



ACTUARIAL STANDARDS BOARD

**Actuarial Standard
of Practice
No. 44**

**Selection and Use of Asset Valuation Methods
for Pension Valuations**

**Developed by the
Pension Committee of the
Actuarial Standards Board**

**Adopted by the
Actuarial Standards Board
September 2007
(Clarified September 2009)**

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TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in the Selection and Use of Asset Valuation Methods for Pension Valuations

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 44

This document contains the clarified version of ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*.

Background

ASOP No. 44 was issued as a new standard in September 2007, with an effective date of March 15, 2008. The ASB recently became aware of a need for clarification of the wording in section 3.4.1, Bias. The intent of the section is to require disclosure of the existence of systematic bias in the asset valuation method only when such bias is, in the actuary's professional judgment, significant. While the first sentence of section 3.4.1 accurately communicates this intent, the second sentence does not, creating some confusion among practitioners. Accordingly, the ASB has clarified the standard by adding the word "significantly" before the word "skewed" in the second sentence of section 3.4.1.

The ASB voted to adopt this clarification on September 21, 2009 effective immediately for reports issued after that date.

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The ASB establishes and improves standards of actuarial practice. These ASOPs identify what the actuary should consider, document, and disclose when performing an actuarial assignment.

The ASB's goal is to set standards for appropriate practice for the U.S.

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September 2007

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in the Selection and Use of Asset Valuation Methods for Pension Valuations

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 44

This document contains the final version of ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*.

Background

Pension Plan Recommendations A, B, and C were adopted and amended by the American Academy of Actuaries (Academy) during the period 1976 to 1983. In 1988, *Recommendations for Measuring Pension Obligations* was promulgated as an ASOP by the Interim Actuarial Standards Board and the Board of Directors of the American Academy of Actuaries. In 1990, the ASB republished that standard as ASOP No. 4, *Recommendations for Measuring Pension Obligations*. In October 1993, ASOP No. 4 was reformatted and published in the uniform format adopted by the ASB, with a title change, *Measuring Pension Obligations*.

The selection of economic and noneconomic assumptions, the actuarial cost method, and the asset valuation method are all key elements in the valuation of pension obligations. The evolution of actuarial practice made it necessary to update the guidance in these areas. The following provide such guidance:

1. ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*;
2. ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*;
3. This ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*; and
4. ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, which ties together the other three standards, provides guidance on actuarial cost methods, and addresses overall considerations for measuring pension obligations and determining plan costs or contributions.

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The comment letters on the exposure drafts of this ASOP led the Pension Committee to conclude that both the use of market value and the use of a variety of asset valuation methods other than market value are generally accepted actuarial practices. In recognition of the many circumstances in which the actuary does not select the asset valuation method and the many different asset valuation methods that are in widespread use, this ASOP provides guidance in selecting appropriate methods and, in some instances, requires disclosure of characteristics of the asset valuation method, regardless of who selected it.

The ASOP also separates considerations relevant to the choice of any asset valuation method, including market value, from those considerations that are relevant only to asset valuation methods other than market value.

This ASOP is intended to accommodate the concepts of financial economics as well as traditional actuarial practice.

First Exposure Draft

The first exposure draft of this ASOP, then titled *Selection of Asset Valuations for Pension Valuations*, was issued in December 2001, with a comment deadline of May 15, 2002.

Thirty-four comment letters were received and considered in developing modifications that were reflected in the second exposure draft.

Second Exposure Draft

The second exposure draft of this ASOP was issued in October 2003 with a comment deadline of April 30, 2004. Fifteen comment letters were received and considered in developing modifications that were reflected in the third exposure draft.

Third Exposure Draft

The third exposure draft of this ASOP was issued in September 2005 with a comment deadline of February 28, 2006. Five comment letters were received and considered in developing modifications that were reflected in the fourth exposure draft.

Fourth Exposure Draft

The fourth exposure draft of this ASOP was issued in August 2006 with a comment deadline of March 1, 2007. The Pension Committee carefully considered the five comment letters received. The key changes made to the final standard in response to these comment letters are as follows:

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1. Section 3.4.1(b), Bias, which addressed possible bias in the *de facto* asset valuation method associated with changes in the asset valuation method, was removed. Instead, section 4.1.3, Changes in Asset Valuation Method, was expanded to require the actuary to disclose the reasons for any changes in asset valuation method.
2. Section 4.1.5, Bias, was revised to provide an example of a disclosure that describes significant systematic bias as a characteristic of an asset valuation method without using the word “bias.”

