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October 31, 2017

Actuarial Standards Board 1850 M Street, Suite 300 Washington, DC 20036-5805

Via email: comments@actuary.org

Re: Proposed Actuarial Standard of Practice (ASOP), Pricing of Life Insurance and Annuity Products

To Whom It May Concern:

The Life Products Committee of the American Academy of Actuaries¹ is pleased to provide comments on the proposed actuarial standard of practice (ASOP) that would apply to actuaries when pricing life insurance and annuity products.

We have reviewed the second exposure draft of the ASOP and provided our comments in the attached redline document. We have suggested some organizational changes in the draft ASOP that may be hard to follow in the redline, so we have also included a table to help illustrate our recommendations.

As we note in the attached comments, there are sections in the proposed ASOP that seem to overlap with other ASOPs currently in development (e.g., *Modeling* and *Setting Assumptions*). We encourage the ASB to minimize areas of overlap as much as possible; however, where overlap is unavoidable, we encourage the ASB to strive for consistency. Otherwise, actuaries might find themselves in a difficult position as they attempt to comply with all applicable standards.

Although we have provided a fair number of comments for consideration, we commend the Life Insurance and Annuity Pricing Task Force on the improvements made from the last exposure. It's clear that the task force took all comments into careful consideration and made meaningful changes.

We hope these comments are helpful. Please contact Ian Trepanier, the Academy's life policy analyst (trepanier@actuary.org; 202-785-7880), if you have any questions.

Sincerely,

Laura Hanson, MAAA, FSA Chairperson, Life Products Committee American Academy of Actuaries

1850 M Street NW Suite 300 Washington, DC 20036 Telephone 202 223 8196 Facsimile 202 872 1948 www.actuary.org

¹ The American Academy of Actuaries is a 19,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

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PROPOSED ACTUARIAL STANDARD OF PRACTICE PRICING OF LIFE INSURANCE AND ANNUITY PRODUCTS STANDARD OF PRACTICE

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

- 1.1 <u>Purpose</u>—This actuarial standard of practice (ASOP) provides guidance to actuaries when performing actuarial services with respect to the **pricing** of life insurance and annuity products, including riders. For this ASOP, the term "product" includes "riders."
- 1.2 <u>Scope</u>—This standard applies to actuaries when performing actuarial services with respect to the **pricing** of life insurance and annuity products when a product is initially developed or when charges or benefits are changed for future sales. This standard does not apply to any changes made on inforce policies. Such resetting of nonguaranteed elements, including dividends, on products in force is outside the scope of this ASOP and is addressed in ASOP No. 2, *Nonguaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts*, and No. 15, *Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance.* The actuary should also refer to ASOP No. 2 or 15 when determining nonguaranteed elements or dividends when a product is initially developed or when charges or benefits are changed for future sales.

In the context of this ASOP, actuarial services include evaluating the product's profitability and underlying risks and advising on the product's rates and benefits. Actuarial services may also include advising on the design of the product. Although the actuary needs to be mindful of all considerations that may affect the ultimate design and price of the product, the standard addresses only issues related to actuarial services, and therefore does not address other issues considerations that may be important to the pricing exercise, such as marketing, sales, and competition, or compliance with federal antitrust laws.

The standard applies to actuaries when performing actuarial services related to life insurance and annuity products written on individual policy forms. The standard also applies to group master contracts with individual certificates that are priced in a similar manner to products written on individual life and annuity policy forms. Examples of products that are not priced in a similar manner to products written on individual life and annuity policy forms and therefore not in scope include the following:

- a. traditional group term life; and
- investment products that do not have an mortality or morbidity riskannuitization component, such as certain types of funds included in a retirement funding products (for example, synthetic guaranteed interest contracts).

To the extent that the guidance in this standard may conflict with guidance in other ASOPs regarding the **pricing** of specific benefits other than life and annuity benefits, the guidance in the other standard will govern. This standard does not apply to actuaries when performing professional services with respect to illustrations of nonguaranteed charges or benefits subject to ASOP No. 24, *Compliance with the NAIC Life Insurance Illustrations Model Regulation*.

If the actuary departs from the guidance set forth in this standard in order to comply with applicable law (statutes, regulations, and other legally binding authority) or for any other reason the actuary deems appropriate, the actuary should refer to section 4.2.

Commented [LH1]: Other ASOPs have included the review of actuarial services in their scope. Does it make sense to include review of pricing work in the scope of this ASOP?

