Appendix 2

Comments on the Second Exposure Draft and Responses

The second exposure draft of this proposed revision of this ASOP, *Selection of Economic Assumptions for Measuring Pension Obligations*, was issued in January 2012 with a comment deadline of May 31, 2012. Fifteen comment letters were received. Some of the letters 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. Also, unless otherwise noted, the section numbers and titles used in appendix 2 refer to those in the second exposure draft.

SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE				
Section 1.1, Purpose				
Comment	One commentator suggested adding inflation to the list of economic assumptions covered by the standard.			
Response	The reviewers agree and made the addition.			
Comment	One commentator expressed concern about the coordination of guidance between ASOP Nos. 4, 6, and 27. The commentator noted that all three ASOPs are under review and suggested that the ASB take more time to coordinate guidance on assumptions for pension and retiree group benefits actuarial work.			
Response	The reviewers appreciate the concern but feel that the overall guidance in ASOP No. 27 is appropriate. Considerable time has been spent coordinating the three standards, but the reviewers feel that value gained by spending more time to restructure the standards does not outweigh the value lost by further delaying updated guidance.			
Comment	One commentator suggested that the ASB use ASOP No. 27 to clarify that mastery of pension practice is not the same as mastery of retiree group benefit practice (or vice versa).			
Response	The reviewers believe that ASOP No. 27 is not an appropriate place to restate the Qualification Standards and made no change.			
Section 1.2, Secti	cope			
Comment	One commentator suggested that the term "social insurance" be defined. Another commentator suggested that non-discrimination testing should be specifically excluded from the scope of the standard. Another commentator suggested adding "or designated authority" to plan sponsor. Another commentator suggested different wording for the second and third paragraphs of this section.			
Response	The reviewers agree with these suggestions and changed this section to more clearly define social insurance and exclude non-discrimination testing from the scope. Language was also changed regarding provision of advice by the actuary relative to assumptions selected by another party.			
SECTION 2. DEFINITIONS				
Section 2.2, M	leasurement Date			
Comment	One commentator suggested changing this definition to "valuation date."			
Response	The reviewers believe the current definition is adequate and made no change.			

Section 2.5, Prescribed Assumption; and Section 4.2, Additional Disclosures				
Comment	Several commentators thought that the proposed language of section 2.5 and 4.2 expanded the			
	disclosure requirements under ASOP No. 41 when assumptions are selected by another party.			
Response	The reviewers agree but believe these changes are appropriate and are consistent with ASOP No. 4.			
	SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES			
Section 3.3, G	eneral Considerations			
Comment	One commentator requested examples for this section.			
Response	The reviewers believe that the guidance provided by this section is adequate without examples and made no change.			
Section 3.4, R	elevant Data			
Comment	One commentator requested clarification of what constituted "appropriate" recent and long-term historical economic data.			
Response	The reviewers believe that "appropriate" is a matter of professional judgment and depends on the circumstances of the situation.			
Comment	One commentator suggested that we delete references to giving undue weight to recent experience and historical data. Another commentator suggested language changes designed to balance historical and recent experience.			
Response	The reviewers believe that the guidance provided is sufficient and made no change			
Section 3.5.1	Adverse Deviation			
Comment	Several commentators suggested that the term "adverse deviation" be replaced by the terms			
Comment	"conservative" or "conservatism" as there exists a body of legal precedents using the terms. Other commentators suggested that the term be defined or revised. Other commentators supported the use of "adverse deviation." Another commentator suggested adding language to section 3.8.3 permitting reduction in the investment return assumption for "gain-sharing" provisions.			
Response	The reviewers believe that the adverse deviation language is clear and that the current language permits actuaries to use professional judgment on this issue and thus made no change. However, the reviewers believe that the same principles could apply when valuing plan provisions that are difficult to measure, such as plans with "gain-sharing" provisions, and added guidance for selection of assumptions for this purpose to this section.			
Section 3.5.4,	Rounding			
Comment	One commentator suggested that the standard require the selected assumption to be tested for reasonableness after rounding and the rounding convention to be disclosed. Another commentator questioned the need for including guidance on rounding in the standard.			
Response	The reviewers believe that the current level of guidance is appropriate and made no change.			
Section 3.5.5.	Changes in Circumstances			
Comment (Several commentators suggested that the guidance be strengthened by indicating that assumptions			
	should be changed only after the measurement date when appropriate and when permitted.			
Response	The reviewers believe that the guidance provided is sufficient and made no change.			

