value of that future amount. For further information, see "actuarial present value."	
ACTUARIAL VALUATION—the determination of normal cost, total pension liability or total OPEB liability, and the actuarial present value of projected benefits for pension benefits or OPEB. Actuarial valuations are reports made as of a particular date. The final 2012 pension standards and proposed OPEB standards are similar in their content with respect to actuarial valuations, with one significant difference: small OPEB plans are given the option of substituting an alternative method in lieu of a formal actuarial valuation for determining the normal cost and other measures that must be reported. Under the pension and proposed OPEB standards, valuations are to be performed at least every two years, although more frequent valuations are encouraged. In cases in which an actuarial valuation is not done as of the measurement date, the total pension liability or total OPEB liability would be based on update procedures to roll forward amounts from an earlier actuarial	For smaller OPEB plans—those with fewer than 100 active and inactive employees—the proposed OPEB standards allow for an alternative measurement method, including with respect to the expected point in time at which benefit payments will begin to be made, marital and dependency status, mortality, health care cost trend, and other factors generally incorporated in actuarial valuations.

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valuation performed as of a date no more than 30 months and 1 day prior to the employer's most recent year-end.	
ACTUARIAL VALUE OF ASSETS (AVA)—the notional value of a trust fund's assets, achieved by spreading investment gains and losses over a period of years. The process used is referred to as "smoothing." In this context, "notional" refers to a value that is calculated and used but, because of the smoothing, is different from the value of the assets actually held by the trust. Indeed, "actuarial value of assets" can be contrasted with the "market value of assets" (fair value of assets), which is what the assets could be sold for on the open market without the pressure of having to unload them in a hurry. (In some cases, if there is no clear market price, an estimate would be used for the market value.) The final 2012 pension standards require the use of the market value of plan assets for purposes of determining an employer's net pension liability (what former standards referred to as the unfunded actuarial accrued liability, or UAAL). The proposed OPEB standards would create a similar framework for using the actuarial value of assets for determining net OPEB liability and OPEB expense.	For more detail on the process of smoothing, see the glossary entry for that subject.
AGENT EMPLOYER—an individual employer participating in an agent multiple-employer plan (a plan that shares administrative and investment-related costs but maintains separate benefits-payment accounts for each employer).	GASB standards distinguish between agent employers and sole employers, on the one hand, and cost-sharing employers, on the other hand.
AGENT MULTIPLE-EMPLOYER PLAN—a group of single-employer plans that have joined together to pool their administrative and investment-related activities. The plan maintains separate accounts	GASB standards distinguish between agent multiple-employer plans and single employer plans, on the one hand, and cost-sharing multiple-employer plans,

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for each agent employer so that the account pays only for the benefits for that employer's workers (and administrative costs for the plan). In the context of agent multiple-employer plans, each participating employer is called an "agent employer." Each agent employer has its own actuarial valuation to determine the financial contributions necessary to fund the plan. These valuations are often done by an actuary hired by the plan to do the valuations for all agent employers in the plan.	on the other.
ALLOCATION—the assignment of a cost to a particular period of time so that, for accounting purposes, the cost is treated as having been accrued during that period. Remember that accounting standards call for employers to figure out how much benefit cost was associated with employees' work during the three different periods of time of interest to actuaries (the past, the present, and the future, as described in greater detail below). When conducting an actuarial valuation, an actuary will first estimate how much benefits will cost in the future. Once that cost is calculated, the actuary can allocate portions of that cost to the different time periods. For example, one time period will be all of the years prior to the dates covered by the actuarial valuation; the costs allocated to that period are the actuarial accrued liability (what the final 2012 pension standards refer to as "total pension liability"). The current year will be a different period; the costs allocated to the current year are called the "normal cost." The years that employees have yet to work give rise to "future normal costs." The final 2012 pension standards include another	Actuaries have multiple methods to choose from to allocate costs and amortize unfunded liabilities. In addition to affecting the technical process, methodological choices have an impact on the outcome of a valuation—on the timing and size of the allocated costs. This, in turn, can affect employers and employees by including greater or smaller costs on a given year's financial statements. The final 2012 pension standards create important changes with respect to allocation. Proposed OPEB standards would do the same in the OPEB context. First, with respect to pensions, the new standards change the way actuaries handle net pension liability (what former standards referred to as the unfunded actuarial accrued liability, or UAAL—the amount of benefit costs allocated to years prior to the valuation that employers have not put money aside to pay for). Former standards allowed actuaries to divide the UAAL into pieces and recognize it a piece at a time into the future (through a process called amortization). The new standards call for employers to recognize the unfunded liability on their financial statements right away. Another change relates to the actuarial cost method that actuaries can use for purposes of allocating pension costs. In the past, actuaries could choose

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allocation concept: Employers with cost-sharing multiple employer plans will have allocated to them their proportionate share of collective net pension liability, collective pension expense, and collective deferred outflows/inflows of pension-related resources. The proposed OPEB standards also call for employers with cost-sharing multiple-employer plans to have allocated to them their proportionate share of collective net OPEB liability, collective OPEB expense, and collective deferred outflows/inflows of OPEB-related resources.	between six possible cost methods, but the new standards require that they use the entry age actuarial cost method as a level percentage of pay, such that the actuarial present value of projected benefits is allocated individually for each employee between the time the employee began to accrue pension benefits and the time of retirement.
AMORTIZATION—the process of recognizing a liability over a period of years. For purposes of accounting and reporting, the final 2012 pension standards do away with an employer's amortization of unfunded liability (now called "net pension liability"), requiring instead that net pension liability be recognized in employers' financial statements. Despite the elimination of the amortization of the net pension liability for purposes of accounting and reporting, the final 2012 pension standards still allow employers to amortize the net pension liability for purposes of determining how much of a funding contribution to make to a plan. The amortization of unfunded liabilities for OPEB plans, including for retiree health benefits, was not affected by the final 2012 pension standards. It is still acceptable for an actuary to use an amortization period of up to 30 years. However, the proposed OPEB standards would eliminate amortization of net OPEB liability; instead, employers would recognize that liability in their financial statements. To amortize an amount, an actuary attributes a certain amount of the unfunded liability to each	The choice of amortization period can make a big difference to employers. In 2007, for example, one state calculated the sensitivity of its annual required contribution (ARC) to changes in the amortization period. It found that with an amortization period of 30 years, its ARC was $314 million, but with an amortization period of 20 years, the ARC increased to $379 million. With an amortization period of just ten years, the ARC shot up to $579 million. This change in the ARC makes sense, because the unfunded liability is being paid off in successively shorter periods of time—30 years, 20 years, and 10 years—and the ARC includes the amortized portion of the unfunded liability.

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year in the amortization period. There are different methods that an actuary can use for doing so. An amortization period may be either "closed" or "open." A closed period means that with each successive year, one more portion of the payment is made, until the entire liability is paid off in the last year of the amortization period. An open period means that the amortization period rolls one year further into the future with each passing year.	
AMORTIZATION METHOD—the process used by an actuary to determine how much of a plan's total unfunded liability will be attributed to each year covered by an actuarial valuation. As described in the observation section of this entry, the final 2012 pension standards change the way unfunded liabilities are handled. Although amortization may still take place for purposes of determining funding requirements or goals, it will not be part of the financial reporting process. The final 2012 pension standards change the way liabilities are to be handled. Rather than calculate the UAAL and factor the amortized portion of the UAAL into the annual required contribution (ARC), employers will now calculate a net pension liability (NPL), which is the total pension liability minus plan fiduciary net position (with fiduciary net position being the market value of plan assets). For detail on how the NPL is to be disclosed on employers' financial statements, see the NPL entry in this glossary. Proposed OPEB standards would institute similar allocation-related changes in the OPEB context.	There are two basic amortization methods. After determining the unfunded accrued actuarial liability (UAAL), the actuary can divide the liability into equal dollar amounts, similar to mortgage payments. The dollar amount is then attributed to each year in the amortization period. This is the "level dollar" approach. Or, after estimating the unfunded liability, the actuary can determine the amount to attribute to each year by calculating the payment as a percentage of the projected payroll of active members. This is the "level percentage of projected payroll" method. If the latter method is used, there are specific standards for how the payroll growth rate is to be calculated.
ANNUAL OPEB COST (AOC)—for an OPEB plan, such as for retiree health benefits, the amount an employer would expense to cover both	For purposes of calculating the annual OPEB cost, if a net OPEB obligation exists, the annual required contribution (ARC) would be adjusted to offset the

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the annual required contribution, or ARC (the normal cost plus the amortized portion of unfunded liabilities) and an adjustment based on interest on the net OPEB obligation (NOO), if a NOO exists. (Technically, employers need not actually pay the annual OPEB cost, but they must show it as an expense on their government-wide financial statements.) In addition to showing up on government-wide financial statements, this figure will appear in actuarial valuations. Under proposed OPEB standards, the term "annual OPEB cost" would disappear. Instead, employers would calculate and report OPEB expense, although annual OPEB cost and OPEB expense would measure very different things.	amount of interest and principal already included in the annual required contribution for amortization of past contribution deficiencies or excesses. The AOC and the ARC are often the same or very similar. The proposed OPEB standards eliminate the concepts of annual OPEB cost, net OPEB obligation, and annual required contribution, leaving the establishment of funding policy to the sponsoring government entity.
ANNUAL PENSION COST (APC)—under former pension accounting standards, the amount of the annual required contribution (the normal cost and amortized portion of unfunded liabilities) and an adjustment for interest on the net pension obligation (NPO), if an NPO exists. In addition to showing up on government-wide financial statements, this figure would appear in actuarial valuations. The final 2012 pension standards call for the calculation and reporting of an employer's pension expense, not the employer's annual pension cost. Measurement of the annual pension cost and pension expense would be quite different. Whereas the former is a function largely of the amount the employer's actuary indicated should be contributed (the ARC), the latter is completely delinked from funding measures. Like the APC, pension expense includes the cost of retirement benefits allocated to the current year (the normal cost). But, unlike the APC, pension expense	For purposes of calculating the annual pension cost, if a net pension obligation existed, the annual required contribution (ARC) would be adjusted to offset the amount of interest and principal already included in the annual required contribution for amortization of past contribution deficiencies or excesses. The final 2012 pension standards eliminate the concepts of annual pension expense, net pension obligation, and annual required contribution, leaving the establishment of funding policy to the sponsoring government entity.