In addition, a number of clarifying changes were made to the text. Please see appendix 2 for a detailed discussion of the comments received and the reviewers’ responses.

Note that the section on Prescribed Statement of Actuarial Opinion (formerly section 4.3) has been deleted due to the amended *Qualifications Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States* promulgated by the American Academy of Actuaries.

The Pension Committee thanks everyone who took the time to contribute comments and suggestions on the exposure drafts.

The Pension Committee thanks former committee members Thomas P. Adams, Arthur J. Assantes, Lawrence Deutsch, David L. Driscoll, Bruce C. Gaffney, Lawrence A. Golden, Marilyn F. Janzen, Daniel G. Laline Jr., John F. Langhans, Michael B. Preston, William A. Reimert, Phillip A. Romello, Joan M. Weiss, and Ruth F. Williams for their assistance with drafting this ASOP.

The ASB voted in September 2007 to adopt this standard.

Pension Committee of the ASB

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ACTUARIAL STANDARD OF PRACTICE NO. 44

**SELECTION AND USE OF ASSET VALUATION METHODS
FOR PENSION VALUATIONS**

STANDARD OF PRACTICE

Section 1. Purpose, Scope, Cross References, and Effective Date

- 1.1 Purpose—This actuarial standard of practice (ASOP) provides guidance to the actuary when performing professional services with respect to the following:
- a. selection of an asset valuation method for purposes of a defined benefit pension plan actuarial valuation; and
 - b. appropriate disclosures regarding the asset valuation method used.

- 1.2 Scope—This standard applies to the actuary when performing professional services with respect to selecting or using an asset valuation method for any defined benefit pension plan that is not a social insurance program as described in section 1.2, Scope, of ASOP No. 32, *Social Insurance* (unless an ASOP on social insurance explicitly calls for application of this standard). Throughout this standard, any reference to selecting an asset valuation method also includes giving advice on selecting an asset valuation method. For instance, the actuary may advise the plan sponsor on selecting an asset valuation method, where the plan sponsor is responsible for selecting the method.

To the extent that the guidance in this standard may conflict with ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, ASOP No.4 will govern.

The actuary should comply with this standard except to the extent it may conflict with applicable law (statutes, regulations, and other legally binding authority). If compliance with applicable law requires the actuary to depart from the guidance set forth in this standard, the actuary should refer to section 4 regarding deviation.

- 1.3 Cross References—When this standard refers to the provisions of other documents, the reference includes the referenced documents as they may be amended or restated in the future, and any successor to them, by whatever name called. If any amended or restated document differs materially from the originally referenced document, the actuary should consider the guidance in this standard to the extent it is applicable and appropriate.

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- 1.4 Effective Date—This standard will be effective for any actuarial valuation with a measurement date on or after March 15, 2008.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice.

- 2.1 Actuarial Valuation—The measurement of relevant pension obligations and, when applicable, the determination of the actuarial value of assets, periodic costs, or contributions.
- 2.2 Actuarial Value of Assets—The value of pension plan investments and other property, used by the actuary for the purpose of an actuarial valuation (sometimes referred to as *valuation assets* or *market-related value of assets*).
- 2.3 Asset Valuation Method—A method used by the actuary to determine the actuarial value of assets.
- 2.4 Market Value—The price that would be received to sell an asset in an orderly transaction between market participants at the measurement date (sometimes referred to as *fair value*).
- 2.5 Measurement Date—The date as of which the actuarial value of assets is determined (sometimes referred to as the *valuation date*).
- 2.6 Prescribed Asset Valuation Method—A specific asset valuation method that is mandated by law, regulation, or other binding authority. For purposes of this standard, the plan sponsor would be considered a binding authority to the extent that law, regulation, or accounting standards give the plan sponsor responsibility for selecting such an asset valuation method.
- 2.7 Principal—A client or employer of the actuary.