Commented [LH2]: To avoid confusion, we recommend removing this sentence and adding "design and" in the following sentence as shown.

Commented [LH3]: We believe synthetic GICs should be called out specifically, otherwise it is not clear whether they are in scope.

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- 1.3 <u>Cross References</u>—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.
- 1.4 <u>Effective Date</u>—This standard will be effective for any actuarial services performed on or after four months after adoption by the ASB.

Section 2. Definitions

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

- 2.1 <u>Modeling Cell</u>—Policies or contracts that are treated in a model as being completely alike with regard to <u>policy characteristics</u>, for example, demographic<u>characteristics</u>, policyholder behavior assumptions, policy provisions, and underwriting class.
- 2.2 <u>Pricing</u>—The process of setting charges for, and benefits <u>and credits</u> provided by, an insurance policy or annuity contract at issue <u>(whether guaranteed or nonguaranteed)</u>. Examples of charges include premiums, cost of insurance charges, separate account charges, surrender charges, <u>and</u> policy fees, and target interest rate spreads. Examples of benefits <u>and credits</u> include death benefits, surrender benefits, <u>credited interest rates, index parameters, dividends, and income benefits</u>.
- 2.3 <u>Profitability Analysis</u>—An evaluation of <u>a product's expected financial results using a set of assumptions, a specified model, and specified **profitability metric(s)**.</u>
- 2.4 <u>Profitability Metric</u>—A measurement used to assess a product's expected level of financial results. Examples of profitability metrics include, but are not limited to, the following:
 - a. the expected return on initial invested capital, often referred to as the internal rate of return;
 - b. the average of expected future periodic returns on capital, often referred to as average return on equity;
 - c. a measure of profitability expressed as a percentage of premium, often referred to as profit margin;
 - d. the present value of expected future profits as a percentage of the present value of expected assets, often referred to as return on assets;
 - e. the present value of expected future profits, often referred to as the value of new business; and
 - f. the time period when a measure of cumulative profits turns positive, often referred to as breakeven year.
- 2.5 <u>Risk Capital</u>—Amounts to absorb potential unexpected losses resulting from severe events.
- 2.6 <u>Sensitivity Analysis</u>—Analysis performed by changing an assumption or set of assumptions and comparing the results to those resulting from the baseline assumption(s).
- 2.7 <u>Stochastic Analysis</u>—Analysis performed using a model that estimates distributions of potential $\frac{3}{3}$

Commented [LH4]: Similar definitions exist in the PBR and modeling ASOPs. Does it make sense to sync the definitions?

Commented [LH5]: We note that there are a number of lists throughout the ASOP containing items that may be considered policy characteristics, and they all have minor differences. It may be preferable to make "policy characteristics" a defined term and then replace the various lists with that term.

Commented [LH6]: This definition of pricing seems too narrow, considering the scope of the guidance in the rest of the ASOP. Also, this definition does not recognize that the actuary may not set final charges and benefits/credits.

Commented [LH7]: Profitability analysis could be conducted at various levels, e.g., modeling cell, product, or group of products.

Commented [LH8]: Throughout the ASOP, we often misunderstood "profitability metric" to mean a number (e.g., 12%) vs. an approach (e.g., IRR). We recommend using a different tern, such as "profit measure" to help clarify. Examples of other language contributing to the confusion are highlighted later.

Commented [LH9]: We recommend moving the examples into the definition, as shown here without tracking the move in redline.

outcomes by allowing random variation in one or more inputs to the model.

Section 3. Analysis of Issues and Recommended Practices

- 3.1 <u>Initial Pricing Considerations</u>—When preparing for the pricing exercise, the actuary should take into account the criteria of the actuary's principal and the relevant characteristics of the product<u>consider the following</u>.
 - 3.1.1 <u>Criteria of the Actuary's Principal</u>—Criteria of the actuary's principal <u>may</u>include, <u>but are not</u> <u>limited to, the following</u>:
 - a. selection of **profitability metrics**, which often are may be stated at an aggregate product level over the expected life of the product, as well as or at the **modeling cell** level is a second sec
 - b. targets for profitability metrics results, including any special circumstances, such as targets for shorter periods of time or situations where profits are expected to be followed by losses; and
 - c. risk management policies that are relevant to product **pricing**; for example, the level of risk contained in the product being priced.
 - 3.1.2 <u>Relevant Characteristics of the Product Considerations</u>—Relevant characteristicsconsiderations of the product include, but are not limited to, the following:
 - a. the intended design objective of the product;
 - b. the intended market, <u>anticipated</u> sales<u>goals</u>, and the competitive alternatives to the product;
 - c. how the product will be sold, for example, underwriting, distribution, and marketing;
 - d. _____how the product will be administered, including any limitations in administrative and valuation systems that could impact product design or operational risks;
 - d.e. risk mitigation strategies such as reinsurance, hedging, and setting dividends or other nonguaranteed elements;
 - e.f. __applicable law (statutes, regulations, and other legally binding authority); and
 - f.g. the tax treatment of the product as it applies to both the owner and the insurer.