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would include immediate recognition of interest on the full net pension liability and of the effect on net pension liability of changes in benefits. In addition, compared to the APC, pension expense would more quickly include the effects on net pension liability of changes in the economic and demographic assumptions used to project benefits and the differences between what actuaries assumed and what the plan actually experienced. These will be factored into pension expense over a period reflecting the average remaining service period of active and retired plan members. Pension expense will also include the differences between expected and actual investment returns, which will be factored in over a closed five-year period. For more detail on the way pension expense is to be calculated, see that entry in this glossary.	
ANNUAL REQUIRED CONTRIBUTION (ARC)— the amount that would have to be paid during the current budget year to cover both the value of benefits allocated to the current year (the normal cost) and the amortized portion of the unfunded liability that is being expensed that year. The final 2012 pension standards no longer rely on the ARC for determining and reporting funding-related measures. Rather than include in financial statements funding figures based on the degree to which employers make ARC payments, financial statements for sole and agent employers will include the entire unfunded liability. Cost-sharing employers will show on financial statements their proportionate share of the unfunded liability. Although the ARC will no longer play the central role in accounting standards, employers can still prepare an ARC like they did in the past, and they can still fund a plan based on that ARC. Under	Although this term includes the word "required," accounting standards do not now, and never did, *require* contributions of any amount. Keep in mind that any amount that an employer pays for pay-as-you-go retiree health benefits (such as for premiums for current retirees) is considered a partial payment of the ARC. Also, for OPEB plans, ARC payments must be made into an appropriate trust fund to count as a formal contribution. Technically, note that, under current OPEB standards for single-employer and agent multiple-employer plans, if the full ARC is not contributed, any amount that is not contributed is to be reported as an accounting liability in government-wide financial statements (listed as a net OPEB obligation or net pension obligation). When a prior year's obligation of this type exists, the ARC is to be adjusted upward to account for interest that would have been earned had the full ARC been paid. In addition to the interest charge, the ARC would be adjusted

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the final 2012 pension standards, though, any actuarially determined employer contribution will show up in footnotes to financial statements. Under proposed OPEB standards, the ARC would go the same way as it did in the final 2012 pension standards. That is, it would go away.	downward to take into account the amount that has already been counted as an expense. The proposed OPEB standards would eliminate the funding-related measurement and reporting requirements; this technical note would become irrelevant.
ATTRIBUTION—see "allocation."	
AVERAGE REMAINING SERVICE LIFE—The estimated average number of years that employees have yet to work. This number is calculated as a simple average consisting of remaining years of work divided by the number of employees. Under the final 2012 pension standards, the average remaining service life of both active and inactive employees, including retirees, is what actuaries are to use in determining how employers are to recognize some components of pension expense, including the effects on net pension liability of changes in economic and demographic assumptions. Such changes are to be recognized as deferred inflows or outflows of resources over that period of time. Proposed OPEB standards also call for the use of this average for the relevant OPEB-related measures.	
BLENDED DISCOUNT RATE—see "discount rate, blended."	
BLENDED PREMIUM—a health care premium rate that is derived from participation of different groups in a single health insurance pool, allowing the members of the different groups to be charged the same premium amount. Active employees and retirees under the age of Medicare eligibility participating in the same insurance pool often have a blended rate premium.	If a blended premium is charged for both active and retired members, the amount charged for retirees under the Medicare-eligibility age will generally be lower than it would be if the retirees participated in an insurance pool by themselves, and the rate for actives will be higher than it otherwise would have been. The difference between what retirees are charged and what they would have been charged if in

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	a group by themselves is the "implicit rate subsidy," which must be accounted for under GASB Statement No. 45. The proposed OPEB standards continue this practice.
CLOSED PERIOD—a specific number of periods that declines to zero over time, with a "period" being the amount of time—generally one year—reflected in a government's financial statements. If a period is not closed, it is referred to as "open."	When a closed amortization period is used to amortize an unfunded liability, the unfunded liability will have multiple layers. That is, each new layer is set up with a new pay-off date. Here is what that means in practice in the context of pensions. First, for the calculation of an employer's pension expense, the new accounting standards say that the effect of differences between the expected rate of return on plan assets and the actual investment experience should be amortized over a closed period of five years. If the actuarial valuation were being performed for the year 2012, there would be four years left in the amortization period in 2013, three in 2014, two in 2015, and one in 2016. By the year 2017, therefore, the effect of the difference between expected and actual returns in 2012 would have already been completely factored into the employer's pension expense over the prior five years.
CLOSED GROUP—in reference to an actuarial valuation, an indication that the actuary has projected the future cost of benefits for retirees and current employees but has not included the future cost of benefits for employees who are yet to be hired. (Costs associated with inactive employees, both vested and nonvested, are also included in the valuation.) An open group valuation will include costs for employees who are yet to be hired.	A valuation for a closed group will come up with lower future liabilities than a valuation for an open group. It is more common for a valuation to use a closed group, although valuations might also present alternative findings for an open group. Generally accepted accounting principles (GAAP) require closed group valuations because it is not proper accounting to book costs for employees who have not yet been hired as of the date of the financial statements being prepared.

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COST-OF-LIVING ADJUSTMENTS (COLAS), ACTUARIAL TREATMENT OF—the process of factoring into actuarial valuations and financial statements automatic or ad hoc increases in pension benefits to compensate retirees for the inflation-related relative loss of purchasing power of their pension checks. The final 2012 pension standards call for employers to include within projected benefit payments the effects of automatic COLAs and of ad hoc COLAs that are not substantively different from automatic COLAs—that is, those that have been paid with sufficient regularity so as to have effectively become automatic. Proposed OPEB standards would similarly treat COLAs for OPEB plans.	Under pre-revision pension accounting standards, the financial impact of ad hoc COLAs could be amortized over up to 30 years, starting when the benefit was given. The impact of the final 2012 pension standards is that, if not already factored into the actuarial analysis, automatic COLAs and ad hoc COLAs substantively similar to automatic COLAs will have to be factored into employers' financial statements immediately. As a result, for employers with pension plans with these kinds of COLAs, the amount of projected future benefit payments and estimated liabilities will be larger than under the former standards.
COST-SHARING EMPLOYER—an employer participating in a cost-sharing multiple-employer plan (a single benefit plan that pools all risks, rewards, and costs associated with providing benefits for more than one employer).	GASB standards distinguish between cost-sharing employers, on the one hand, and agent employers and sole employers, on the other.
COST-SHARING MULTIPLE-EMPLOYER PLAN—a single benefit plan that pools all risks, rewards, and costs associated with providing benefits for more than one employer. The trust's assets can be used to pay the benefits of any employees of participating cost-sharing employers. One actuarial valuation is prepared for the plan, and all participating employers often have the same contribution rate regardless of the details of their particular employees. The final 2012 pension standards create significant changes for cost-sharing employers. Among the more important changes: Employers participating in such pension plans will have to report on their government-wide financial	GASB standards distinguish between cost-sharing multiple-employer plans, on the one hand, and single employer and agent multiple-employer plans, on the other.

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statements their proportionate share of the plan's net pension liability (what former standards referred to as the unfunded accrued actuarial liability) and their proportionate share of the pension expense. The pre-revision pension standards required these employers to recognize on their financial statements liabilities based on the cumulative difference between what they had been contractually obligated to contribute and the amount they had actually contributed. Similarly, former standards called for recognition of annual pension cost (pension expense) based on the amount they were contractually obligated to contribute for the year. Proposed OPEB standards would do the same in the OPEB context.	
COVERED PAYROLL—The annual compensation paid to active employees covered by an OPEB and/or pension plan. If covered by a pension plan, the employees' compensation for purposes of calculated covered payroll should include all compensation on which contributions to the pension plan are based (such as overtime, if overtime is included in pension contribution calculations).	Annual covered payroll figures are used to produce contextual information in financial statements, including ratios of liabilities to covered payroll. That ratio can be misleading, because the covered payroll is an annual amount, while there is no expectation that the unfunded liability will be expensed or paid off in a single year.
CREDIT RATING—a measure of a borrower's creditworthiness (also called a bond rating). A credit rating is a measure of how much risk the investor (the lender) should expect regarding the borrower's ability to make promised interest payments and to pay back the money that was borrowed. Credit ratings are issued by companies in the business of analyzing the creditworthiness of companies and governments. Standard & Poor's, Fitch Ratings, and Moody's Investors Service are	

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the three credit-rating companies commonly cited in this regard. The more creditworthy the borrower, the lower the interest rate the borrower is likely to pay to investors. Therefore, the better its credit rating, the less costly it is for a government to finance its capital needs. In addition, pension funds frequently use credit ratings to prescribe the types of investments that can be held by the fund. Securities regulators and legislators also have built credit-rating requirements into certain regulations or laws.	
DEFERRED OUTFLOW/INFLOW OF OPEB RESOURCES*—a consumption/acquisition of net assets that is applicable to a future reporting period. In the context of the proposed OPEB standards, the deferred outflow or inflow of resources generally refers to changes in plan assets or liabilities that are not to be factored into a government's financial statements right away. Deferred outflows/inflows of resources must be calculated as of a date no earlier than the end of the employer's prior fiscal year. For example, the proposed OPEB standards call for recognizing over five years changes in the amount of plan assets that are due to a difference between what actuaries assumed investment returns would be and what returns actually were. Assuming plan assets were lower than actuaries assumed they would be, a government would include one-fifth of the difference as an increase in pension expense for the current year, but four-fifths of the amount would be recorded as a deferred outflow of resources. The proposed OPEB standards consider the following to be deferred outflows/inflows of resources: differences between expected and	

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actual experience related to economic or demographic factors and the impact of changes of assumptions about economic and demographic factors related to both active and inactive employees, including retirees. These changes would be recognized in OPEB expense over the average expected remaining service lives of active and inactive employees.	
DEFERRED OUTFLOW/INFLOW OF PENSION RESOURCES—a consumption/acquisition of net assets that is applicable to a future reporting period. In the context of the final 2012 pension standards, the deferred outflow or inflow of resources generally refers to changes in plan assets or liabilities that are not to be factored into a government's financial statements right away. Deferred outflows/inflows of resources must be calculated as of a date no earlier than the end of the employer's prior fiscal year. For example, the new standards call for recognizing over five years changes in the amount of plan assets that are due to a difference between what actuaries assumed investment returns would be and what returns actually were. Assuming plan assets were lower than actuaries assumed they would be, a government would report one-fifth of the difference as an increase in pension expense for the current year, but four-fifths of the amount would be recorded as a deferred outflow of resources. The final 2012 pension standards consider the following to be deferred outflows/inflows of resources: differences between expected and actual experience related to economic or demographic factors and the impact of changes of assumptions about economic and demographic factors related to both active and inactive	In July 2011, the GASB issued a new set of accounting standards related to the deferred outflow and deferred inflow of resources (Statement No. 63, Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position).

