



# AMERICAN ACADEMY *of* ACTUARIES

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## **REPORT ON ANNUITY SUPPORTABILITY OF THE DISCLOSURE WORKING GROUP OF THE COMMITTEE ON STATE LIFE INSURANCE ISSUES**

**SEPTEMBER 1998**

The American Academy of Actuaries is the public policy organization for actuaries of all specialties within the United States. In addition to setting qualification standards and standards of actuarial practice, a major purpose of the Academy is to act as the public information organization for the profession. The Academy is nonpartisan and assists the public policy process through the presentation of clear actuarial analysis. The Academy regularly prepares testimony for Congress, provides information to federal elected officials and congressional staff, comments on proposed federal regulations, and works closely with state officials on issues related to insurance.

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With appreciation to the many interested parties for their active participation and contributions.

September 1998—Report of the Disclosure Working Group

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## **I. Introduction**

As a professional organization, the American Academy of Actuaries, through the Academy's Disclosure Working Group (ADWG), is pleased to assist the NAIC Life Disclosure Working Group (LDWG) in exploring annuity supportability options. In providing technical assistance, the Academy does not take a position on the public policy issue of whether annuity supportability testing should be required. The Academy is serving the public through helping to explore alternatives for consideration by the LDWG's public policy decisions.

## **II. Supportability Testing and Supportability Disclosure**

As discussed in prior reports, the ADWG believes annuity supportability testing is limited to demonstrating the "ability to pay". As such, it can only demonstrate what a company can reasonably afford to pay if testing assumptions happen to reflect future actual conditions.

The ADWG has also considered concepts using supportability disclosure. This approach may provide consumers with more information on the company's intent to pay illustrated benefits, although such information will still be limited.

Both supportability testing and supportability disclosure may be useful tools in achieving regulator's public policy goals.

## **III. Supportability Testing Research: Polling Regulators and Industry**

### *1. Polling LDWG Members*

The ADWG talked individually with each member of the LDWG (see appendix A for a summary of the poll).

Currently LDWG is focusing its priorities on disclosure issues, especially surrender charge levels and durations.

The need for annuity supportability testing is subject to a variety of opinions by LDWG members. A few members actively desire such testing, a few do not see a need for testing at this time, and still other members would simply accept testing as long as test methods were acceptable to concerned regulators. After the current set of disclosure issues are resolved, the ADWG suggests the LDWG discuss the need for annuity supportability testing, develop a consensus on its priority and objectives, and determine how to accomplish these objectives.

2. *The New York Insurance Department*

The ADWG has also been contacted by the New York Insurance Department. They identified an immediate deadline, imposed by legislation, that requires supportability testing.

3. *Industry Input*

The ACLI distributed the ADWG's June Report through a number of its committees, including the Cost Disclosure Committee and the Actuarial Committee. Comments from member companies are anticipated by early September, which is after the publication date of this report.

#### **IV. Supportability Testing Research: The Six Test Options**

Additional research by the ADWG has verified that any of the six tests contained in the ADWG's June 1998 Report could be made to work, subject to limitations on accuracy, flexibility, verifiability, or time necessary to complete the testing. Results from the additional research are summarized in appendix B. The advantages and drawbacks each test, as described in the June report, are summarized in appendix C.

The key result of the additional research is identification of the "option cost" as being (after the solvency criteria) perhaps the most critical component that influences test results. An "option cost", which decreases illustrated values, is an additional cost charged against the earned interest rate in a level interest rate scenario. The option cost is calculated using stochastic modeling for a large variety of interest rate environments and "post-issue" changes in the credited rate, subject to a solvency criteria. Essentially it is a "single number" representing the cost of readjustments to asset/liability matching for "post-issue" changes in the interest rate environment.

In general, the ADWG considers the use of stochastic methods to be the most complete for measuring the company's "ability to pay." Such methods calculate "option costs" that are specific to a company and product. Thus, the information received by a consumer best reflects the true ability of a company to pay nonguaranteed benefits. Stochastic methods are also better able to handle product variations and future innovations.

## V. Policy Directions

The ADWG recommends that the LDWG consider setting policy directions for the following four areas:

### 1. *Competing Objectives:*

The annuity marketplace has a wide variety of products and company approaches to managing such products. It is also a highly competitive area with frequent product variations and innovations.