Section 3.5.6,	Views of Experts			
Comment	One commentator suggested removing "accountants" from the sources of economic data and analyses. Another commentator suggested that the language of this section permitting the actuary to incorporate the views of experts be strengthened to require the actuary to incorporate the views of experts.			
Response	The reviewers agree and removed "accountants." The reviewers also changed the language in this section to clarify the guidance provided, but the new language does not require the actuary to incorporate the views of experts.			
Comment	One commentator suggested that more guidance be provided with respect to how an actuary can use views of experts and how to document this process.			
Response	The reviewers believe that the guidance provided by this section is sufficient and not overly prescriptive, and therefore made no change.			
Section 3.6, S	electing a Reasonable Assumption			
Comment	Several commentators indicated a preference for the changes made to this exposure draft versus the "no gain/loss" concept included in the first exposure draft. One commentator suggested that the language be strengthened to require that an assumption is considered to be reasonable "if and only if" it satisfies the five characteristics set forth in the section. Another commentator was disappointed to see removal of a range definition, particularly for the selection of an investment return assumption. This commentator suggested development of a narrower range than the range in the existing standard such as geometric mean plus or minus one standard deviation.			
Response	The reviewers believe that the current language in the proposed exposure draft provides adequate guidance and made no change.			
Comment	One commentator proposed alternative language to take into account forecast economic data.			
Response	The reviewers believe that the current language provides adequate guidance and made no change.			
Comment	Several commentators suggested alternative wording for this section, including adding the phrase "in the actuary's judgment" and modification of the parenthetical language addressing what is considered to be "unbiased."			
Response	The reviewers agree and changed the language to include "significant" bias. The reviewers note that the actuary's professional judgment is part of the definition of a reasonable assumption in section $3.6(b)$.			
Section 3.6.1,	Reasonable Assumption Based on Future Experience or Market Data			
Comment	Several commentators indicated that the list of how an actuary may observe estimates from financial data was not exhaustive and the items listed should be prefaced with "such as." One commentator suggested a language change to paragraph (a) and another commentator suggested language changes to the last paragraph.			
Response	The reviewers note that the language in the stem of 3.6.1 refers to the items in the list as examples and believes that this adequately addresses the non-exhaustive nature of the list. The reviewers modified the language of this section in response to the alternative language suggestions.			
Section 3.6.2,	Range of Reasonable Assumptions			
Comment	One commentator indicated that the language wasn't clear regarding whether an actuary could use different economic assumptions for different projects. Several other commentators addressed this same issue by suggesting language changes.			
Response	The reviewers agree and modified the language.			
Comment	One commentator stated this section did not seem appropriate for a standard.			
Response	The reviewers disagree and made no change.			

Section 3.7, Selecting an Inflation Assumption					
Comment	One commentator suggested that sections 3.7 through 3.11 be addressed in a study note rather than in				
	an actuarial standard.				
Response	The reviewers disagree and made no change.				
Section 3.8, S	electing an Investment Return Assumption				
Comment One commentator suggested modifying and expanding the language of section 3.8.1, Data					
additional data to consider.					
Response	The reviewers believe that the current language is sufficient and made no change.				
Section 3.8.3,	Measurement Specific Considerations				
Comment	Several commentators suggested that the items listed in this section be considered examples of				
	measurement specific factors to consider, not an exhaustive list each of which should be considered.				
	One commenter suggested including two additional measurement specific considerations: a) input				
	from investment professionals and b) special considerations for plans with gain-sharing (or similar)				
	provisions. Another commentator suggested adding a section on investment horizon to the list of				
	examples. Another commentator suggested adding a section on inputs from investment professionals.				
Response	The reviewers agree with the first suggestion and have now described the items as "examples" Since				
	these are examples, the reviewers did not feel it necessary to include the additional suggested				
	considerations.				
Comment	Several commentators suggested that the standard consider known or possible future changes in the				
	investment policy. Another commentator suggested that the standard provide specific guidance when				
	the investment policy may change during the measurement period according to pre-defined criteria,				
	such as funded status.				
Response	The reviewers believe that section 3.8.3 (a) provides appropriate guidance regarding future changes				
	in investment policy. The reviewers changed the language to permit consideration of a stationary or				
	dynamic asset allocation. The reviewers believe the changes made provide adequate guidance in the				
	situation where the dynamic asset allocation strategy may change according to pre-defined criteria.				
Comment	One commentator stated that most actuaries are not qualified to set investment assumptions and				
	should be required to consult with investment professionals.				
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Response	The reviewers agree that investment consultants may be an appropriate source of information for				
	actuaries who do not feel qualified to set investment assumptions and note that use of external				
	sources is mentioned in the standard. The reviewers do not believe that ASOP No. 27 is the				
~	appropriate place to establish qualification standards.				
Comment	One commentator suggested that the language should be strengthened to require compelling evidence				
	that superior or inferior returns have been achieved. Another commentator suggested alternative				
	wording for this section.				
Response	The reviewers made a small change to the language to make the intent clearer.				
Comment	One commentator suggested defining investment expenses and comment that sometimes it is difficult				
	to determine such expenses.				
	r				
Response	The reviewers believe that the existing language is clear and made no change.				
Comment	One commentator indicated that this section fails to provide guidance to the actuary regarding how				
	benefit volatility affects the investment return selection process.				
Deenerse	The manipulation that the automatic language is conversion and used as a share-				
Response	The reviewers believe that the current language is appropriate and made no change.				