Section 3. Analysis of Issues and Recommended Practices

- 3.1 Overview—The measurement of a pension plan's assets and the relationship between the plan's assets and its obligations are integral to the valuation process. The asset valuation method potentially affects the timing and amount of future plan costs or contributions and the plan's ability to satisfy its benefit obligations. Consequently, the actuary should use professional judgment when selecting an asset valuation method.
- 3.2 Considerations in Selecting a Method—The actuary should consider the following factors

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when selecting an asset valuation method:

- 3.2.1 Purpose and Nature of the Measurement—The actuary should consider the purpose and nature of the measurement when selecting an asset valuation method. It may be appropriate for the actuary to select different methods for different purposes. For example, for purposes of determining contributions to an ongoing plan, the actuary may consider selecting an asset valuation method that smoothes the effects of volatility in market value on the pattern of contributions. As a second example, for measurements in conjunction with a plan termination, the actuary should consider selecting an asset valuation method that produces an actuarial value of assets that represents the value of assets expected to be available for distribution (i.e., net of any significant liquidation or surrender charges reasonably expected to be incurred).
- 3.2.2 Objectives of the Principal—The actuary should consider the objectives of the principal to the extent such objectives have been communicated to the actuary, are relevant to, and not inconsistent with, the purpose of the measurement, and are consistent with the actuary's responsibilities under the *Code of Professional Conduct*. For example, when the principal is a plan sponsor and the purpose of the measurement is to determine annual contributions, the actuary should consider plan sponsor objectives such as a desire for stable or predictable costs or contributions, or a desire to achieve a target funding level within a specified time frame.
- 3.2.3 Multiple Asset Valuation Methods—The actuary may select different asset valuation methods for different classes of assets. For example, the actuary may determine that it is appropriate to use a smoothing method for equity investments and market value for fixed income investments.
- 3.2.4 Adjustment of Asset Values for Timing Differences—Sometimes asset values as of the measurement date are not available. In these situations, the actuary should select an asset valuation method that adjusts the value of the assets for the time between the date as of which asset values are available and the measurement date. Such an asset valuation method may reference appropriate published asset indices or involve an adjustment using another reasonable method.
- 3.2.5 Use of Actuarial Assumptions—To the extent that actuarial assumptions are used as part of an asset valuation method, the actuary should be guided by ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, and No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*, in selecting those assumptions. Furthermore, the assumptions should be consistent with the other assumptions used in the actuarial valuation.

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It may be appropriate for the actuary to select different assumptions for different purposes. For example, the actuary may project asset values for a few months using an assumption that differs from a long-term expected return assumption.

3.2.6 Additional Considerations—When selecting an asset valuation method, the actuary should consider other known, relevant factors such as the following:

- a. the plan's investment policy and actual investment practices;
- b. the characteristics of the asset classes in which the plan is invested (for example, the volatility of the return of each asset class and the correlation of the return with changes in the value of plan obligations);
- c. the plan's expected future cash flows and liquidity needs;
- d. the period of time over which the plan's assets are expected to be held; and
- e. the characteristics of the method used to measure the pension obligation (for example, whether the pension obligation is measured on a mark-to-market basis).

3.3 Selecting Methods Other Than Market Value—If the considerations in section 3.2 have led the actuary to conclude that an asset valuation method other than market value may be appropriate, the actuary should select an asset valuation method that is designed to produce actuarial values of assets that bear a reasonable relationship to the corresponding market values. The qualities of such an asset valuation method include the following:

- a. The asset valuation method is likely to produce actuarial values of assets that are sometimes greater than and sometimes less than the corresponding market values.
- b. The asset valuation method is likely to produce actuarial values of assets that, in the actuary's professional judgment, satisfy both of the following:
 1. The asset values fall within a reasonable range around the corresponding market values. For example, there might be a corridor centered at market value, outside of which the actuarial value of assets may not fall, in order to assure that the difference from market value is not greater than the actuary deems reasonable.
 2. Any differences between the actuarial value of assets and the market value are recognized within a reasonable period of time. For example, the actuary might use a method where the actuarial value of assets converges

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toward market value at a pace that the actuary deems reasonable, if the investment return assumption is realized in future periods.

In lieu of satisfying both (1) and (2) above, an asset valuation method could satisfy section 3.3(b) if, in the actuary's professional judgment, the asset valuation method either (i) produces values within a sufficiently narrow range around market value or (ii) recognizes differences from market value in a sufficiently short period.