This creates two competing objectives for supportability testing:

- a. **Simplicity**
  - i) to support smaller companies
  - ii) to allow for easier regulatory verification of results
  - iii) to keep the cost of complying with a new regulatory requirement as affordable as possible
- b. **Flexibility**
  - i) to allow for variations in product designs to be more thoroughly demonstrated by companies to consumers
  - ii) to allow variations in management practices to be more thoroughly demonstrated by companies to consumers
  - iii) to allow a supportability test to respond to new concepts and innovation that will occur in future product designs (ie, building in flexibility into the design of a supportability test)

The ADWG recommends that regulatory requirements satisfy both the simplicity and flexibility objectives, which, in turn, suggests that any supportability testing regulation would probably need to include testing alternatives.

### 2. *General Regulatory Approaches*

In writing a regulation, the ADWG has identified four general approaches to incorporating supportability testing:

- i. Stochastic test.
- ii. Simplified test with standardized "option costs".
- iii. Company choice of (a) a stochastic test, or (b) a simplified test with standardized "option costs".
- iv. Simplified test that:
  - a. Uses standardized "option costs", and
  - b. Contains an opportunity for a company, at their discretion, to develop and use customized "option costs" based on stochastic testing.

In all of the simplified tests, the standardized "option costs" would be based on periodically updated external studies and set by regulation.

The ADWG recommends that approaches iii or iv be considered. These two approaches best satisfy the competing objectives for simplicity and flexibility. Each method allows a simplified approach to satisfy certain needs. Also, each approach allows for a stochastic test methodology to be employed, creating "option costs" specific for the product and company. The two approaches differ, however, by the degree of stochastic based factors that can be included. Alternative iii allows for full stochastic testing, where alternative iv could be designed to limit stochastic customization to only the "option costs".

While the ADWG considers the Stochastic Test (alternative i) to be the most complete test from an actuarial perspective, it is not recommended at this time because it does not satisfy the objective of simplicity.

The Simplified test with a standardized "option cost" (alternative ii) is also not recommended at this time. While such a test could be developed, it would not satisfy the objective of flexibility.

### 3. *Specific Test(s) to Be Used*

As stated earlier, any of the six tests presented in the ADWG's June 1998 Report could be a reasonable basis for a supportability test, with each test identified having certain limitations. Finishing the development of any of the tests would require a number of parameters to be set, including passing criteria. Some of the unique issues for each test are:

- ! Tests #1 (stochastic method) and Test #2 (defined scenario stochastic method) are both stochastic tests. Test #1 would require a measurement standard to determine if the interest rate environments tested were reasonably varied. Test #2 would require identification of a limited number of prescribed interest rate environments. (Testing has shown the valuation set, the New York 7, is not a good set for an illustration standard).
- ! Test #3 (static scenario method - product based), #4, (the margin approach) and #5 (static scenario method - standardized) are all simplified tests that are similar to "static assumption pricing". Any can be developed to serve as a simplified test.

- ! Test #6 (the Treasury approach) could also work, but is felt by the ADWG to be too removed from the actual assets that would back the policy values. It is the only test that is not recommended at this time.

The advantages and drawbacks of each method are summarized in appendices C.

The ADWG encourages the LDWG to decide to develop further (at most) one of the stochastic and one of the simplified methods. Full definition of six different methods is beyond the level of work that can be accomplished at this time. Also, the ADWG believes that further testing of generic product designs will not provide grounds for eliminating any of the tests.

#### 4. *Use of Supportability Disclosure*

The ADWG believes consumer's understanding of non-guaranteed elements would be increased from disclosure supportability information. The ADWG encourages the LDWG to consider how such disclosure can be encouraged. More information is contained in the supportability disclosure sections of the ADWG's February and June 1998 reports.

## **VI. Recommendations**

To summarize the ADWG Recommendations identified above:

First, the ADWG suggests the LDWG discuss the need for annuity supportability testing, develop a consensus on its priority and objectives, and determine how it would like to accomplish these objectives.

If a model regulation is to be developed that contains an annuity supportability test, then the ADWG further recommends: :

- Recommendation #1: The competing objectives of simplicity and flexibility should both be incorporated into testing requirements.
- Recommendation #2: The requirements should consider either of the following general testing approaches:
- iii. Company choice of (a) a stochastic test, or (b) a simplified test with standardized "option costs".
  - iv. Simplified test that:
    - a. Uses standardized "option costs", and
    - b. Contains an opportunity for a company, at their discretion, to develop and use customized "option costs" based on stochastic testing.

Recommendation #3: The LDWG should make an explicit decision to develop further one stochastic and one simplified test for use in a regulation.

Recommendation #4: The LDWG should consider supportability disclosure.

## **VII. Academy's Willingness to Assist**

The Academy's Disclosure Work Group believes the key aspect of the original charge is completed. Research has been completed that provides useful information about annuity supportability testing options for consideration by the LDWG as they develop their public policy priorities.