Section 3.8.3(j), Arithmetic and Geometric Returns		
Comment	Several comments were received regarding the guidance on arithmetic and geometric returns. Some commentators were pleased with the guidance. Several commentators said that all or parts of this section belong in a practice note or in the appendix. Two commentators said that the terms "arithmetic mean" and "geometric mean" should be defined. One commentator suggested that the last sentence of the first paragraph should say that the actuary "may," not "should," consider implications of forward looking returns. One commentator said that the attachment of "forward-looking" to arithmetic mean or geometric mean is a new financial concept and should be defined.		
Response	The reviewers believe that the current language strikes an appropriate balance of all the considerations raised and made no changes.		
Comment	One commentator argued that the harmonic mean investment return is a more appropriate rate for discounting pension obligations than either the arithmetic or geometric mean return.		
Response	The reviewers believe that the guidance in section 3.8.3 and the discussion in appendix 3 will help pension actuaries use the expected investment return estimates most commonly provided by investment professionals in the selection of an investment return assumption and made no changes.		
Comment	One commentator suggested adding a reference list of recommended reading on this subject to the appendix.		
Response	The reviewers believe that additional details on arithmetic and geometric returns beyond appendix 3 are better placed in a practice note.		
Comment	One commentator said that the standard should not draw a line between the actuary and an investment consultant by stating that the actuary will receive capital market assumptions from an investment consultant.		
Response	The reviewers agree and made changes to the language.		
Section 3.8.4,	Multiple Investment Return Rates		
Comment	One commentator suggested that examples include benefit payments covered by current or projected plan assets.		
Response	The reviewers agree and added "projected" assets to the second example of how multiple investment return rates could be used.		
Section 3.9, Secti	electing A Discount Rate		
Comment	Two commentators suggested that the language be better coordinated with the types of present values then anticipated under ASOP No. 4. One commentator suggested a complete re-write of the section using the concept of present value types that was contained in the exposure draft of ASOP No. 4 issued in January 2012.		
Response	e The reviewers made changes to this section to make it consistent with the market-consistent conce in the anticipated revision of ASOP No. 4. The reviewers note that the anticipated revision of ASO No. 4 no longer contains the concept of present value types.		
Comment	One commentator opined that the guidance should not say that a discount rate is used to measure present values since present values are a measurement in themselves. Instead, the guidance should indicate that a discount rate is used to determine or calculate present values.		
Response	The reviewers agreed and made changes to the language.		
Comment	One commentator stated that the examples in this section provided too much guidance on measurements if they are just examples of measurement purposes.		
Response	The reviewers believe that language in the examples does not restrict the actuary in making measurements appropriate to the measurement's purpose and made no change.		