A plan's investment policy may provide that fixed-income securities are expected to be held to maturity and holding such securities to maturity is not inconsistent with the plan's investment practice and expected cash flow needs. In such situations, an asset valuation method that uses amortized cost for such securities is deemed to bear a reasonable relationship to market value relative to those assets.

3.4 Using Methods Other Than Market Value—When using an asset valuation method other than market value, regardless of who selected the method, the actuary should consider the following:

3.4.1 Bias—If the asset valuation method has significant systematic bias, the actuary should disclose such bias in accordance with section 4.1. An asset valuation method has significant systematic bias if, in the actuary's professional judgment, the method's design is expected to produce a distribution of actuarial values that is significantly skewed toward understatement or overstatement relative to the corresponding market values.

The following paragraphs are intended to clarify the meaning of bias for purposes of this standard.

- a. An asset valuation method does not have significant systematic bias solely because it has one or both of the following characteristics:
 1. the asset valuation method would produce actuarial values of assets that are consistently less than (or greater than) the corresponding market values during sustained periods of increasing (or decreasing) market values; or
 2. the asset valuation method would produce actuarial values of assets that approach the corresponding market values asymptotically, assuming the investment return assumption is realized in future periods.
- b. Examples of asset valuation methods that have significant systematic bias include the following:

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1. an asset valuation method that is designed to produce a value consistently below market value if, in all time periods relevant to the application of the asset valuation method, the actual return on market value of the assets subject to the asset valuation method were equal to the actuary's expected return on those assets (such as a method that immediately recognizes interest and dividends but defers recognition of realized and unrealized capital gains and losses); and
2. an asset valuation method that produces an actuarial value of assets equal to a smoothed value that is subject to an asymmetrical corridor around market value, such as not more than 105% of market value or less than 80% of market value.

3.4.2 Different Treatment of Realized and Unrealized Gains and Losses—If the asset valuation method treats realized gains and losses differently from unrealized gains and losses, the actuary should disclose this difference in accordance with section 4.1. An asset valuation method treats realized gains and losses differently from unrealized gains and losses if it would produce different results depending upon whether an asset is sold or held. When such a method is used, an increase in asset turnover, as might happen if the plan changes investment managers, can cause a significant change in the actuarial value of assets.

Examples of asset valuation methods that treat realized gains and losses differently from unrealized gains and losses include the following:

- a. an asset valuation method that uses the average of book value and market value;
- b. an asset valuation method that immediately recognizes realized gains and losses and gradually recognizes unrealized gains and losses; and
- c. an asset valuation method that uses the product of the book value of assets on the measurement date multiplied by a five-year average of the ratio of market value to book value.

3.5 Assets that are Difficult to Value—Some assets do not have a readily established market value, such as certain insurance contracts, real estate, or other property. In determining the value of such assets, if audited financial statements do not provide an appropriate market value, the actuary may consider appraisals by qualified independent experts, recent sales of similar assets, the present value of reasonably expected future cash flows, or other appropriate methods. The value, so determined, may be treated as market value for purposes of this standard.

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- 3.6 Reviewing the Asset Valuation Method—Once an asset valuation method has been selected for a particular purpose, at each subsequent measurement date, the actuary should consider whether the selected asset valuation method continues to be appropriate for that purpose. The actuary is not required to do a complete reassessment at each measurement date. However, if a significant change in the principal's objectives has been communicated to the actuary (see section 3.2.2), the actuary should review the appropriateness of the asset valuation method. Furthermore, if the asset valuation method is other than market value, the actuary should review the appropriateness of the asset valuation method if an event such as the following has occurred:
- a. a significant change in the plan provisions affecting cash flow (such as adding a lump sum payment option, or freezing or terminating the plan), in the actuarial cost method or funding policy, or in participant demographics;
 - b. a significant change in the plan's investment policy (such as adding a new asset class or significantly changing the proportion of assets invested in each class);
 - c. a prolonged significant deviation from market value; or
 - d. changes in relevant law, regulations, or accounting guidance.
- 3.7 Level of Refinement—The actuary should exercise professional judgment in establishing an appropriate balance between refined methodology and materiality. The actuary is not required to use a particular type of valuation method or to select a highly refined method when it is not expected to produce materially different results than would a less refined method. For example, it may be reasonable to assume that benefit payments are evenly distributed throughout the year, rather than reflecting the actual timing of each payment.
- 3.8 Reliance on Data or Other Information Supplied by Others—When relying on data or other information supplied by others, the actuary should refer to ASOP No. 23, *Data Quality*, for guidance.
- 3.9 Documentation—The actuary should prepare and retain documentation in compliance with the requirements of ASOP No. 41, *Actuarial Communications*. The actuary should also prepare and retain documentation to demonstrate compliance with the disclosure requirements of section 4.1.