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employees, including retirees. These changes are to be recognized in pension expense over the average expected remaining service lives of active and inactive employees.	
DEFINED BENEFIT PLAN—a plan providing benefits that an employee will receive at or after separation from employment and that are defined by the terms of the plan. The benefits can be specified as a specific dollar amount, an amount based on factors like age, years of service, and compensation, or, for defined benefit OPEB plans, as a type or level of coverage.	Defined benefit plans can be contrasted with defined contribution plans. When it comes to the application of GASB standards, plans that do not have all of the characteristics of defined contribution plans are considered defined benefit plans.
DEFINED CONTRIBUTION PLAN—a plan providing benefits that an employee will receive at or after separation from employment and based on terms that provide an individual account for each employee, define the contributions or credits that will be made to the account while employees are active, and indicate that the benefit employees will receive will be based only on contributions/credits, investment earnings, forfeitures, and administrative costs.	Defined contribution plans can be contrasted with defined benefit plans. When it comes to the application of GASB standards, plans that do not have all of the characteristics of defined contribution plans are considered defined benefit plans.
DEPLETION DATE—the date on which plan assets are projected to be insufficient to pay for the cost of projected benefits.	Under the final 2012 pension standards, the depletion date will be calculated using a closed group valuation (one that assumes that no new entrants join the plan). Many plans will find that the GASB depletion date is the date that the last beneficiary is expected to die. However, if the depletion date is something different, a blended discount rate would have to be used, because that would mean that plan assets were not expected to be available to pay for all benefits. Proposed OPEB standards would do the same in the OPEB context.
DISCOUNT RATE—the percentage factor used to	Here is a simplified example of how discount rates

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compute the present value of a pension or OPEB plan's liabilities. Key to this term is the concept of the time value of money, the idea that a dollar today is more valuable than the same dollar in the future (because the dollar today can be invested and grow in the future, for example). Given the time value of money, actuaries determine how much benefit plans will cost in the future by applying multiple assumptions, and then they apply the discount rate to figure out what those costs would be today (the present value). Here is another way to think about discount rates: If you wanted a certain amount of money in the future, the discount rate is the rate of return you would have to get on your investments if the investments were to grow into the amount you wanted in the future. In the example in the column to the right, by using a 5 percent discount rate, \$1.8594 is what we would need on January 1, 2006, if we expected to need \$1 on January 1, 2007, and another dollar on January 1, 2008. From an actuarial perspective, the present value of an amount is worth the exact same thing as the future amount that it is based on, even though in absolute terms the future amount is larger. In terms of the example, having \$1.8594 in 2006 is the exact same thing as having \$1 in 2007 and another dollar in 2008—actuarially speaking, and only if you apply the discount rate assumption of 5 percent. Until the new accounting standards for pension plans were released in June 2012, pension and other post-employment benefit plans frequently used the term "discount rate" and "investment rate of return" interchangeably, noting that the discount rate was the long-term expected yield on the investments that were expected to be used to	work. Pension and OPEB plan actuarial valuations are far more complicated than expressed in this example, but the underlying principles are the same. Assume that it is January 1, 2006, and we will pay \$1 in pensions at the beginning of 2007 and another \$1 at the start of 2008. The time value of money tells us that two dollars today are worth more than the sum of one dollar in 2007 and another dollar the following year. But we don't have to pay two dollars today, because we don't have to pay our pensions now; we just want to know how much our future costs would be if we were to pay them today. That is another way of asking how much we would need to have today in order for that amount to grow to allow us to make our expected future pension payments. We need a discount rate to figure out how much those two future dollars are worth today. Let's use a discount rate of 5 percent. That is telling us that our \$1 obligation for 2007 is worth the exact same thing as a smaller amount that, if invested today with a 5 percent return, would grow to be worth \$1 in 2007. You have to do a little more than simply take 5 percent from the \$1 and put away the remaining 95 cents, because 95 cents earning 5 percent interest over the year would only turn into 99.75 cents. Close, but not close enough to meet our \$1 pension obligation in 2007. You'd need to put away 95.24 cents in 2006 to get to exactly \$1 dollar in 2007. There's a formula for figuring this out: the present value is the amount you will have in the future divided by the sum of 1 and the discount rate: PV = [Future amount/(1+i)]. Continuing with the example, we know we have another \$1 obligation for 2008, but we have even more time between 2006 and when we have to make that payment. Conceptually, it makes sense, then, for the present value of \$1 in 2008 to be even less than the present value of \$1 in 2007. Fortunately, we've already figured out the present value of a dollar in

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pay benefits as they came due. The final 2012 pension standards alter the way discount rates are determined for pension plans. Proposed OPEB standards would do the same in the OPEB context. The final 2012 pension standards call for use of a discount rate that reflects the long-term expected rate of return on plan assets (net of investment expense but not net of non-investment-related administrative expense) to the extent that plan assets are expected to be available to pay for benefits, and that reflects a tax-exempt high-quality municipal bond index rate to the extent that plan assets are not expected to be available to pay for benefits. If both situations exist, the discount rate would be blended using a weighted average. The approach to the discount rate for other post-employment benefits did not change with the release of the final 2012 pension standards. The final 2012 pension standards indicate that, for purposes of determining the discount rate, professional judgment should be applied to project future employer contributions if contributions are subject to statutory or contractual requirements or if a formal, written policy on contributions exists. If neither of those conditions pertains, projected contributions should be limited to an average of the contributions made over the most recent five-year period (although projections could be adjusted in light of new events). For more information, see "time value of money," "blended discount rate," and "investment rate of return."	2007: 95.24 cents. So, we apply the discount rate again to the value of $1 in 2007 to figure out the present value of the 2008 dollar. The answer is: 90.70 cents. That is: PV = [95.24 cents/(1 + .05)] To finish, we know that the present value of the 2007 dollar is 95.24 cents and the present value of the 2008 dollar is 90.70 cents. We get the total present value by adding the present values of each future year's dollar, which turns out to be $1.8594. That is the amount that, in actuarial terms, is the exact same on January 1, 2006, as having one dollar at the beginning 2007 and another at the start of 2008. Present values can be calculated at any discount rate. Finding a reasonable rate that is not too high or low is often the source of heated debate that reasonable people can (and often do) disagree over. The higher the discount rate, the smaller the present value. The lower the rate, the larger the present value. As a result, determining how much to set aside in the present to fund future benefits dependents a lot on the discount rate. If the rate is too high, the plan could face the risk that not enough will be set aside. If the rate is too low, current contributions and expense could be too high.
DISCOUNT RATE, BLENDED—under the final 2012 pension standards, a single discount rate that	Under the final 2012 pension standards, an actuary will essentially follow three broad steps to establish

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reflects the long-term expected rate of return on plan assets to the extent that plan assets are expected to be available to pay for benefits, and that reflects a tax-exempt, high-quality municipal bond index rate to the extent that plan assets are not expected to be available to pay for benefits. For greater detail, see the explanation in the observations to the right. For other post-employment benefit (OPEB) plans, including those for retiree health care, the use of a blended discount rate was required in some circumstances starting with the standards released in 2004. OPEB plans that are being partially funded by an employer are required to use a discount rate that reflects the proportionate amount of plan assets and employer assets. Employer assets are generally expected to have a lower rate of return than plan assets. With respect to blended discount rates, the proposed OPEB standards would apply the same approach to OPEB plans as was applied to pension plans in the final 2012 pension standards.	the discount rate. They would follow similar steps under the proposed OPEB standards. 1. Projection of whether plan assets will ever be depleted (or if future benefit payments will be made with assets invested using a short-term investment strategy). This calculation will be made year by year into the future using a closed period valuation. 2. If either situation in the first step pertains, calculation of the present value of future benefits using the long-term expected return applied to benefits for which long-term-invested assets are projected to be available and the municipal bond index rate to projected benefits for which assets are not projected to be available (or for which short-term-invested assets are available). This has nothing to do with how well the plan is currently funded. 3. Discounting of the entire projected benefit amount using a single discount rate that produces the same present value as the sum of the two separate calculations made in the second step. Additional detail follows. • An actuary will need to project future cash flows into and out of the plan. That is, the actuary will project into the future benefit payments and plan fiduciary net position (the market value of assets). • Year by year into the future, the actuary will compare projected benefit payments to projected plan fiduciary net position. For purposes of determining the discount rate, the actuary will include within projected plan fiduciary net position all employee contributions and employer contributions (and contributions made

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	by a state on behalf of a local employer) that are intended to fund benefits of current and former employees. The actuary will not include any contributions made related to future employees. • In considering what future contributions for current and former employees to include within projected plan fiduciary net position, the actuary will take into consideration current contribution policies and practices. As a result, an employer making contributions designed to fully fund the plan over a reasonable period of time will not, by definition, be in a situation in which projected plan assets are insufficient to cover projected benefit payments. The GASB also recognizes the possibility that actuaries could assess the sufficiency of projected plan fiduciary net position to pay projected pension benefits "through other methods." • If the actuary projects that plan fiduciary net position will be sufficient to make benefit payments and plan assets are expected to be invested using a long-term investment strategy, the discount rate will be the long-term expected rate of return on plan assets. • Under two circumstances, an actuary will need to take into consideration the municipal bond index rate when determining the discount rate: ○ If plan assets are expected to be invested using a long-term investment strategy but the actuary determines that projected plan fiduciary net position will not be sufficient to cover projected benefit payments; or ○ If assets to be used to make projected benefit payments are not expected to be held long enough to allow the use of a long-term investment strategy. • If the municipal bond index rate is to be used

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	along with the long-term expected rate of return on plan assets, the actuary will not ultimately apply two different discount rates to determine the plan's present value of projected benefits. Rather, the actuary will use a single discount rate reflecting both the municipal bond index rate and the rate based on the expected long-term return on plan assets. • Although the actuary will ultimately apply a single discount rate to projected benefit payments in order to determine the present value of projected benefits, the process used to get there will initially require the calculation of two individual present value figures—one using the expected long-term rate of return, which will be applied to projected benefit costs expected to be paid with plan assets invested using a long-term strategy, and one using the municipal bond index rate, which will be applied to projected benefit costs for which plan assets were not projected to be available (or for which assets invested using a short-term investment strategy would be used). The single discount rate ultimately used by the actuary will be one that, when applied to the full amount of projected benefit costs, returned the same present value as the sum of the individual calculations.
ENTRY AGE ACTUARIAL COST METHOD (EAN)—one of six actuarial cost methods permitted under current GASB standards, this method allocates the cost of benefits from the time an employee is hired (the entry age) to the date of expected retirement either as a level dollar amount or as a level percent of payroll. The new pension accounting rules establish this allocation method as the only one that, for reporting purposes, can be used for allocating the actuarial present value of benefits to the three	This is the most common actuarial cost method used by the pension plans in which NEA members participate. See "actuarial cost method" for details on how cost methods vary and the potential impact of choosing one method over another.

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time periods of interest to actuaries. The new standards also require that actuaries allocate the costs as a level percentage of payroll. Proposed OPEB standards would similarly address the use of the entry age normal actuarial cost method in the OPEB context. For more information, see actuarial cost method.	
EXCISE TAX ON HIGH-COST HEALTH PLANS*—starting in 2018, a 40 percent excise tax on the cost of employer-sponsored health coverage that is above certain dollar-based taxable thresholds. The excise tax was established in the Affordable Care Act. The tax is not levied on employees. Instead, "coverage providers"—those who administer employer-sponsored coverage—are responsible for paying the tax. The base thresholds in 2018 are $10,200 for self-only coverage and $27,500 for all other coverage; they are indexed to the Consumer Price Index (CPI) plus 1 percentage point in 2019 and to the CPI after that. Regulations as to the exact mechanics of the calculation have not been issued. There are several ways that those thresholds could be adjusted. The base thresholds will increase to the extent that premiums in the Federal Employees Health Benefit Plan increase between 2010 and 2018 more than expected (even for people who don't participate in that plan), and for plan members to the extent that the age and sex characteristics of their employer's employees are more expensive than the age and sex characteristics of the national workforce. In addition, the thresholds for pre-Medicare retirees are increased by $1,650 for self-only coverage and $3,450 for other coverage.	Regulations have not been issued, and a number of questions as to the mechanics of these calculations, which can have a significant impact on the amount of excise tax a plan may be subject to, are not answered. Although the excise tax must be collected and paid by the third party administrator or insurer, it is likely that these costs will be passed on to the health plan (to date, ACA fees and charges have been consistently passed on to health plan sponsors). More importantly, who will pay for this tax (plan sponsors, employees, or other entities) is yet to be determined.