Comment	One commentator suggested that the section be expanded to include a description of a current market			
	measurement approach and an expected cost measurement approach. The commentator also			
	suggested an expanded list of measurement purpose examples.			
Response	The reviewers believe that guidance regarding measurement approaches belongs in ASOP No. 4 and			
	will consider this comment in its work on ASOP No. 4. The reviewers note that the list of examples			
	is not exhaustive and believe that the current guidance is sufficient, and made no change.			
Comment	One commentator suggested that the section be re-written. Key comments include the following:			
	• The language should be based on the principle that discount rates are measurements of			
	portfolio returns. The commentator pointed out that this principle would support both			
	traditional and financial economic practice.			
	• The draft implies that discount rates are specified first and then present values are			
	calculated using those discount rates. The commentator suggested that the guidance			
	acknowledge that present values can be observed first and implied discount rates can then			
	be determined or not determined at all if the actuary does not want to use a deterministic			
	discount rate.			
	• The commentator felt the guidance was inadequate because it focuses solely on			
	deterministic discount rates and deterministic present values. The commentator suggested			
	that using deterministic discount rates and deterministic present values is an actuarial			
	assumption that should be disclosed and also suggested that the standard should make room			
	for stochastic present values to exist			
	for stochastic present values to exist.			
Response	The reviewers believe that the section as drafted supports traditional and financial economic practice			
1	and does not preclude the actuary from using observed present values if desired. The reviewers note			
	that the concept of stochastic present values has not been discussed widely in the pension profession			
	but that the use of stochastic values is not precluded. The reviewers made no change to the guidance.			
Comment	One commentator suggested that the list of examples be amended to acknowledge the emerging			
Comment	frequency of participant contributions to retiree health benefit plans and to make a distinction			
	between sponsor and participant contributions.			
Response	The reviewers note that the list of examples is not exhaustive and believe that the current guidance is			
response	sufficient and made no change.			
Section 3.10.	Selecting a Compensation Increase Assumption			
Comment	One commentator suggested renaming this section "Selecting a Compensation Change Assumption."			
Response	The reviewers believe the current language is appropriate and made no change.			
Section 3.10.1	1.1. Data			
Comment	One commentator suggested adding "relevant" to the requirement to review available compensation			
	data in section 3.10.1.			
Response	The reviewers believe the current language provides clear guidance and made no change.			
Section 3.10.2	0.2. Measurement-Specific Considerations			
Comment	One commentator suggested removing the example in section 3.10.2(c) since it did not add value.			
Response	The reviewers agree and removed the example.			
Section 3.11.3	, Rate of Payroll Growth			
Comment	One commentator suggested changing the title of this section to "Rate of Payroll Change."			
Response	The reviewers believe the current language to be appropriate and made no change.			

Section 3.12, Consistency among Economic Assumptions Selected by the Actuary for a Particular				
Measurement				
Comment	One commentator suggested adding an exception to the language for circumstances where there will not be consistency.			
Response	The reviewers believe this is adequately covered in the last sentence of section 3.12, but changed the title of this section to make it clear that consistency applies to a particular measurement.			
Section 3.13,	Prescribed Assumption(s)			
Comment	One commentator stated that the term "principles" is not defined and causes the first sentence of this section to be misleading and unnecessary.			
Response	The reviewers agreed and substituted the term "guidance" for principles.			
Section 3.14,	Changing Assumptions			
Comment	One commentator suggested deleting the second sentence of this section.			
Response	The reviewers agree and deleted the entire section.			
	SECTION 4. COMMUNICATIONS AND DISCLOSURES			
Section 4.1, C	ommunications			
Comment	One commentator suggested that the guidance in section 4.1 be clarified to apply to reports and not to all actuarial communications.			
Response	The reviewers agree and made the change.			
Section 4.1.1,	Economic Assumptions			
Comment	One commentator suggested that disclosure should be for "explicit" adjustments for adverse deviations and that the general requirement to describe each economic assumption be limited to each "material" economic assumption. Another commentator suggested moving the last sentence of this section to section 4.1.2			
Response	The reviewers agree with the suggestion to require disclosure of explicit adjustments for adverse deviations (and for plan provisions that are difficult to measure) and made changes to the language. The reviewers do not believe that moving the last sentence to section 4.1.2 is appropriate.			
Section 4.1.2,	Rationale for Assumptions; and Section, 4.1.3, Changes in Assumptions			
Comment	One commentator objected to the extra work not requested by the Principal resulting from these sections. Another commentator indicated that this was an impractical expansion of the standards and suggested that instead of "should" disclose the standard specify that the actuary "should consider" disclosing the rationale.			
Response	The reviewers believe that, in spite of the possible drawbacks of requiring disclosure of assumption rationale, the proposed language will lead to a more thorough actuarial assumption-setting process. The reviewers note that the guidance indicates that the rationale can be brief and the actuary can reference a previously published work product and made no change.			
Comment	One commentator suggested that the section provide a disclosure exception when the Principal instructs the actuary not to disclose certain information.			
Response	The reviewers note that in such an instance the actuary can deviate from guidance as long as the actuary makes the disclosures required in ASOP No. 41 section 4.4			
Comment	One commentator felt the language in this section could be interpreted to require the actuary to disclose confidential information. This interpretation conflicts with Precept 9 of the <i>Code of Professional Conduct</i> and would provide conflicting guidance to the actuary.			
Response	The reviewers understand the concern and added section 4.4 to avoid confusion.			