3.2 <u>Selecting Profitability Metrics</u> The actuary should select **profitability metrics** in a manner consistent with the criteria of the actuary's principal and the underlying design and risks of the product.

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Commented [LH10]: We question whether this should be the first consideration in the list. Perhaps move to the end of 3.1.

Commented [LH11]: This description contributes to the confusion of whether metrics are a number or an approach. (An approach would not be determined at the modeling cell level – numerical targets could be.)

Commented [LH12]: We note that the ASOP does not provide considerations when setting targets if not included in criteria of the principal. (Perhaps this is intentional.)

Commented [LH13]: This section/list could be replaced with a defined term such as "policy considerations." Otherwise, it seems to be missing considerations included in other lists such as demographics, rate setting/product management approach.

Commented [LH14]: We do not believe the items in this list are all characteristics of the product (e.g., applicable laws)

3.2.1 <u>Profitability Metrics</u>—The actuary should consider using more than one **profitability metric** when evaluating the expected profitability performing a **profitability analysis**.

3.2.23.1.3 <u>Considerations When Selecting Profitability Metrics</u> When selecting **profitability metrics**, the actuary should consider the following:

- a. the expected pattern of profits over time (for example, the pattern of gains and losses, however measured);
- b. the significance of the product's underlying risks (for example, how capital intensive the product is);
- c. the criteria of the actuary's principal;
- d. discount rate(s) that are suitable for the selected **profitability metric**, where applicable; and
- e. any other considerations that the actuary determines are relevant.

3.33.2 Developing the Model—The actuary should develop the model to support **pricing** in a manner consistent with the criteria of the actuary's principal. The actuary should develop a model that accommodates the design of the product and the selected **profitability metrics**, and reasonably simulates the future financial impact of the product.

When developing the model, the actuary should consider the following:

- a. Time Horizon—the degree to which the model extends over a sufficient time period such that the profitability results and underlying risks of the product are adequately captured;
- b. Granularity—the degree to which (1) the number of modeling cells represents the expected profitability and risk evaluation <u>of future salesnumber of different policy</u> characteristics, and (2) assumptions vary by the modeling cells reflect different assumptions or time intervals. For example, the actuary should be able to evaluate the range of profitability across different modeling cells in order to understand the degree to which the profitability metrics could vary based on achieving a different sales mix than anticipated;
- c. Dynamic Assumptions—the degree to which the model <u>can_accommodates</u> how certain assumptions <u>such as policyholder behavior assumptions</u> may vary based on <u>external_other_factors_through_policyholder_behavior_and_other_items_described_in</u> <u>section 3.4.4(d)</u>;
- d. Asset Returns—the degree to which the model incorporates asset returns consistent with how returns are expected to be recognized and allocated to the product;
- e. Economic Scenarios—the degree to which the model uses, if appropriate, market consistent or real world economic scenarios that represent an appropriate range of 5

Commented [LH15]: Since discount rates aren't assumptions, we recommend moving discount rates to this section as shown.

Commented [LH16]: We stumbled quite a bit on the wording of this sentence, and believe a shorter description of granularity is sufficient.

future asset returnseconomic conditions;

- Accounting and Actuarial Bases—the degree to which the model uses accounting and actuarial bases relied upon by management to evaluate the product's profitability and underlying risks;
- g. Risk Capital Framework—the degree to which the model uses a **risk capital** framework that is expected to be used in practice;
- h. Taxes—the degree to which the model uses a tax structure that is expected to apply, given the product, the tax position of the company, and the company's tax allocation practices;
- i. Risk Quantification—the degree to which the model uses an appropriate method to quantify risks as described in section 3.5;
- j. Risk Mitigation—the degree to which the model appropriately <u>uses_reflects_risk</u> mitigation strategies that are expected to be used to support the product. such as reinsurance, hedging, dividends, or nonguaranteed elements;
- k. Model Validation—the degree to which the model is sufficiently transparent to support validation as described in section 3.6; and
- 1. <u>Such Any</u> other items as the actuary determines are significant to the model.
- 3.3 <u>Pricing Assumptions</u>—The actuary should use professional judgment to set assumptions that reflect expected future experience, based on the following considerations.-<u>When working</u> with data, the actuary should refer to ASOP No. 25, *Credibility Procedures*, and ASOP No. 23, *Data Quality*, for guidance.
 - 3.3.1 <u>Assumptions Based on Relevant and Credible Data</u>—The actuary should use assumptions based on relevant and credible data, such as company experience, industry experience, and other relevant experience, which may be modified to reflect the circumstances being modeled, smoothness, or data quality. When modifying such experience, the actuary should refer to ASOP No. 25, *Credibility Procedures*, for guidance.