Section 4. Communications and Disclosures

- 4.1 Disclosures in Actuarial Reports—When issuing an actuarial report, as defined in ASOP No. 41, the actuary should follow the applicable disclosure requirements in ASOP No. 4, *Measuring Pension Obligations and Determining Plan Costs or Contributions*, and

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ASOP No. 23. In addition, the actuary should disclose the following:

- 4.1.1 Asset Valuation Method—The actuary should describe each asset valuation method used in the measurement in sufficient detail to permit another actuary qualified in the same practice area to reproduce the calculation if the actuary were provided with the necessary asset data.
- 4.1.2 Market Value and Actuarial Value of Assets—The actuary should disclose the market value and actuarial value of assets. If multiple asset valuation methods are used, in accordance with section 3.2.3, the actuary should disclose the market value and actuarial value of the assets subject to each asset valuation method. With respect to assets whose market value is determined under section 3.5, disclosure shall include the amount of such assets and a description of how the value of such assets was determined.
- 4.1.3 Changes in Asset Valuation Method—The actuary should describe changes, if any, in the asset valuation method from the method previously used for the same measurement purpose and the reasons for those changes. The actuary should disclose the general effects of any such changes in words or by numerical data, as appropriate.
- 4.1.4 Prescribed Asset Valuation Method—The actuary's communication should state the source of any prescribed asset valuation method, including any assumption used as part of the asset valuation method. In addition, in accordance with ASOP No. 4, the actuary should evaluate whether a prescribed asset valuation method selected by the plan sponsor is reasonable for the purpose of the measurement and, if necessary, make appropriate disclosure.
- 4.1.5 Bias—If, in the actuary's professional judgment, the asset valuation method has significant systematic bias toward understatement or overstatement relative to market value, as described in section 3.4.1, the actuary should disclose the direction of the bias. For example, if the asset valuation method used to determine the plan's contribution requirements is one of the methods described in section 3.4.1(b), the disclosure might state the following: "A characteristic of this asset valuation method is that, over time, it is more likely to produce an actuarial value of assets that is less than the market value of assets."
- 4.1.6 Different Treatment of Realized and Unrealized Gains and Losses—If the asset valuation method treats realized gains and losses differently from unrealized gains and losses, the actuary should disclose this characteristic and the possible consequences of the use of such an asset valuation method. For example, the disclosure might state the following: "This asset valuation method treats unrealized gains and losses differently from realized gains and losses. Thus, asset

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turnover can cause a significant change in the actuarial value of assets.”

- 4.2 Disclosures in Other Actuarial Communications—The actuary should be guided by ASOP No. 41 when considering which of the disclosures in section 4.1 should be included in an actuarial communication that is not in the form of an actuarial report.
- 4.3 Deviation—If, in the actuary’s professional judgment, the actuary has deviated materially from the guidance set forth elsewhere in this standard, the actuary can still comply with this standard by applying the following sections as appropriate:
 - 4.3.1 Material Deviations to Comply with Applicable Law—If compliance with applicable law requires the actuary to deviate materially from the guidance set forth in this standard, the actuary should disclose that the assignment was prepared in compliance with applicable law, and the actuary should disclose the specific purpose of the assignment and indicate that the work product may not be appropriate for other purposes. The actuary should use professional judgment to determine whether additional disclosure would be appropriate in light of the purpose of the assignment and the intended users of the actuarial communication.
 - 4.3.2 Other Material Deviations—The actuary’s communication should disclose any other material deviation from the guidance set forth in this standard. The actuary should consider whether, in the actuary’s professional judgment, it would be appropriate and practical to provide the reasons for, or to quantify the expected impact of, such deviation. The actuary should be prepared to explain the deviation to a principal, another actuary, or other intended users of the actuary’s communication. The actuary should also be prepared to justify the deviation to the actuarial profession’s disciplinary bodies.