Appendix 3

Arithmetic and Geometric Returns

A. Introduction

One of the most important assumptions an actuary uses in measuring pension obligations is the discount rate. The exposure draft of ASOP No. 27 issued in January 2011 included the following question in transmittal memorandum:

"4. Do you agree that the guidance on arithmetic and geometric returns is appropriate? Should the consequences of the use of geometric or arithmetic returns be disclosed?"

Given the wide range of responses received to the above question, the Pension Committee of the Actuarial Standards Board determined that the inclusion of some educational material regarding arithmetic and geometric returns in ASOP No. 27 would be beneficial. The following material is not meant to be an exhaustive discussion of the matter. It is meant to give the actuary some direction regarding the considerations that may be employed in determining whether the use of arithmetic or geometric returns is more appropriate in the selection of a discount rate. In many circumstances, as with the selection of other assumptions, the purpose of the measurement is one of the most important determinants.

The use of a *forward looking expected geometric return* as a discount rate will produce a present value that generally converges to the median present value as the time horizon lengthens (i.e., if the actuary determines a funding obligation using the *forward looking expected geometric return* to discount the obligation to produce a present value, it is expected that in the limiting case there will be enough money to fund the obligation 50% of the time). The use of a *forward looking expected arithmetic return* as a discount rate will generally produce a *mean* present value (i.e., there will be no expected actuarial gains and/or losses).

This appendix should not be construed as a preference for any particular present value measurements over others (for example, market-consistent present value measurements or measurements using a discount rate reflecting anticipated investment return).

B. Looking Back Versus Looking Forward

The discount rate used in the measurement of a pension obligation is a forward-looking assumption. While the actuary may use some historical results in establishing expectations regarding the future, the discount rate reflects an expectation of events to come, not events that have already occurred.

One of the more confusing aspects of the debate regarding arithmetic and geometric returns is as follows:

- (a) determining whether we are talking about using historical results to establish forward looking (i.e., future) expectations, or
- (b) determining whether we are talking about whether a *forward looking expected geometric return* or *forward looking expected arithmetic return* is a more appropriate discount rate

Note that a *forward looking expected geometric return* is not synonymous with compounding. That is, both a *forward looking expected geometric return* and a *forward looking expected arithmetic return* would be used in a compounding nature.

C. An Example

The following example illustrates the use of a *forward looking expected arithmetic return* to produce a *mean* present value. Assume that an asset class is expected to have a 50% probability of earning a return of 30% and a 50% probability of earning a return of 0% for each of the next two years and that these returns are the only possible outcomes. (The *forward looking expected arithmetic return* in this example would be 15%.) The chart below illustrates the totality of possible investment results for an initial \$1,000 investment placed in this asset class:



The expected ending wealth values and a derivation of the *forward looking expected geometric return* is presented below:

Ending We	<u>alth</u>	Rate of Return
\$1,690 x 1/4 =	\$ 422.50	$\left[\left[\frac{\$1,690}{\$1,000} \right]^{\frac{1}{2}} - 1 \right] \times 1/4 = 7.50\%$
\$1,300 x 2/4 =	\$ 650.00	$\left[\left(\frac{\$1,300}{\$1,000} \right)^{\frac{1}{2}} - 1 \right] \times 1/2 = 7.01\%$
\$1,000 x 1/4 = Expected Value =	\$ <u>250.00</u> \$1.322.50	$\left(\left(\frac{\$1,000}{\$1,000} \right)^{\frac{1}{2}} - 1 \right) \times \frac{1}{4} = \frac{0.00\%}{14.51\%}$

The *forward looking expected geometric return* in this example is 14.51%. The question then becomes what discount rate would take the expected value of \$1,322.50 at the end of year 2 and produce a present value of \$1,000? The answer is shown below:

Mean PV Rate of Return =
$$\left[\left[\frac{\$1,322.50}{\$1,000.00} \right]^{\frac{1}{2}} 1 \right] = 15\%$$

which is the *forward looking expected <u>arithmetic</u> return*. Note however in this simple example, that if the actuary funded an obligation that is expected to be \$1,322.50 at the end of year two with a one-time payment of \$1,000 at the beginning of year 1, there would be insufficient funds at the end of year 2 three-quarters of the time.