3.3.1.1 Assumptions Based on Historical Experience—When using historical experience, the actuary should consider whether there are reasons to expect that future experience will differ from past experience.

3.3.1.2 <u>Assumptions When There Is No Relevant Historical Experience</u> In some instances, no relevant historical experience is available to the actuary. In this situation, the actuary should use professional judgment, considering available sources of data, when setting the assumption.

3.3.2

3.3.3.3.2 Assumption Margins—The actuary should consider the appropriateness of including a margin for uncertainty in the assumptions. When setting any margin, the actuary should consider the following:

Commented [LH17]: Bases may be used by non-management.

Commented [LH19]: We question whether this section is too detailed since there is also a new Assumption Setting ASOP in development. Are any of these considerations specific to setting pricing assumptions vs. non-pricing assumptions? Otherwise, we risk having conflicting ASOPs.

Commented [LH18]: Moved to 3.1.2

Commented [LH20]: We recommend moving reference to ASOP 25 into 3.3 so it has broader application.

- a. the degree to which there is uncertainty around the assumptions due to lack of relevant, credible company or industry experience data to support the assumptions; such as when a new product is being introduced to the marketplace;
- b. whether the degree of uncertainty may vary over different periods of time within the time horizon of the model; and
- c. whether the level of margins individually for each assumption and in aggregate for all assumptions is appropriate.
- 3.3.4<u>3.3.3</u> Consistency of Assumptions—The actuary should use assumptions that are internally consistent with other components of the model, consistent with current and anticipated company practices, and, where appropriate, consistent with assumptions used for other assignments within the entity.
- 3.3.5<u>3.3.4</u> Product Design and Assumption Setting—When setting assumptions, the actuary should consider the product design, as well as the following:
 - a. sales mix assumptions that reflect the anticipated distribution of sales across modeling cells;
 - investment assumptions and economic market assumptions that reflect real world or market consistent theory, where appropriate, and that includinge assumptions for reinvestment, asset default, and investment expenses;
 - c. mortality and morbidity<u>assumptions that incorporate, including</u> the effects of selection and classification of future applicants, where appropriate, the impact of expected trends on future assumptions, and the impact of policy or rider characteristics, such as conversion and level premium periods on term coverage;
 - d. for experience that is elective in nature, such as the policyholder's ability to pay or not pay premiums, to receive certain types of benefits, or to terminate the contract, assumptions that consider the causal-variables impacting the policyholder's choice behavior, such as policyholder characteristics (for example, age) and policy or rider characteristics (for example, size of policy), as well as the value of guaranteed benefits driven by external factors (for example, the current interest rate environment and underlying market performance);
 - e. expense assumptions that reflect anticipated future trends in expenses (for example inflation or expense efficiencies). The actuary should consider the appropriateness of the basis (for example, fully allocated, marginal) when developing expense assumptions;
 - f. the principal's capacity and intent with regard to inforce management strategies, including dividends and <u>other</u> nonguaranteed elements.

The actuary should consider the extent to which certain of these assumptions may also be influenced by the <u>"Relevant Product Considerations"</u>distribution channel through which the product will be sold. Formatted: Indent: Left: 1.06", Space After: 12 pt

The actuary should consider incorporating the views of experts when setting assumptions in areas outside the actuary's area of expertise. However, the setting of assumptions should reflect the actuary's professional judgment.