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EXPENSE (OR, TO EXPENSE)—in accrual accounting, to match a cost, whether actually paid during the year or not, to revenue on an income statement.	
EXPOSURE DRAFT—the final stage of due process before the GASB issues new accounting standards. In May 2014, the GASB finalized two OPEB-related exposure drafts. One dealt with governments' accounting and financial reporting for OPEB (to replace GASB Statement No. 45). The other focused on financial reporting for OPEB trusts. Much of the conceptual work for these exposure drafts had been completed years before as the GASB revised pension-related standards, so it did not take the standards board as long to develop the OPEB drafts as it took it to prepare pension-related exposure drafts. A third exposure draft released by the GASB at the same time would amend existing pension standards and create new standards for pensions not administered through a certain type of trust. In July 2011, the GASB issued two pension-related exposure drafts. One addressed employers' accounting and financial reporting related to pensions, which were contained in GASB Statement No. 25, and the other dealt with accounting by pension plans themselves, the standards for which were included in GASB Statement No. 27. Before releasing these exposure drafts, the GASB spent several years obtaining and analyzing public comments on the proposed accounting changes contained in them.	
FAIR VALUE OF ASSETS—see "Market value of assets."	
FINAL 2012 PENSION STANDARDS—a set of	

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accounting standards related to financial reporting done by pension plans and to accounting and financial reporting for employers that provide a defined benefit pension administered through a trust. The plan-related standards are found in Statement No. 67, while the employer standards are in Statement No. 68. Both were approved in June 2012. In May 2014, the GASB released proposed pension standards that would amend some of the standards that it approved in 2012 and would create new standards for pensions not administered through a trust.	
FUNDED RATIO—an expression of the plan's assets in relationship to its liabilities. Technically, this is the plan's actuarial value of assets (or market value of assets, if that is what is used) shown as a percentage of its actuarial accrued liability. Under the final 2012 pension standards and proposed OPEB standards, the total pension liability or total OPEB liability would be used instead of the actuarial accrued liability.	Funded ratios can be tricky, because the methods used to measure plan assets and benefits can vary. As a result, a plan could be "fully funded" if one method is used but less than fully funded if another is used. The funded ratio does not measure the risk that a plan will be over-funded or underfunded in the future, because it is a snapshot measure.
FUTURE NORMAL COSTS—the portion of the total projected benefits that an actuarial cost method allocates to years after the end of the current valuation year. Employers are not required to account for future normal costs, because employees have yet to do the work that would be exchanged for benefits in the future (one of the tenets of accrual accounting).	Heads up: The total projected benefits figure will be much bigger than the actuarial accrued liability (or total pension liability or total OPEB liability under new pension and proposed OPEB standards), but it reflects costs for work not yet done by active employees, so it is not really a good number to use to discuss an employer's current financial situation.
GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP)—the aggregate framework of accounting rules, procedures, and standards. GAAP, which is followed by most companies, government entities, and other groups that	In their reports, auditors note whether the audited financial statements conform to GAAP. When the Governmental Accounting Standards Board (GASB) issues new standards, they become part of GAAP.

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produce financial statements, facilitates standardization in the format and content of financial statements. Separate GAAP exists for private sector companies. There are also separate international accounting standards.	
GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB)—the independent, nonprofit organization that sets accounting standards for state and local government entities, including cities, counties, school districts, and the trust funds that they establish.	
GOVERNMENT-WIDE FINANCIAL STATEMENTS—a report on the net assets and financial activities of the government agency as a whole, as distinguished from the governmental fund accounting of the component parts of the government. Government-wide financial statements are prepared using accrual accounting. Prior pension accounting standards did not call for governments to show total unfunded liabilities as financial statement entries that counted against net assets. Current OPEB standards do not do so, but proposed OPEB standards would. The final 2012 pension standards say that governments should report their net pension liability on financial statements themselves, not in footnotes. Employers participating in cost-sharing multiple-employer plans will show their proportionate amount of the net pension liability. The proposed OPEB standards would make similar changes in the OPEB context.	When a school board is a component unit of a local or even state government, the board's financial statements will be part of the government-wide financial statement of the larger governmental entity. Most governmental fund accounting is done on a modified accrual basis and records only the current year's liabilities.

Protecting Pension and Retiree Health Care Benefits

A Glossary of Key Actuarial and Accounting Terms and Concepts for Public Employee Plans

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Health care cost trend—an assumption about the future rate of increase of the per capita cost of a retiree health plan's benefits. It is typical for health care cost trend assumptions to show change over time, commonly decreasing from a higher percentage to a lower one. Health care trend should not reflect the impact of changes in the average age of a population.	Given that the cost of health care benefits is a crucial component of OPEB valuations, it makes sense that even small changes in the assumptions can have a large impact on the outcome of a valuation. For example, one state began its health care trend analysis at 9.275 percent for 2007 and trended down to 5 percent in 2015 and afterward, and found that its liability was $9.2 billion. When it raised each rate by one percentage point, the liability jumped to $11 billion. When it trended down starting from 8.275 percent, the liability became $7.8 billion.
High-quality municipal bond yield—under final 2012 pension standards, a yield or index rate for tax-exempt municipal general obligation bonds that have a maturity of 20 years and an average rating of AA/Aa or higher. It is to be used in the calculation of a blended discount rate for pension plans. Proposed OPEB standards would use the same definition for blended discount rates.	
Implicit rate subsidy—the amount by which the actual health insurance premiums for retirees are lower than the true cost of coverage for retirees calculated on a stand-alone basis. Implicit rate subsidy typically results when retirees participate in a plan with active workers and the retirees are charged based on a blended premium rate that is the same for both retirees and active employees.	The GASB has said that the difference between the premium cost for pre-Medicare-eligible retirees and the amount that the premium would have been if these retirees were in an insurance pool on their own is a benefit that must be accounted for under the standards included in Statement No. 45. Even if retirees pay for their entire premium, if their premium rate is blended, they may not be covering the entire cost of their retiree health care benefit. Actuarial standards of practice require the actuary to take this into account when setting the cost of the health plan, even if the plan is fully insured and the employer pays the same for actives and retirees. The proposed OPEB standards continue this requirement.
Insured benefits*—defined benefit pension or other postemployment benefits (OPEB) provided	

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through an insured plan. In such plans, premiums are paid to an insurance company while an employee is still active, and the insurance company unconditionally takes on an obligation to pay the benefits when the employee retires (and when the plan calls for benefits to be paid).	
INSURED PLAN*—a defined benefit OPEB or pension plan in which premiums are paid to an insurance company while employees are active. In exchange for the pre-payment of premiums, the insurance company agrees to assume the financial risk of providing benefits when the employees are retired. Under proposed OPEB and proposed pension standards, employers would recognize in their government-wide financial statements an OPEB expense or pension expense equal to the contributions or required premiums, and, if the full contribution or payment was not made, they would recognize a change in net OPEB liability or net pension liability that is equal to the difference between the amounts recognized as OPEB expense or pension expense and the amounts paid by the employer to the insurer.	
INVESTMENT RATE OF RETURN (ASSUMED)—an assumption about how quickly investments will grow in the future. This rate is a crucial component of an actuary's work to estimate a plan's funded status, because if assets set aside to pay for future benefits grow more quickly than assumed, the pension or OPEB plan will have lower net liabilities (or unfunded liabilities, as they were called under prior pension standards and, until proposed OPEB standards become effective, are still called for OPEB plans). Conversely, if plan assets grow slower than assumed, unfunded liabilities/net liabilities will be	Think of it this way: Assume that we wanted to invest enough money right now so that, with no more contributions, it would grow in the future to pay for all of the benefits already promised to active and retired workers. The higher our expected investment return, the lower the amount we would need to set aside now, because more of the future benefits would be paid for by investment gains. Here are some typical effects of changing assumed investment rates of return. By changing the assumed rate from 4.5 percent to 5.5 percent, one state's retiree health care unfunded liability fell from $22.3 billion to $18.7 billion. A school district's retiree

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larger. Under the final 2012 pension standards, the difference between assumed investment earnings and actual plan investment experience should be recognized over five years (closed period). For more information, see pension expense. The proposed OPEB standards would similarly address the investment rate of return in the OPEB context.	health care unfunded liability went from $160.7 million to $81.1 million when it used an investment rate of return of 7.75 percent instead of 4 percent.
Irrevocable trust—under current OPEB standards, a trust established for retiree health benefits or other OPEB in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer (or employers) or plan administrator. GASB also notes that an arrangement equivalent to an irrevocable trust could be created to achieve the same goals. Under current OPEB standards, only contributions to an irrevocable trust or its equivalent count toward lowering a plan's unfunded liability, according to GASB. For more detail, see "annual required contribution." The final 2012 pension standards establish a detailed definition of a pension plan, similar to the requirements listed above for OPEB trusts. The standards cover employers providing pension benefits through trusts or similar entities that meet the definition. Such a trust is one in which employer contributions (including contributions made on behalf of the employer) and earnings on contributions are irrevocable. In addition, a trust will have to be dedicated to providing pensions to plan members according to the plan's benefit terms. Finally, plan assets will have to be legally protected from creditors of the employer/ employers and plan members, entities that	The GASB standards contained in Statement No. 45 say that if an appropriate irrevocable trust (or its equivalent) is used, an actuary can use a higher assumed rate of investment return, because, presumably, the funds will be invested with a longer-term perspective and must be used for paying benefits and trust administrative costs. Without an irrevocable trust, GASB reasoned, funds earmarked to pay for OPEB might be used for other purposes and, in any case, could only be counted on to earn lower rates of return because they would likely be held in short-term investment accounts that typically earn less. The term "irrevocable trust" is not mentioned as such in GASB Statement No. 45; it is a term that has come to mean a trust that meets the requirements of the standards. Unlike the current OPEB standards, the final 2012 pension standards specifically refer to the irrevocability of trusts. Another difference is that the final 2012 pension standards apply only to trusts that meet the definition, while the current OPEB standards vary depending on whether the trust definition is met. Similarly, proposed OPEB standards explicitly refer to the irrevocability of trusts, although the standards that apply depend on whether a trust is irrevocable and meets other criteria.