D. Capital Market Assumptions from External Sources

In many instances, the actuary will collect capital market assumptions from external sources in order to determine the *forward looking expected arithmetic return* and/or the *forward looking expected geometric return*. The capital market assumptions can be broadly classified into the following categories:

- (a) expected returns by asset class;
- (b) standard deviations by asset class; and
- (c) correlation coefficients between asset classes.

With respect to expected returns by asset class, some external sources report *forward looking expected arithmetic returns*, some report *forward looking expected geometric returns* and some report both. It is important to understand what type of return was collected as well as the future time horizon to which the expected returns apply.

In general, a *forward looking expected geometric return* for an asset class can be approximated by taking the *forward looking expected arithmetic return* and subtracting one-half of the variance of the asset class¹.

If the actuary is trying to determine the *forward looking expected arithmetic return* for an entire portfolio from individual asset classes, this can be accomplished by taking the appropriate weightings from the individual asset classes' *forward looking expected arithmetic returns*. However, if the actuary is trying to determine the *forward looking expected geometric return* for an entire portfolio from individual asset classes, this <u>cannot</u> be accomplished by taking the appropriate weightings from the individual asset classes, this <u>cannot</u> be accomplished by taking the appropriate weightings from the individual asset classes, this <u>cannot</u> be accomplished by taking the appropriate weightings from the individual asset classes' *forward looking expected geometric return* for the entire portfolio, the actuary would first determine the *forward looking expected arithmetic return* for the entire portfolio and then subtract one-half of the variance of the entire portfolio.

¹ <u>Investments</u>, Bodie, Kane and Marcus, 2005, p. 864.

Appendix 4

Selected References for Economic Data and Analyses

The following list of references is a representative sample of available sources. It is not intended to be an exhaustive list.

- 1. General Comprehensive Sources
 - a. Kellison, Stephen G. *The Theory of Interest*. 3rd ed. Colorado Springs, CO: McGraw-Hill, 2008.
 - b. *Statistics for Employee Benefits Actuaries*. Committee on Retirement Systems Practice Education, and the Pension and Health Sections, Society of Actuaries. Updated annually.
 - c. *Stocks, Bonds, Bills, and Inflation (SBBI)*. Chicago, IL: Ibbotson Associates. Annual Yearbook, market results 1926 through previous year.
- 2. Recent Data, Various Indexes, and Some Historical Data
 - a. *Barron's National Business and Financial Weekly*. Dow Jones and Co., Inc. Available on newsstands and by subscription.
 - b. U.S. Bureau of the Census. *Statistical Abstract of the United States*. <u>http://www.census.gov/compendia/statab/</u>
 - c. U.S. Department of Labor, Bureau of Labor Statistics. *Consumer Price Index*. <u>http://www.bls.gov/cpi/</u>
 - d. U.S. Federal Reserve Weekly Statistical Release H.15. Interest rate information for selected Treasury securities. http://www.federalreserve.gov/releases/h15/
 - e. U.S. House of Representatives, Committee on Ways and Means. *Green* Book: Background Material and Data on Programs within the Jurisdiction of the Committee <u>http://greenbook.waysandmeans.house.gov/</u>
 - f. U.S. Social Security Administration. *Social Security Bulletin*. http://www.ssa.gov/policy/docs/ssb/
 - g. *The Wall Street Journal*. Daily periodical. Available on newsstands and by subscription.

3. Forecasts

- a. *Blue Chip Financial Forecasts*. Capital Publications, Inc., P.O. Box 1453, Alexandria, VA 22313-2053. March and October issues contain long-range forecasts for interest rates and inflation.
- b. Congressional Budget Office's economic forecast. The forecast projects three-month Treasury Bill rates, 10-year Treasury Note rates, CPI-U, gross domestic product, and unemployment rates. http://www.cbo.gov/publication/43907