- 3.3.6 <u>Capital Market Assumptions</u> If performing stochastic analysis, the actuary should take into account the design of the product when determining whether to use market consistent assumptions or real world assumptions. When analyzing a benefit that can be replicated using liquid capital market instruments, the actuary should consider comparing the cost of the benefit using market consistent assumptions to the price of a comparable investment guarantee observed in capital markets to assure that it aligns with the profitability goals and risk management policy of the actuary's principal.
- 3.3.73.3.5 Documentation of Assumptions, Their-Rationale, and Data Modifications— The actuary should document the assumptions, the rationale behind the assumptions, and any modifications made to data sources. If margins are included in assumptions, the actuary should document the approach used and, where practicable, the margin component of each assumption. The actuary should consider making disclosures of documentation of material assumptions, as appropriate.
- 3.5 <u>Risk Evaluation</u>—The actuary should <u>conduct a risk evaluation</u> evaluate the impact on profitability metrics from deviations in assumptions when performing a **profitability analysis**.
 - 3.5.1 <u>Cost of Capital</u>—The actuary should consider incorporating the cost of capital into the **profitability analysis**. Examples of approaches that the actuary can use include, but are not limited to, incorporating **risk capital** or setting **profitability metrics** that are consistent with the underlying risks of the product.
 - 3.5.2 <u>Sensitivity Analysis</u>—The actuary should use **sensitivity analysis** to evaluate the impact of deviations in assumptions on profitability from future experience being different than assumed results and should consider performing more analysis for assumptions that have a significant impact on the **profitability analysis** than for assumptions that have less impact.
 - 3.5.3 <u>Stochastic Analysis</u>—The actuary should consider whether stochastic analysis should be used to evaluate the distribution of potential profitability <u>metrics</u>_results_from variations in key assumptions. In particular, the actuary should consider performing stochastic analysis for products that are expected to exhibit sensitivity to the level of interest rates or equity returns.
 - 3.5.4 Risk Identification and Classification——The actuary should consider identifying the types of risk in the product and classifying them (for example, high, medium, or low).

The actuary may consider other risk evaluation techniques as appropriate. The actuary should consider the impact of risk mitigation strategies that are expected to be implemented at the product and company level and the expected effectiveness of those strategies.

 $\label{eq:commented_constraint} \begin{array}{l} \mbox{Commented} \ [\mbox{LH21}] : \mbox{ We believe this concept should apply to} \\ \mbox{more sections of the ASOP, not just assumption setting.} \end{array}$

Commented [LH22]: We recommend deleting the entire "Capital Markets Assumption" section as shown. The first portion is covered in both "Consistency of Assumptions" and "Assumption Setting," and the second portion is too detailed and prescriptive for an ASOP.

Commented [LH23]: We recommend moving all references of documentation to section 3.8, and including model documentation and documentation of data quality. We also recommend suggesting actuarial documentation if the company sets a design or price that is different than what the actuary recommends.

Commented [LH24]: We suggest that Cost of Capital may fit better under "Initial Pricing Considerations"

Commented [LH25]: The three uses of "profitability metrics" in these three paragraphs contributes to the confusion of whether metrics are a number or an approach. For example, it seems like the language in this paragraph is describing requiring a certain level of profitability relative to the product risks.

Commented [LH26]: We recommend also considering the impact of product design features.

3.6	<u>Governance and Controls</u> —The actuary should use, or, if appropriate, rely on others to use, reasonable governance and controls over the actuarial services provided as part of pricing . Examples of possible governance and controls include, but are not limited to, the following:		Commented [LH27]: Is this intended to require all of the examples below? It could be interpreted in this way.
	a.	effective oversight of methods and assumptions used in the pricing exercise;	examples below: It could be interpreted in ans way.
	b.	preservation and protection of the model from unintentional or untested changes;	
	c.	separation of duties;	Commented [LH28]: Can this be expanded?
	d.	validation of the appropriate use of the inputs in model calculations;	
	e.	validation that values from the models are consistent with independent calculations of such values from outside the model;	
	f.	validation that the model reasonably simulates the product's expected impact on the company's future financial and risk position; and	
	g.	review of assumptions and other aspects of the model by a <u>nother</u> knowledgeable person who conducts the review in an objective way.	
	The a pricin	actuary should consider documenting the governance and controls used as part of ng.	Commented [LH29] : We recommend moving all references of documentation to section 3.8.
3.7	inforr	ance on Data or Other Information Supplied by Others—When relying on data or other rmation supplied by others, the actuary should refer to ASOP No. 23, <i>Data Quality</i> , for ance. When relying on assumptions provided by others, the actuary should refer to ASOP	ocumentation to section 5.6.

3.8 <u>Documentation</u>—The actuary should prepare and retain documentation in accordance with ASOP No. 41.

No. 41, Actuarial Communications.