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contribute to the plan but are not employers, and the plan administrator.	For more on irrevocable trusts in the final 2012 pension standards and proposed OPEB standards, see "trusts that meet the specified criteria."
LEGACY COST—the present value of future benefit costs allocated in an actuarial valuation to service prior to the valuation year, less any assets that have been set aside and dedicated to paying for those future benefits. For more detail see "unfunded actuarial accrued liability (UAAL)," "net pension liability," and "net OPEB liability."	
LEVEL DOLLAR AMORTIZATION METHOD—see "Amortization methods."	
LEVEL PERCENTAGE OF PAYROLL AMORTIZATION METHOD—see "Amortization methods."	
MARKET VALUE OF ASSETS—the value of a plan's assets as measured by the amount that would be received if the plan sold the assets without the pressure of having to liquidate them in a hurry. This is also called the "fair value of assets." In some cases, if there is no clear market for the assets, an estimated value is required. The market value of assets can be contrasted with the actuarial value of assets, which is the value of plan assets that is smoothed to incorporate over a period of years the annual swings in market returns. The final 2012 pension standards require the use of the market value of assets for calculating an employer's net pension liability (what former standards referred to as the unfunded actuarial accrued liability). Proposed OPEB accounting standards would use the market value of assets for determining net OPEB liability.	

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MEASUREMENT DATE (FOR A PENSION OR OPEB PLAN)—the date as of which an actuary determines the value of the pension or OPEB obligation. Under the final 2012 pension standards, an employer is allowed to recognize its net pension liability on a measurement date that is no earlier than the end of its prior fiscal year, consistently applied from period to period. Proposed OPEB standards would similarly treat measurement dates in the OPEB context. The measurement date is not necessarily the same as the valuation date—the date on which the normal cost, actuarial accrued liability (or total pension liability under the new GASB pension standards, or total OPEB liability under the proposed OPEB standards), and other actuarial calculations are determined. The final 2012 pension standards create separate measurement date and valuation date standards to give plans (particularly cost-sharing multiple-employer plans) more time to pull together their results. The same would be true under proposed OPEB standards. If an actuarial valuation is completed prior to the measurement date, the total pension liability component of the net pension liability is to be calculated by rolling forward amounts from the valuation to the measurement date, as long as the actuarial valuation was completed not more than 30 months and a day before the end of the employer's fiscal year. Actuaries are to use their professional judgment in determining what post-valuation changes are to be incorporated into updated amounts.	In the past, actuaries tended to be provided with information on benefit provisions, members' census data, and plan asset values as of a common date referred to as the valuation date. Based on that information, actuaries would calculate the normal cost, the actuarial accrued liability, and other measures as of the valuation date. Under the new GASB pension standards, the date on which the assets are valued could be different from the valuation date—the date on which normal cost and other actuarial measures are determined. For example, benefit and census information as of July 1, 2013, might be used to produce liabilities as of a July 1, 2013, valuation date, but the results could be rolled forward to determine pension obligations at a later measurement date. For accounting purposes, the information reported by employers in financial statements would be based on the liability calculations projected to the measurement date and the actual market value of assets on measurement date. Changes in benefit provisions between the valuation date and the measurement date would be factored into the liabilities at the measurement date. Changes after the measurement date would only be noted and not included in the calculation of liabilities.
METHODOLOGICAL CHOICES—the decisions made that affect the way an actuarial valuation is conducted. In addition to affecting the process, these choices can have an impact on the outcome	For more information on the impact of methodological choices on the outcome of actuarial valuations, see "actuarial cost method" and "amortization method." See "allocation" for more

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of an actuarial valuation. Methodological choices include the way the actuarial value of assets is determined, the actuarial cost method, and the amortization method.	information on that concept.
NET OPEB OBLIGATION (NOO)—for an OPEB plan such as a retiree health plan, a measurement of the cumulative difference between the annual OPEB cost and the employer's contributions to the retiree health benefit plan. To the extent that an employer paid less than the annual required contribution (ARC) one year, during the next year the employer's NOO would increase. This figure would show up in an actuarial valuation and an employer's government-wide financial statements. Under proposed OPEB standards, the NOO would disappear, because the new standards would eliminate funding-related measures. Instead, employers would calculate their net OPEB liability (NOL) or, for cost-sharing employers, their proportionate share of the NOL. The difference between NOO and NOL is significant, as the NOO is based on annual amounts not contributed to the plan and the NOL would be based on the entire unfunded liability.	This is the cumulative excess of amounts expensed for OPEB since the implementation of GASB Statement No. 45 over amounts contributed by the employer.
NET OPEB LIABILITY (NOL)*—under proposed OPEB standards, the total OPEB liability of the employer minus the plan fiduciary net position (plan assets at the end of the period). NOL is what current OPEB standards refer to as the unfunded actuarial accrued liability (UAAL). • The total OPEB liability would essentially be the estimated amount of future benefits that actuaries determine are due to work already completed by plan participants. More technically, it would be the portion of the present value of the plan's projected	

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future payments that is attributed to work already completed by plan participants. Total OPEB liability is what current OPEB standards refer to as the "actuarial accrued liability (AAL)." Calculation of the total OPEB liability would have to use the entry age actuarial cost method and, in some circumstances, a blended discount rate. • The plan fiduciary net position is the market value of plan assets (also referred to as the fair value of plan assets). For employers with single employer plans or agent multiple-employer plans, the NOL would have to be reported on government-wide financial statements. For employers participating in cost-sharing multiple-employer plans, the employer's proportionate share of the collective net OPEB liability would have to be shown on financial statements. The proposed OPEB standards also address how to handle the NOL in situations in which a government entity makes OPEB contributions on behalf of workers that it does not directly employ. Such employers are called nonemployer contributing entities. A state that contributes on behalf of a local school district would fall into this category. For more detail on that type of situation, see "special funding situation" in this glossary. Net OPEB liability would have to be calculated as of a date no earlier than the end of the employer's prior fiscal year.	
NET PENSION LIABILITY (NPL)—under the final 2012 pension standards, the total pension liability	The NPL represents an important departure from former pension accounting standards in several ways.

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of the employer minus the plan fiduciary net position (plan assets at the end of the period). NPL is what former accounting standards referred to as the unfunded actuarial accrued liability (UAAL). • The total pension liability is, essentially, the estimated amount of future benefits that actuaries determine are due to work already completed by plan participants. More technically, it is the portion of the present value of the plan's projected future payments that is attributed to work already completed by plan participants. Total pension liability is what former accounting standards referred to as the "actuarial accrued liability (AAL)." Calculation of the total pension liability will have to use the entry age actuarial cost method and, in some circumstances, a blended discount rate. • The plan fiduciary net position is the market value of plan assets (also referred to as the fair value of plan assets). For employers with single employer plans or agent multiple-employer plans, the NPL will have to be reported on government-wide financial statements. For employers participating in cost-sharing multiple-employer plans, the employer's proportionate share of the collective net pension liability will have to be shown on financial statements. The final 2012 pension standards also address how to handle the NPL in situations in which a government entity makes pension contributions on behalf of workers that it does not directly employ. Such employers are called nonemployer contributing entities. A state that contributes on	First, it will have to be disclosed on an employer's government-wide financial statements. That is, the value of benefits already earned by employees and retirees, minus plan assets, will be factored into a snapshot of the employer's financial position at the end of the fiscal year. Former accounting standards only required sole and agent employers to show the cumulative difference between what they should have been contributing (the annual pension cost) and what was actually contributed. Employers participating in cost-sharing multiple-employer plans will have to show their proportionate share of the NPL on their financial statements instead of the former requirement: the amount they were contractually obligated to contribute. Another significant change is that employers will not be able to smooth plan assets when determining the NPL. In addition, the discount rate used to determine liabilities will, in some circumstances, need to be a blended rate based on the expected long-term return on plan assets and the yield on an index of high-quality municipal bonds. The long-term expected return will be used to the extent that current and expected future assets are sufficient to pay projected benefits. To the extent that it is expected that assets will be insufficient to meet that goal, the blended rate will have to be used. While there is no smoothing when determining the NPL, there is some smoothing in what are referred to as deferred inflows and outflows of resources, which also show up on financial statements and affect pension expense.

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behalf of a local school district would fall into this category. For more detail on that type of situation, see "special funding situation" in this glossary. Net pension liability must be calculated as of a date no earlier than the end of the employer's prior fiscal year.	
NET PENSION OBLIGATION (NPO)—under former pension standards, a measurement of the cumulative difference between the annual pension cost and the employer's contributions to the pension plan. To the extent that an employer paid less than the annual required contribution (ARC) one year, during the next year the employer's NPO would increase. That is because the NPO is the cumulative excess of amounts expensed for pensions since the implementation of the old GASB pension standards (GASB Statement No. 27, released in 1994) over amounts contributed by the employer for that period. This figure would show up in an actuarial valuation and an employer's government-wide financial statements. The final 2012 pension standards eliminate the use of the NPO. Instead, employers calculate their net pension liability (NPL) or, for cost-sharing employers, their proportionate share of the NPL. The difference between NPO and NPL is significant, as the NPO was based on annual amounts not contributed to the plan and the NPL is based on the entire unfunded liability.	
NONEMPLOYER CONTRIBUTING ENTITY—A government entity that is legally responsible for making the employer contribution on behalf of a	Many state governments are nonemployer contributing entities with respect to benefits for the employees of local school boards.

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different government entity.	
NORMAL COST—the cost of retirement benefits that is allocated to the current year but employees will not begin to use until sometime in the future, when they retire. This is also called the "service cost," and the final 2012 pension standards use the term "service cost" instead of "normal cost." The proposed OPEB standards also use the term "service cost" interchangeably with the term "normal cost."	This is an important figure, because it reflects the estimated cost of future pension or retiree health care benefits earned during the year and how much new liability an employer is incurring.
NOTES TO FINANCIAL STATEMENTS—the information about the plan that must be included in financial statements to disclose certain characteristics about the plan. Compared to former standards, the final 2012 pension standards require more in-depth information about the new pension accounting measures used and, in keeping with the GASB's shift away from funding measures, eliminate notes related plan funded status as measured by the annual required contribution (ARC). Under the final 2012 pension standards, disclosures in notes are to include a description of pension contribution requirements, discount rate-related information such as periods of projected benefits to which the municipal bond index rate was applied, the measurement date of the net pension liability, detail about significant changes in the plan that took place between the measurement date and the date on which the financial report was produced, and a sensitivity analysis of the net pension liability to changes in the discount rate. Cost-sharing employers will also need to disclose in notes information related to their proportionate share of collective totals, including how the	The disclosures in these notes are, according to the GASB, "essential for communicating with users the financial position or inflows and outflows of resources of the reporting unit in conformity with generally accepted accounting principles."