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Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes, but is not part of the standard of practice.

Background

Historically, actuaries have selected various methods to determine the actuarial value of pension plan assets for different measurement purposes.

Current Practices

Actuaries use both market value and asset valuation methods other than market value. The latter asset valuation methods are usually used for smoothing the effects of volatility in market value on plan costs or contributions, or achieving consistency between the valuation of assets and obligations.

An asset valuation method that is intended to smooth the effects of market volatility typically reflects the market value of plan assets in some fashion. This is accomplished through a variety of commonly used techniques, such as the following:

1. smoothing some components of the return on market value or the difference between actual returns on market value and expected returns;
2. requiring that the actuarial value of assets fall within a specified range, such as 80% to 120%, of the market value; or
3. recognizing differences between the actuarial and market values of assets over a specified time schedule.

Actuaries often select different asset valuation methods for different purposes, such as for determining cash contribution requirements, determining employer accounting costs, or assessing the plan's funded status upon plan termination.

Asset valuation methods have been the subject of growing attention, influenced by regulatory trends and consideration of the concepts of financial economics. Actuaries who apply a financial economics approach generally advocate the use of market measurement of assets, while traditional actuarial practice includes both the use of market value and the use of a variety of asset valuation methods other than market value.

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Appendix 2

Comments on the Fourth Exposure Draft and Responses

The fourth exposure draft of this proposed ASOP was issued in August 2006 with a comment deadline of March 1, 2007. Five comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term “commentator” may refer to more than one person associated with a particular comment letter. The Pension Committee carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the proposed changes. Summarized below are the significant issues and questions contained in the comment letters and the responses to each. The term “reviewers” includes the Pension Committee and the ASB. Unless otherwise noted, the section numbers and titles used below refer to those in the fourth exposure draft.

GENERAL COMMENTS	
Comment	Several commentators suggested various editorial changes in addition to those addressed specifically below.
Response	The reviewers implemented such changes if they enhanced clarity and did not alter the intent of the section.
SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.4, Effective Date	
Comment	One commentator believed the effective date should be extended until regulations concerning asset valuation methods are issued under the Pension Protection Act of 2006.
Response	The reviewers disagree and made no change. Section 1.2 addresses how to reconcile any discrepancies between applicable law and this standard.
SECTION 2. DEFINITIONS	
Section 2.4, Market Value	
Comment	One commentator suggested that the definition be revised to capture the nuance that market value is technically not the price for which an asset might potentially be sold (the “bid price”), but rather the last price for which a security was sold. The commentator recommended that the proposed standard state that the actuary may rely on brokerage statements for market value and is not required to ascertain the difference between bid price, asked price, and last sales price.
Response	The reviewers believe that the current definition, which is based on the definition of “fair value” in Statement of Financial Accounting Standards No. 157, <i>Fair Value Measurements</i> , is appropriate and made no change.

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Section 2.6, Prescribed Asset Valuation Method	
Comment	One commentator recommended that the definition be revised to include asset valuation methods selected by principals other than plan sponsors.
Response	The reviewers note that the definition is intended to be limited to those situations in which the plan sponsor is given responsibility for selecting an asset valuation method by law, regulation, or accounting standards. Thus, an asset valuation method selected by the plan sponsor or other principal in other circumstances – determining the cost of a benefit increase during collective bargaining, for example – would not be considered a prescribed asset valuation method. Hence, the reviewers made no change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.2.6, Additional Considerations	
Comment	One commentator wrote that item (a) could be interpreted to mean that the actuary should not consider a plan's actual investment practices when the plan has a stated investment policy. The commentator suggested that a plan's actual investment practices should always be considered, regardless of whether the plan has a stated investment policy.
Response	The reviewers agree and changed the wording accordingly.
Section 3.3, Relationship to Market Value, and 3.4, Further Considerations for Methods Other Than Market Value (now 3.3, Selecting Methods Other Than Market Value, and 3.4, Using Methods Other Than Market Value)	
Comment	One commentator pointed out that the title of section 3.4, Further Considerations for Methods Other Than Market Value, was misleading because the section required disclosure of characteristics of asset valuations other than market value. The commentator recommended changing the section's title to correspond to the content of the section.
Response	The reviewers agree and renamed sections 3.3 and 3.4 to be consistent with the guidance provided in those sections. In addition, the reviewers clarified that the considerations in section 3.4 are intended to apply to all asset valuation methods other than market value, whether selected by the actuary or selected by others.