Section 4. Communications and Disclosures

- 4.1 <u>Actuarial Communications</u>—When issuing any actuarial communication relating to this ASOP, the actuary should refer to ASOP No. 41. The actuary should consider the needs of the intended user in communicating the actuarial findings in any actuarial report. In addition, in any actuarial report concerning **pricing**, the actuary should disclose the following, if practical and relevant:
 - a. product description including design features and the market to which it will be sold;
 - b. results of the **profitability analysis**, including the range of results over **modeling cells**;
 - c. the **profitability metrics** used in the to evaluate expected profitability analysis and how these metrics are consistent with the criteria of the actuary's principal as described in section 3.2 of this standard;

- d. the considerations used to develop the model as described in section 3.3 of this standard;
- e. material pricing assumptions and the manner in which the actuary established these assumptions to reflect expected future experience, adjusted to include any margin, as described in section 3.4 of this standard; and
- f. results of risk evaluation as described in section 3.5 of this standard, including the manner in which the actuary has evaluated the product's underlying risks and how those underlying risks will be managed.
- 4.2 <u>Additional Disclosures</u>—The actuary should also include the following disclosures, as applicable, in an actuarial communication:
 - a. the disclosure in ASOP No. 41, section 4.2, if any material assumption or method was prescribed by applicable law (statutes, regulations, and other legally binding authority);
 - b. the disclosure in ASOP No. 41, section 4.3, if the actuary states reliance on other sources and thereby disclaims responsibility for any material assumption or method selected by a party other than the actuary; and
 - c. the disclosure in ASOP No. 41, section 4.4, if, in the actuary's professional judgment, the actuary has otherwise deviated materially from the guidance of this ASOP.

ASB Exposure	LPrC Recommendation		
Section 1. Purpose, Scope, Cross References, and	Section 1. Purpose, Scope, Cross References, and		
Effective Date	Effective Date		
Section 2. Definitions	Section 2. Definitions		
Section 3. Analysis of Issues and Recommended	Section 3. Analysis of Issues and Recommended		
Practices	Practices		
3.1 Initial Pricing Considerations	3.1 Initial Pricing Considerations		
3.1.1 Criteria of the Actuary's Principal	3.1.1 Criteria of the Actuary's Principal*		
3.1.2 Relevant Characteristics of the	3.1.2 Relevant Product Considerations		
Product			
	3.1.3 Profitability Metrics		
3.2 Selecting Profitability Metrics			
3.2.1 Profitability Metrics			
3.2.2 Considerations When Selecting			
Profitability Metrics			
3.3 Developing the Model	3.2 Developing the Model		
24			
3.4 Pricing Assumptions	3.3 Pricing Assumptions		
3.4.1 Historical Experience Used When Setting Assumptions	3.3.1 Assumptions Based on Relevant and Credible Data		
3.4.1.1 Assumptions Based on Relevant	and Credible Data		
and Credible Data			
3.4.1.2 Assumptions Based on Historical			
Experience			
3.4.1.3 Assumptions When There Is No			
Relevant Historical Experience			
3.4.2 Assumption Margins	3.3.2 Assumption Margins		
3.4.3 Consistency of Assumptions	3.3.3 Consistency of Assumptions		
3.4.4 Product Design and Assumption	3.3.4 Assumption Setting		
Setting			
3.4.5 Capital Market Assumptions			
3.4.6 Documentation of Assumptions,	3.3.5 Documentation of Assumptions,		
Their Rationale, and Data Modifications	Rationale, and Data Modifications		
3.5 Risk Evaluation	3.5 Risk Evaluation**		
3.5.1 Cost of Capital	3.5.1 Cost of Capital*		
3.5.2 Sensitivity Analysis	3.5.2 Sensitivity Analysis		
3.5.3 Stochastic Analysis	3.5.3 Stochastic Analysis		
	3.5.4 Risk Identification and		
	Classification		
3.6 Governance and Controls	2.6 Covernance and Controls		
3.6 Governance and Controls3.7 Reliance on Data or Other Information	3.6 Governance and Controls 3.7 Reliance on Data or Other Information		
Supplied by Others	Supplied by Others		
3.8 Documentation	3.8 Documentation		
	5.6 Documentation		
Section 4. Communications and Disclosures	Section 4. Communications and Disclosures		
Section 4. Communications and Disclosules	Section 4. Communications and Disclosures		

*Move suggested in the redline comments but not performed. **Technically Risk Evaluation should now be 3.4, etc., but we've mirrored the numbering shown in the document here.