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proportion was determined. Proposed OPEB standards would similarly address notes to financial statements in the OPEB context, although the nature of other post-employment benefits means that additional information—such as health care cost trends and, if applicable, insured benefits—would have to be included in the OPEB context. The proposed OPEB standards also include a provision related to reporting in notes to financial statements detail related to variations in the estimated cost of future health benefits for retirees. Notes would include information on alternative estimates based on eight different combinations of discount rate and health care cost trend rates—leading to nine total projections of future costs. In addition to the combination of rates actually used by actuaries, the notes would include variations based on +1 and -1 percent on both rates. For example, if an actuary used a discount rate of 6.5 percent and a health care cost trend rate of 5.3 percent for the development of the estimates used to estimate the employer's total OPEB liability, the notes would also include projections based on the following combinations of discount rate and cost trend: 5.5% and 4.3%, 5.5% and 5.3%, 5.5% and 6.3%, 6.5% and 4.3%, 6.5% and 6.3%, 7.5% and 4.3%, 6.5% and 5.3%, and 6.5% and 6.3%.	
OPEB EXPENSE*—under proposed OPEB accounting standards, the estimated cost of the benefits earned by employees during the period of the actuarial valuation, with the addition or subtraction of amounts for issues such as changes in assumptions about economic and demographic factors and the change in the plan's market value of assets. OPEB expense would have to be calculated as of a date no earlier than the end of	

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the employer's prior fiscal year. Under the proposed standards, OPEB expense would be reported in employers' financial statements instead of what current standards call annual OPEB cost (AOC). AOC and OPEB expense would be quite different, as AOC is largely a function of the amount that the employer's actuary indicated should be contributed to the plan (the annual required contribution, ARC). OPEB expense would include many more factors than the AOC. In cases in which an irrevocable trust were established, or if prefunding were not taking place, OPEB expense would include: • The normal cost (or "service cost"), which was also part of AOC. • Interest on the net OPEB liability, which current OPEB standards call the unfunded actuarial accrued liability (UAAL). AOC includes interest on cumulative OPEB contributions not made, not on the full unfunded liability. • Changes in the amount of the total OPEB liability due to differences between assumed and actual economic and demographic assumptions; changes in economic and demographic assumptions; and changes in OPEB benefits. Current OPEB standards call the total OPEB liability the actuarial accrued liability, although the underlying projection of future benefit costs are not calculated in exactly the same way as total OPEB liabilities would be calculated under the proposed OPEB standards. Some components of OPEB expense would be factored in immediately, while others would be recognized gradually.	

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In pre-funding or non-pre-funding situations (as contrasted with insured plans), for employers with single-employer or agent multiple-employer plans: • Employers would immediately factor into their OPEB expense any changes in the total OPEB liability due to benefit changes. They would also factor into OPEB expense any liability changes due to adjustments to economic and demographic assumptions or due to the difference between those assumptions and actual experience. Such changes would be factored in over a period representing the average remaining service lives of active and inactive employees, including retirees. These amounts would be treated as deferred inflows or outflows of resources. • Over a five-year closed period, employers would factor into OPEB expense changes in the amount of plan assets that result from the difference between what actuaries assumed investment returns would be and what returns actually were. In pre-funding or non-pre-funding situations (as contrasted with insured plans), for employers with cost-sharing multiple-employer plans, each participating employer's OPEB expense would be its proportionate share of the collective OPEB expense. In cases in which an employer has an insured OPEB plan, for their government-wide financial statements, employers would recognize OPEB expense equal to the contributions or required premiums. The proposed OPEB standards also address how to deal with OPEB expense in situations in which a nonemployer government entity makes	

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contributions on behalf of an employer, such as when a state contributes for a school district whose employees it does not directly employee. For more detail on that type of situation, see "special funding situation" in this glossary.	
OPEN GROUP—in reference to an actuarial valuation, an indication that the actuary has projected the future cost of benefits for retirees and current employees but has also included the future cost of benefits for employees who are yet to be hired. Demographic and economic assumptions would need to be made about the employees yet to be hired.	An actuarial valuation completed with an open group will report liabilities in future years that are higher than those reported for a closed group, because only the open group valuation will include future hires. It is more common for actuarial valuations to use a closed group, although valuations might also present alternative findings for an open group.
OPEN PERIOD—with respect to actuarial valuations, a set number of years over which an amount is amortized every year. A liability amortized over a 30-year open period in 2011 would again be amortized over a 30-year period in 2012 (equivalent to refinancing your mortgage every year over a new 30 year period); although the amount itself would change based on multiple factors, including the amount paid in 2011 and new liabilities added to the amount, the amortization period would not change. If the period were closed, the number of years over which the liability was amortized would decrease year by year.	A plan that uses an open period to amortize unfunded liabilities for purposes of developing pension contribution amounts may potentially have to use a blended discount rate under the final 2012 pension standards. That is because with an open period, some portion of the unfunded liability will never be paid off.
OTHER POSTEMPLOYMENT BENEFITS (OPEB)—a category of benefits that includes medical, dental, vision, and hearing regardless of the type of plan that provides them, and life insurance, disability, long-term care, and other non-health and non-pension benefits when provided separately from a pension fund. OPEB are paid after active employment ends, generally in retirement.	As shorthand, rather than use the term "other postemployment benefits," we often refer to this entire category of benefits as retiree health care benefits, because retiree health care benefits are usually the big-ticket item included within OPEB.

PROTECTING PENSION AND RETIREE HEALTH CARE BENEFITS

A GLOSSARY OF KEY ACTUARIAL AND ACCOUNTING TERMS AND CONCEPTS FOR PUBLIC EMPLOYEE PLANS

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PAST SERVICE LIABILITY—see "actuarial accrued liability" or "total pension liability."	
PAY-AS-YOU-GO PLAN—a benefit plan that pays for the current year's costs out of the current year's budget. Pay-as-you-go plans can be contrasted with pre-funded plans, which set aside funding to pay for benefits in the future.	Pension plans are rarely funded on a pay-as-you-go basis, although most OPEB plans are. Any pension plan handled on a pay-as-you-go basis would not be covered under the final 2012 pension standards included in GASB Statement No. 68. Such plans would still apply Statement No. 27. GASB's new proposals, issued at the same time as the new proposed OPEB standards, would now cover pay-as-you-go pension plans in a manner similar to those plans that are pre-funded.
PENSION EXPENSE—under the new accounting standards, the estimated cost of the benefits earned by employees during the period of the actuarial valuation, with the addition or subtraction of amounts for issues such as changes in assumptions about economic and demographic factors and the change in the plan's market value of assets. Pension expense must be calculated as of a date no earlier than the end of the employer's prior fiscal year. Under the new standards, pension expense will be reported in employers' financial statements instead of what former standards called annual pension cost (APC). APC and pension expense are quite different, as APC was largely a function of the amount that the employer's actuary indicated should be contributed to the plan (the annual required contribution, ARC). Pension expense includes many more factors than the APC. Pension expense includes: • The normal cost (or "service cost"), which was also part of APC. • Interest on the net pension liability, which	Measurement of the annual pension cost (a term used in former accounting standards) and pension expense (a term from the new standards) would be quite different. Whereas the former is a function largely of the amount the employer's actuary indicated should be contributed (the annual required contribution, or ARC), the latter is essentially delinked from any funding measure. Given its components, pension expense may fluctuate more than APC. In fact, for plans with a net pension liability that is less than zero (e.g., if the plan's fiduciary net position exceeds the total pension liability), pension expense could even be negative.

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former standards called the unfunded actuarial accrued liability (UAAL). APC included interest on cumulative pension contributions not made, not on the full unfunded liability. • Changes in the amount of the total pension liability due to differences between assumed and actual economic and demographic assumptions; changes in economic and demographic assumptions; and changes in pension benefits. Former standards called the total pension liability the actuarial accrued liability, although the underlying projection of future benefit costs would not be calculated in exactly the same way, as explained in the entry on total pension liability. Some components of pension expense would be factored in immediately, while others would be recognized gradually. For employers with single-employer or agent multiple-employer plans: • Employers will be required to immediately factor into their pension expense any changes in the total pension liability due to benefit changes. They will also have to factor into pension expense any liability changes due to adjustments to economic and demographic assumptions or due to the difference between those assumptions and actual experience. Such changes will be factored in over a period representing the average remaining service lives of active and inactive employees, including retirees. These amounts will be treated as deferred inflows or outflows of resources. • Over a five-year closed period, employers will factor into pension expense changes in the amount of plan assets that result from	

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the difference between what actuaries assumed investment returns would be and what returns actually were. For employers with cost-sharing multiple-employer plans, each participating employer's pension expense would be its proportionate share of the collective pension expense. The new standards also address how to deal with pension expense in situations in which a nonemployer government entity makes contributions on behalf of an employer, such as when a state contributes for a school district whose employees it does not directly employee. For more detail on that type of situation, see "special funding situation" in this glossary.	
PLAN FIDUCIARY NET POSITION—under the final 2012 pension standards and proposed OPEB standards, the market value (fair value) of plan assets. In determining an employer's net pension liability or net OPEB liability (what former pension standards used to call, and current OPEB standards still call, the unfunded actuarial accrued liability), actuaries will subtract plan fiduciary net position from total pension liability or total OPEB liability (the actuarial accrued liability under former pension and current OPEB standards). Changes in plan fiduciary net position resulting from expected earnings on the plan's investments are to be incorporated into the pension expense calculation immediately. Similarly, under proposed OPEB standards, they would be incorporated into OPEB expense immediately. The effect of differences between the expected rate of return on plan investments and actual experience will be recognized as deferred pension outflows/inflows of resources or would be recognized as deferred OPEB outflows/inflows of	

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resources and included in expense in a systematic and rational manner over a closed period of five years, beginning with the current period.	
PLAN FIDUCIARY NET POSITION, PROJECTED—under the final 2012 pension standards, the future amount of plan fiduciary net position (that is, the market value of plan assets) as calculated in any given year. The proposed OPEB standards would similarly require the projection of plan fiduciary net position.	In essence, the projected plan fiduciary net position answers the question of whether the plan will have sufficient assets to pay all benefits for current plan participants.
PLAN SPONSOR—the entity that establishes a benefits plan. Usually, the sponsor is the employer or one of the employers who participates in the plan.	There can be some cases in which the plan sponsor is not an employer, such as when a state sets up a health care plan for retirees of school districts or local governments but the employees of the state do not participate.
PRE-FUNDED BENEFIT PLAN—a pension, health care, or other employee benefit plan that relies on money contributed in advance of when employees will use the benefit for which funding is contributed. The assets of pre-funded plans are invested. Investment gains contribute to the amount of money available to pay for benefits, while investment losses and administrative costs detract. This can be contrasted with a pay-as-you-go plan.	
PRESENT VALUE—see "actuarial present value."	
PROJECTED BENEFITS—the estimated cumulative cost of all benefit payments to be made by the plan, as calculated using a particular set of assumptions and made as of the measurement date. The final 2012 pension standards include within projected benefit estimates future salary increases and service credits. They also include cost-of-living adjustments that are automatic or take place	This number will be quite large, because it includes every payment that the plan would make into the future, but before those amounts are discounted to reflect the total present value of projected benefits, a much smaller (though still relatively large) number. That is, the dollar value of every year's benefits as projected to be paid by the plan is tallied here; given the time value of money, the present value of those payments will be much smaller. For additional