Based on public policy directions set by LDWG, the ADWG is able and willing to assist in completing the development of an annuity supportability test for use in a regulation. We look forward to the LDWG discussions and decisions on this matter.



## **Appendix A: Regulators' Perceived Need for Supportability Testing**

In order to better understand regulators' range of concerns and determine how widely particular concerns were shared, in August 1998, ADWG members contacted members of the LDWG and asked them a set of questions touching a number of areas. The sections below summarize the results of the interviews in the seven areas discussed.

### **Problems to be Addressed by Regulation**

LDWG members mentioned a range of problems and considerations that the regulation and the regulatory process should address. Among the problems and areas cited were:

Surrender charges

Buyer's Guide

Assurance the "numbers are sound"

Suitability of sales, especially to seniors

Replacements, especially with surrender charges

Actuarial stuff can wait longer than the end of year

Customers not understanding that annuities sold by banks are not bank contracts

Annuities have the fewest customer complaints

Concern about "baiting and switching", including first year bonuses

Complaints are 1 to 6 years after the sale and focus on:

i) inadequate disclosure of surrender charges including the durations to which they apply and

ii) projected high interest rates when the company does not intend continue to pay

What about products that mix life and annuity features -- how should they be included?

Life tests need not be modified to include cost of capital and asset and liability matching

Concerns may not be best addressed by supportability as much as by additional disclosure

(Seniors and two-tier annuities)

Projections too far into the future have no meaning

Increase in lapses can be due to unfavorable publicity for a company

Concern the company will illustrate increases in rates after certain durations

(as has been done with universal life illustrations)

Profits should be level for the life of policy or at least be intended that way

Higher profit objectives at later years should somehow be disclosed

Paid interest rates, rather than illustrated rates, are the cause of surrenders and complaints to insurance departments

Need to focus on interest rates and what consumers should expect.

Consumer should review buyer's guide, then disclosure, then

(potentially) the illustration, then the contract

Surrender Charges -- length and how (date of deposit and with each deposit)

Concern about unique products

Not a lot of concern with bonus products, disclosure not found to be misleading

Not concerned about disclosure of payout rate

Bonus rates need to be disclosed

Any interest rate is an implicit illustration and must be treated in that way

Reductions in crediting rates after a company is sold to a new buyer

Illustration of rates that the company does not intend to pay

For nonguaranteed elements (NGE's), there are three types of insurers

1. companies that are highly confident they can provide the NGE's
2. companies that have trouble providing the NGE's
3. a blend of 1 and 2, where the company may believe it can provide NGE's, but is not highly confident.

Concerns is over #2 and #3, but evidence is anecdotal

Silence on renewal rates implies the first year rate will continue in renewal years; a possible solution is to require that the rate be supportable over the life of contract; also need to show expected renewal rates

Agent's don't explain surrender charges well, but it could be the memory of consumers

Concern that some agents may be dishonest or simply don't understand the products

In general, very few complaints on annuities -- "No big deal"

Consumer disclosure by itself is helpful

Regulators are also concerned that products and illustrations are supportable;

regulators should be able to rely on a company's certification, but should not be expected to police the application of supportability standards

Supportability standards could build on the actuarial opinions and Risk-Based Capital standards related to company solvency, except applied to a product level

Concern that because annuities are so important to companies (i.e., a large part of their sales), products may be brought to market too quickly and may not be supportable; disclosure alone will not get to this, but certification may help control it

Concern that a company will reduce its credited rates to earn a higher spread;

yet, if the actuary has to disclose this to regulators, what will the regulators do with this information? What if the regulator finds out it was not disclosed, what will they do?

## **Options for Regulatory Solutions**

Too much disclosure is as bad as none

Need to monitor telemarketing

The internet -- need methods to police licensure of companies and agents

Better surrender charge disclosure (amount and duration)

Illustrations consistent with company interest crediting strategy; some states

require filing of strategy, but we also want consumers to be aware of the strategy

Want public to understand what will happen (based on past history of the company), i.e., what are this company's business practices?  
Favor use of supportability test; there should be controls  
Complex products -- same supportability test is acceptable, but the amount of disclosure should increase with complexity  
Don't want to force illustrations and lots of paper if the company is not doing it now  
A supportability test may help, but it needs to be simple  
Supportability disclosure will not work (for example, balancing language or a complex "prospectus" that people will not read)  
Disclosure on the risks of products may be more helpful to the regulator than to the consumer  
Disclose as much as possible  
Use disclosure, but keep it very simple (one-half a page); make the Buyer's Guide available if requested  
Should have disclosure on annual reports to remind consumer about the surrender charges, etc.  
High powered testing may not be helpful -- every actuary will be able to set assumptions to justify the rate the company wishes to use that was developed by their normal means; it becomes a regulatory hurdle that does not serve a real worthwhile purpose  
The illustration implies the company's intent and ability to pay the illustrated scale; verifying management integrity is very difficult and will not be forced by many calculations  
If the consumer has the basic understanding that, as interest rates change, the credited rate will change, then what is the point of dealing with all kinds of different interest rates in the future?