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Section 3.4.1, Bias	
Comment	One commentator disagreed with the requirement that the actuary disclose that an asset valuation method has significant systematic bias, believing that a full description of the asset valuation method is sufficient for the user to determine if the method is biased. The commentator also wrote that it is inappropriate for the proposed standard to require the actuary to disclose that a prescribed asset valuation method has bias, as it puts the actuary in a position of evaluating whether a required method has characteristics that could be considered undesirable. Finally, the commentator noted that the word “bias” is often used to describe the introduction of error into a statistical sample, and pointed out that describing an asset valuation method as having “significant systematic error” suggests that the use of that asset valuation method is inappropriate and that the actuary should not perform the assignment. Two commentators supported the requirement that the actuary disclose that an asset valuation method has significant systematic bias.
Response	Regarding the first point, the reviewers do not believe that a full description of a biased asset valuation method is always sufficient for all intended users to recognize that the method has bias. The reviewers revised section 4.1.5 to provide an example of a disclosure that describes significant systematic bias as a characteristic of the asset valuation method without the use of the word “bias.”
Comment	One commentator noted that the appropriate assumption in paragraph (a)(2) is that market values experience <i>expected returns</i> rather than <i>constant returns</i> .
Response	The reviewers agree and made the recommended change. A similar change was made in section 3.3(b)(2).
Comment	Three commentators wrote that paragraph (b) was vague and inappropriate. One commentator pointed out that paragraph (b) could be read to imply that any change in asset valuation method produces systematic bias if the new method results in a greater actuarial value of assets than the old method. One commentator was concerned that paragraph (b) required information about past changes in the asset valuation method that might not be available to the actuary. The commentator recommended that disclosure of significant systematic bias be limited to the future operation of the asset valuation method rather than the application of the asset valuation method in the past. Another commentator pointed out that paragraph (b) could be read to imply that many changes in asset valuation method that are decided upon after the relevant measurement date could have been influenced by market experience subsequent to the measurement date and be deemed biased.
Response	The reviewers agree that paragraph (b) was problematic and deleted it. Instead of considering whether changes in the asset valuation method produce systematic bias, the standard now requires the actuary to disclose the reason for any changes in asset valuation method (section 4.1.3).
Section 3.6, Reviewing the Asset Valuation Method	
Comment	One commentator recommended adding a reference to changes in relevant law, regulations, or accounting guidance.
Response	The reviewers agree and made the change.

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SECTION 4. COMMUNICATIONS AND DISCLOSURES	
Section 4.1.4, Prescribed Asset Valuation Method	
Comment	One commentator opposed the requirement that the actuary disclose that, in the actuary's professional judgment, an asset valuation method prescribed by the plan sponsor is not reasonable in light of the purpose of the measurement even though a regulator has approved the general use of that asset valuation method.
Response	The reviewers note that the standard requires the actuary to evaluate whether the prescribed asset valuation method selected by the plan sponsor is <i>reasonable for the purpose of the measurement</i> , and did not believe that general approval of an asset valuation method by a regulator indicates that the use of that method is reasonable for every measurement.
Section 4.1.6, Different Treatment of Realized and Unrealized Gains and Losses	
Comment	One commentator suggested that this section require disclosure of the possible consequences of treating realized gains and losses differently from unrealized gains and losses.
Response	The reviewers agree and made the change.
Appendix 1, Background and Current Practices	
Comment	One commentator wrote that the relevance of the appendix wasn't clear and that it seemed unnecessary. The commentator also noted that the appendix incorrectly equated the use of market value with financial economics.
Response	The reviewers note that the appendix is provided for informational purposes and is not part of the standard. It is intended to describe current actuarial practice. However, the reviewers agree that the appendix incorrectly implied that traditional actuarial practice involved only the use of asset valuation methods other than market value, and that actuaries who apply the principles of financial economics were the only actuaries who use market value. The reviewers revised the appendix to correct this.