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in such a way that they are considered substantively automatic. Other automatic or substantively automatic postemployment benefit changes are also to be factored in. The old pension standards did not include ad hoc COLAs or benefit changes within projected benefits. Proposed OPEB standards would similarly treat projected OPEB benefits. However, the proposed OPEB standards also address issues that are not relevant to pensions: The Affordable Care Act's excise tax on high-cost health plans and how to assess health care-related costs. The proposed OPEB standards explicitly call on employers to factor the excise tax into projected benefit costs for purposes of accounting and financial reporting. With respect to health care costs, the proposed OPEB standards say that projected OPEB benefit payments would be based on claims costs or age-adjusted premiums approximating claims costs. Actuarial valuations generally don't report the projected benefits figure, but they should report the current per capita benefits cost as well as the health care inflation rate used to develop them.	information on discount rates and present value calculations, see those entries in this glossary.
PROJECTED UNIT CREDIT ACTUARIAL COST METHOD (PUC)—one of six actuarial cost methods, this method estimates the amount of benefits a worker will receive upon retirement and allocates an equal portion to each year of service. The actuarial accrued liability is the value of the portion of the benefits allocated to the employee's past service. The normal cost is the value of the benefit allocated to the coming year.	The new GASB pension standards permit the use of just one actuarial cost method for reporting purposes: the entry age method.
PROPORTIONATE SHARE OF COLLECTIVE TOTALS—under the final 2012 pension standards, the amount of collective net pension liability, collective pension expense, and collective	Under the final 2012 pension standards, a big change for cost-sharing plans consists of the requirement that employers show on the financial statements the proportionate share of the plan's liabilities. In the

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deferred outflows/inflows of pension-related resources that an employer participating in a cost-sharing multiple-employer plan should recognize in its own financial statements. Cost-sharing employers will also need to disclose additional proportionate share information within the financial statement section on required supplementary information (RSI), including a schedule of net pension liability and detail on contributions that are contractually required. The proportion used to calculate an individual employer's share of the collective totals will be based on the way the plan determines employer contributions to the plan. Proposed OPEB standards would similarly treat collective totals in OPEB contexts created by cost-sharing multiple-employer plans.	past, employers participating in cost-sharing multiple-employer plans recognized on their financial statements a figure based on the cumulative difference, in any, between the amounts they had been contractually obligated to contribute to the plan and the amounts they had actually contributed.
PROPOSED OPEB STANDARDS*—standards proposed in May 2014 for the accounting and financial reporting for state and local governments with respect to other postemployment benefits (OPEB), and for accounting for trusts for such benefits. The new standards were proposed in exposure drafts. The proposed standards for trusts would go into effect for the first fiscal year starting after December 15, 2015, while those for governments would become effective for the first fiscal year starting after December 15, 2016.	
PROPOSED PENSION STANDARDS*—new standards proposed in May 2014 for the accounting and financial reporting for state and local governments with respect to pensions and for the accounting for trusts. The new standards were proposed in an exposure draft and would amend some of the pension standards finalized in	

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2012 in Statement No. 67 and Statement No. 68. In addition, the proposals would create a new statement related to accounting and financial reporting for pension plans that are not administered through a trust. Proposals that amend the final 2012 pension standards would not require employers or plans to produce different actuarial measurements, so the GASB has indicated that the amendments would become effective for the first fiscal year after the formal approval of the proposed amendments.	
RECOGNITION—the process of incorporating information into financial statements. Recognition is not the same as disclosure. Information that is disclosed changes neither the assets nor liabilities of a government, while recognition of the same information does.	
REQUIRED SUPPLEMENTARY INFORMATION (RSI)—information required by accounting standards to be disclosed in financial statements. This is information that, according to the GASB, is "essential for placing basic financial statements and notes to basic financial statements in an appropriate operational, economic, or historical context." The final 2012 pension standards require employers to include more years' worth of historical data in RSI than they did under former standards. Sole and agent employers (with single employer or agent multiple-employer plans, respectively) will need to present schedules covering 10 years of changes in the net pension liability as of the measurement date. Employers will also have to include a 10-year schedule showing details related to contributions, whether determined by an	Like the notes to financial statements, this information can provide important contextual detail about what influenced the outcome of the valuation, and it can give additional data on funding-related issues related to the plan. Given that data for three valuations must be presented, it can also provide an interesting sense of how things are changing with the plan.

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actuary or a legislature, as of the end of the employer's fiscal year. Cost-sharing employers will present 10-year schedules, as of the employer's measurement date, of the employer's: a) proportion of the collective net pension liability; b) net pension liability; c) payroll for covered employees; and net pension liability as a percentage of covered payroll. If pension contributions are legislatively determined, then RSI will also include a 10-year schedule with details about the contributions (as of the end of the employer's fiscal year), including the required contribution and the employer's actual contribution compared to the requirement. Proposed OPEB standards would similarly address RSI in the OPEB context.	
SENSITIVITY ANALYSIS—a test performed by an actuary to determine how changing an assumption, method, or other factor would change the outcome of the valuation.	The most common sensitivity analyses are done on investment rate of return and health care cost trend, although sensitivity analyses of other assumptions and methods, including the actuarial cost method, can also be done.
SERVICE COST—see "normal cost." The final 2012 pension standards use the term "service cost," while proposed OPEB standards use the two terms interchangeably.	

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SINGLE-EMPLOYER PLAN—an employee benefit plan in which only one employer participates.	GASB standards distinguish between single-employer plans and agent multiple-employer plans, on the one hand, and cost-sharing multiple-employer plans, on the other.
SMOOTHING OF ASSETS—a process used by actuaries to recognize only a portion of the difference between any year's actual investment gains or losses from the assumed amount, so that volatility in returns and, therefore, liabilities and costs are reduced (but not eliminated). See "actuarial value of assets" for more detail. The final 2012 pension standards eliminate the use of smoothing for determining an employer's net pension liability, which will have to be based on the market value of assets. Although smoothing is no longer permitted in the determination of the asset value to be used for determining either the net pension liability or pension expense, the impact of any gains or losses is amortized over a closed five year period in determining pension expense. The final 2012 pension standards did not change the way other post-employment benefit (OPEB) plans (for retiree health and other non-pension benefits) smooth their assets, including for purposes of determining unfunded pension liabilities. However, proposed OPEB standards would institute changes in the OPEB context similar to those already applied in the pension context.	In the case of smoothing done over a five-year period, for example, it is common for a trust fund to calculate the difference between what it expected its investments to earn and what the investments actually earned during the year, and to reflect 20 percent of that difference in the plan's actuarial value of assets, with the balance reflected in increments of 20 percent per year over the next four years. In any one year in this example, the asset value would reflect a layering of 20 percent of the actuarial gain or loss from the last five years. When smoothed in, a very bad investment year from the past can still negatively affect the actuarial value of assets, even if the market value of assets increased greatly during the year. The opposite is also true: A good investment year from the past can boost the actuarial value of assets even when the current year's returns are bad. Even before the final 2012 pension standards, many pension plans smoothed their investment returns over five years. However, an important difference in the smoothing between the former practice and the new standards is that former standards allowed employers to smooth over five years and then amortize over up to 30 years the amount being smoothed in.

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SOLE EMPLOYER—an employer with a single employer plan.	GASB standards distinguish between sole employers and agent employers, on the one hand, and cost-sharing employers on the other.
SPECIAL FUNDING SITUATION—a circumstance in which one government entity is legally responsible for making the employer contribution to the defined benefit pension or OPEB plan on behalf of a different government entity. Such would be the case, for example, when a state government makes some or all of the pension contributions for a school district. The entity making the contribution on behalf of another government is called a "nonemployer contributing entity." Under former pension accounting standards, nonemployer contributing entities generally followed the employer provisions related to the measurement and recognition of pension expense and pension liability contained in GASB Statement No. 27. The final 2012 pension standards addressed two situations differently: • If the nonemployer contributing entity contribution is conditional on one or more events or circumstances unrelated to the pensions, such as the requirement to contribute a certain percentage of a revenue stream; or • If the nonemployer contributing entity contribution is unconditional, such as a requirement to contribute based on a defined percentage of payroll or a defined proportion of the employer's required contributions. In the case of conditional funding: • For accounting purposes, this is treated similar to the way a grant would be handled. The employer on whose behalf the contribution is	In developing the final 2012 pension standards, the GASB considered whether nonemployer governments that contribute to pensions on behalf of other governments were taking responsibility for a portion of the unfunded liability or if they were simply committing to make a contribution. This question arises, for example, in cases in which a state government (the nonemployer government) contributes on behalf of a school district (the employer). The GASB developed its proposal consistent with the idea that when the nonemployer entity is legally required to contribute and the contribution is not conditional upon factors unrelated to the pension, the nonemployer entity was, in fact, taking on part of the unfunded liability. Under the new pension accounting standards, state governments or other entities that contribute on behalf of school districts will show on their own financial statements larger unfunded liabilities than under former standards, with greater volatility in pension expense. There are some special funding situations, such as when local governments pay no more than the normal cost, in which the local governments might not be allocated any of the net pension liability or other measures.

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made will recognize the contribution as revenue and will recognize its net pension liability, pension expense, and deferred outflows/inflows of resources on its financial statements (either fully or, for cost-sharing employers, as its proportionate share). The nonemployer entity would record the contribution a non-pension expense. In the case of unconditional funding: • For accounting purposes, the non-employer entity will essentially be considered to have taken on a proportionate share of the employer's pension liability, pension expense, and deferred outflows/inflows of resources, and it will account for that proportionate amount in its own government-wide financial statements. • In essence, the employer will end up showing in its financial statements its net pension liability, pension expense, and deferred outflows/inflows of resources, subtracting out the amount contributed by the non-employer entity. Technically, the employer will determine its net pension liability and deferred outflows/inflows, net of the non-employer entity's proportionate share. The employer will recognize the full amount of its pension expense and revenue equal to the portion of non-employer's pension expense that is related to the employer's employees. Special funding situations will carry with them their own requirements for addressing the effects of a change in the proportion used by the non-employer entity for calculating its proportionate share of collective amounts, and for differences between the non-employer's actual contribution and its proportionate share of the contributions. They will be treated as deferred inflows/outflows of resources and factored into the non-employer entity's pension expense over a closed period representative of the	

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expected remaining service lives of active employees. Similarly, special funding situations would have particular requirements for content of footnotes and required supplemental information. Proposed OPEB standards include similar provisions related to special funding situations, although the context created by health benefits gives rise to additional circumstances that merit consideration. For example, in the OPEB context, a nonemployer contributing entity could face the unconditional requirement to pay for health insurance premiums as they come due.	
STATEMENT NO. 25—issued by the Governmental Accounting Standards Board (GASB) in November 1994, a set of accounting standards for state and local governments that establishes financial reporting standards for defined benefit pension plans and, for defined contribution plans, for notes to financial statements. The statement requires defined benefit plans to present current financial information about plan assets and financial activities (including the market value and makeup of assets). In addition, plans must present, from a long-term perspective, schedules of historical data going back at least six years that show actuarially determined information about funded status, funding progress, and employer contributions.	
STATEMENT NO. 27—issued by the Governmental Accounting Standards Board (GASB) in November 1994, a set of accounting standards that covers the way state and local governments account for pension expenses and expenditures, including their liabilities, assets, notes to financial statements and, where applicable, required supplementary information.	

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STATEMENT NO. 43—a set of accounting standards for state and local government retiree health care plans and trust funds that covers other postemployment benefits, including retiree health care. The statement, which was issued by the Governmental Accounting Standards Board (GASB) in April 2004, deals with measuring, recognizing, and reporting liabilities and expenses. Proposed OPEB standards would replace Statement No. 43.	
STATEMENT NO. 45—a set of accounting standards for state and local governments, including school districts, that covers other postemployment benefits, including retiree health care. The statement, which was issued by the Governmental Accounting Standards Board (GASB) in June 2004, deals with measuring, recognizing, and reporting liabilities, assets, expenses, and expenditures. Proposed OPEB standards would replace Statement No. 45.	
STATEMENT NO. 47—a set of accounting standards for state and local governments that covers termination benefits, as opposed to other postemployment benefits. The statement, which was issued by the Governmental Accounting Standards Board (GASB) in June 2005, deals with measuring, recognizing, and reporting liabilities, assets, expenses, and expenditures.	Keep in mind that the distinction between termination benefits and other postemployment benefits, including retiree health care, can in some cases be difficult to determine.
STATEMENT NO. 50—a set of accounting standards related to the content of notes to the financial statements or required supplementary information included in the financial statements of employers and pension plans. Issued in 2007, Statement No. 50 amended Statement No. 25 and	

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Statement No. 27 and aligned reporting standards related to pension plans with reporting standards related to other postemployment benefits (OPEB). The final 2012 pension standards replaced Statement No. 50.	
STATEMENT NO. 67—approved in June 2012, a set of accounting standards related to the financial reporting done by pension plans. The statement also replaced Statement No. 50.	This statement amends Statement No. 25.
STATEMENT NO. 68—approved in June 2012, a set of accounting standards related to accounting and financial reporting for employers with pension plans using an irrevocable trust. The statement also replaced Statement No. 50.	This statement amends Statement No. 27.
SUBSTANTIVE PLAN—the OPEB benefit plan as understood by plan members and the employer (or employers). The substantive plan can vary from the written plan to the extent that actual practice or oral promises vary from the plan as written. Statement No. 45 requires compliant financial statements to be based on the substantive plan. Proposed OPEB standards continue to require projected benefit costs to be based on the substantive plan.	It is possible that retiree health care benefits or other OPEB have been provided in ways not formalized in writing. Most retiree health care plans have operated on a pay-as-you-go basis and have not historically conducted actuarial valuations, so all plan provisions may not have been codified in writing. As a result, it could be a lot of work for an actuary to gather accurate detail about a plan's benefit provisions. Pension plans are almost always in writing in part since that is an IRS requirement that does not exist for OPEB plans. However, the substantive plan requirement also applies to pensions in circumstances where past practices or recurring changes suggest that the actual benefits to be paid from the plan are different (generally greater) than those described in the plan document.
TERMINATION BENEFITS—benefits offered by an employer with the purpose of hastening an employee's separation from employment, whether voluntary or involuntary. Such benefits are primarily accounted for under GASB Statement	There are cases in which an employee's acceptance of termination benefits would affect an existing OPEB plan. In such instances, the termination benefits would be accounted for under the OPEB-related GASB statements. There may be times,

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No. 47, not statements that deal with retiree health care and other OPEB benefits.	therefore, when an actuary's professional judgment is required to determine if a benefit is a termination benefit or OPEB.
TIME PERIODS—the past, the present, and the future, or the three segments of time of interest to actuaries. After estimating the future cost of a plan's benefits and then discounting that cost, actuaries have to decide how much of that cost is due to: 1) Work already done by active and retired employees (and plan participants who are neither active nor retired but still have a claim on future benefits); 2) Work done during the current period (the time period covered by the actuarial valuation, which is often the fiscal year most recently ended); and 3) Work yet to be done by active employees (or, potentially, employees yet to be hired). The process used by actuaries to figure out how much of the cost goes to which time period is called allocation (or attribution).	The assumptions used and actuarial cost method chosen to allocate costs to the three time periods can make a difference in how much employers are told they should contribute. After all, if a cost method ends up allocating more of the future cost of benefits to the past time period, the amount of the liabilities reported will be higher. That is because actuaries calculate the cost of benefits for work that has not yet been completed, but they don't include it in the liability calculations.
TIME VALUE OF MONEY—a reference to the fact that a dollar received today is more valuable than the same dollar received in the future. For a valuation, actuaries will first determine how much benefits are expected to cost in the future. That is done by applying actuarial assumptions—like how long people will live, their marital status, changes in compensation (for pension plans that use salary as a basis for determining benefits), and the cost of health care benefits in the future (for a retiree health care plan). Then, actuaries "discount" that value back to today to get what's called the actuarial present	For an example of how a present value calculation would take place, see "discount rate."

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value or, simply, the "present value." When we see actuarial accrued liabilities (AAL) or unfunded actuarial accrued liabilities (UAAL) reported in a valuation, those figures have been determined by discounting and arriving at present values, not by using figures that reflect what the cost is estimated to actually be in the future.	

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TOTAL OPEB LIABILITY*—under proposed OPEB accounting standards, the amount of an employer's OPEB liability that is attributed to work completed by employees in the past. Total OPEB liability is what current OPEB accounting standards refer to as the actuarial accrued liability (AAL). More technically, total OPEB liability is the portion of the present value of projected benefit payments that is attributed to employees' past periods of service. The total OPEB liability is a key to the calculation of the net OPEB liability (NOL), as the NOL is the difference between the total OPEB liability and plan fiduciary net position. When changes in economic and demographic assumptions affect an employer's total OPEB liability, and when there is a difference between assumptions and actual experience, the change is recognized over a closed period representing the average expected remaining service lives of active and inactive employees, including retirees.	Under the proposed OPEB standards, total OPEB liability would replace actuarial accrued liability (AAL), although total OPEB liability and actuarial accrued liability would not necessarily be calculated in the same way.
TOTAL PENSION LIABILITY—under the final 2012 pension standards, the amount of an employer's pension liability that is attributed to work completed by employees in the past. Total pension liability is what former standards referred to as the actuarial accrued liability (AAL). More technically, total pension liability is the portion of the present value of projected benefit payments that is attributed to employees' past periods of service. The total pension liability is a key to the calculation of the net pension liability (NPL), as the NPL is the difference between the total pension liability and plan fiduciary net position. When changes in economic and demographic	Under the final 2012 pension standards, total pension liability will replace actuarial accrued liability (AAL), although total pension liability and actuarial accrued liability would not necessarily be calculated in the same way.

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assumptions affect an employer's total pension liability, and when there is a difference between assumptions and actual experience, the change is recognized over a closed period representing the average remaining service lives of active and inactive employees, including retirees. employees.	
TOTAL PRESENT VALUE OF PROJECTED BENEFITS—the value of all benefits that are expected to be paid to retirees and active employees based on past service as well as future expected service.	This figure will be bigger than the actuarial accrued liability, because it includes a projection of the benefits to be accrued for work that has yet to be done by current employees.
TRUE COST—with respect to a pension or OPEB plan, the value of the benefits paid minus the investment earnings on funds set aside to pay for the benefits. In an actuarial valuation, the actuary uses many assumptions to estimate the true cost of the plan, but the true cost can only be determined when the plan ends. If the actuarial assumptions or actuarial cost method changes, the estimated cost will change, but the true cost would only change if the benefits offered by the plan changed or the investment earnings changed.	The idea of a plan's true cost draws attention to the conceptual distinction between actuarial values, costs, and liabilities and their real counterparts. Keep in mind that any actuarial valuation is an estimate of the true cost of the plan. The estimate is only as good as the assumptions about many unknown future events. The better the assumptions, the better the estimate. For that reason, it can be useful to evaluate the reasonableness of the assumptions used.
TRUST THAT MEETS THE SPECIFIED CRITERIA—under pension standards and proposed OPEB standards, trusts with three characteristics and to which particular standards apply: • Contributions from employers and nonemployer contributing entities to the plan and earnings on those contributions are irrevocable. • Plan assets are dedicated to providing benefits to plan members in accordance with the benefit terms. • Plan assets are legally protected from the	The final 2012 pension standards apply to employers with trusts that meet this definition, but the proposed OPEB standards apply to employers that do and don't have such trusts. One key distinction in the OPEB context between employers with and without trusts is that the former would have no plan fiduciary net position to subtract from total OPEB liability to determine net OPEB liability. Similarly, there would be no changes to plan fiduciary net position to be factored into OPEB expense. Proposed pension standards—issued in 2014 along

Term and Definition	Observations
creditors of employers, nonemployer contributing entities, the plan administrator, and the plan members. The final 2012 pension standards consider "arrangements equivalent to trusts" as trusts for purposes of determining which standards apply, but the proposed OPEB standards do not refer to equivalent arrangements.	with proposed OPEB standards—extend the concepts under GASB 68 to pension plans that do not have a trust that meets the specified criteria. Such plans would also not have a fiduciary net position to subtract from the total pension liability to determine the net pension liability for that plan.
UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)—the present value of future benefit costs allocated in an actuarial valuation to service prior to the valuation year, less any assets that have been set aside and dedicated to paying for those future benefits. The actuarial value of assets, not the market value of assets, was often used as the offset in this calculation. In essence, the UAAL is the amount of an employer's liability for work already completed by current and former employees, minus assets. Although the UAAL will no longer be used for GASB-related pension accounting and reporting purposes, it will still be used for OPEB accounting and reporting—until proposed OPEB standards become effective. In addition, it may still be used by employers in the development of pension- or OPEB-funding measures, regardless of the effective date of new standards. Former accounting standards did not require employers to recognize on their financial statements the full pension-related UAAL. In contrast, the final 2012 pension standards require sole and agent employers to recognize their full unfunded liability, called net pension liability (NPL), on their financial statements. Cost-sharing employers will recognize their proportionate amount of the NPL on their financial statements. Proposed OPEB standards would establish similar changes in the OPEB context.	

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VALUATION DATE—the "as of" date of an actuarial valuation. The valuation date is the date on which the normal cost, actuarial accrued liability (or total pension liability under the new GASB pension standards), and other actuarial calculations are determined. Proposed OPEB standards would establish a similar definition in the OPEB context.	Under the new GASB pension standards, the measurement date and the valuation date could be different. The valuation date is also usually the date as of which census data is collected.
VESTING—earning a non-forfeitable right to benefits, usually by working at least a minimum number of years. Depending on the plan, a worker might partially vest if fewer years are worked.	A vested benefit is one that the employee will receive whether or not the employee completes additional work for the employer. The amount of time it takes a public employee to vest can vary from one plan to another.