### **Preferences for Any of the Six Tests Identified in the Academy's June Report**

Don't yet understand the tests, but favor controls on what is given to the customer  
There needs to be consistency among companies—a level playing field  
One regulator preferred the Static Scenario-Standardized; the small companies would accept it, it would be harder to have regulators verify stochastic testing, though it is more thorough  
Suggest the Academy Disclosure Working Group get feedback of small companies  
Static Method-Standardized is my choice; there are fewer actuarial assumptions  
Could use two tests and require passing both  
Test results are only as good as assumptions, so minimize assumptions  
Don't understand the need for capital and cost of capital issue  
Margin approach (due to focus on spread) or standardized static scenario (due to consistency with life tests)  
Complex tests seem to add cost without justifying efforts  
Keep self-support test as simple as possible but make sure "gaming" is as small as possible (e.g., 2 percent of the time would be an okay level)  
Would choose a self-support solution closer to the "disclosure" end of the spectrum, rather than stochastic testing

Doubtful that a self-support test is needed  
Life tests work well—can those margins and simplifications be used for annuities?  
In the introduction of new products, regulators should have some assurance that  
the tests selected will work for those products  
If complex testing will lessen abuses, then maybe they can be justified

### **Use of Layered Approach**

Use of stochastic annually and simplified more frequently would be acceptable  
Having a choice is probably okay; it would allow smaller companies to avoid stochastic testing  
Interesting concept with which I'm comfortable

### **Equity Indexed Annuities (EIA's)**

Should be important part of the disclosure rules  
Prefer it is in fixed annuity regulation, not a stand alone rule  
Concerned about EIA's being too complex and companies taking too much margin  
Consumer disclosure for EIA is generally good  
Equity indexed disclosures that companies are asking customer to sign to indicate  
understanding are themselves very difficult to understand and may be incomplete  
Should allow use of hypotheticals  
It would be acceptable to have the same supportability test for equity indexed products,  
but a separate view may be needed  
EIA's can have the non-guaranteed element problem (i.e., showing a nonsupportable  
participation rate when it is guaranteed only one year at a time).  
It would be nice to have same self-support test for EIA's as other annuities; perhaps  
testing would be limited to just the participation rate issue  
EIA's need extra disclosure  
A self-support test is probably not needed if all the pieces are guaranteed  
Hope the supportability testing will decrease the potential for misleading  
consumers into the purchase of EIA products  
Any tests should apply to EIA products as soon as the tests are adopted

### **Illustration of Annuitization Options**

This should be a more important part of sales process  
Purchase rates should be better to encourage annuitization  
Payouts should be illustrated (not just accumulation)  
Disclosure of guaranteed and current purchase rates would be good  
Not used, but if they are, they should be subject to same principles as other illustrations.  
Prefer emphasizing income benefits, but industry and public may have little interest in them  
Don't believe a supportability test on the income options is of benefit

Important for two-tier annuities

Possible problem for all annuities if current purchase rates may not be available in the future

Not a big issue for regular annuities, but could be if insurers start to compete on  
future annuity income amounts

Not that important

No need to test for self-support; just provide caveats if showing a current purchase rate

### **Other**

The LDWG should discuss the observations the Academy is collecting  
and, using all the comments, discuss the future directions

## **Appendix B. Summary of Additional Research**

### **Research Testing Description**

The additional research was completed on the Bonus SPDA product outlined in the ADWG's June 1998 Report. This product has a bonus of 3 percent in the first year's credited interest rate. The research solved for the highest renewal credited rate that could be supported under each test. The table below summarizes these renewal interest rates for each of the six test methods. The table shows results for three different yield curves (which are summarized in a second table below). For each test, an initial approach was defined to allow for completion of the test. For any of the six tests, the approach will need further refinement before it can be used in a regulation.

The Stochastic Method (#1), with a solvency criteria of 85 percent, established the parameters that were then used in the other test methodologies. This includes use of an optimal investment strategy. The Additional Research was a test of the six testing methodologies, not a test of specific parameters or passing criteria. Using parameters derived from the stochastic test gave similar results under each of the six test methods, which indicates that any of the six test method could be developed further into a supportability test.

### **Conclusions**

- For all six methodologies, the additional research shows each of the tests to be a viable alternative. Further work is necessary to refine approaches and define passing criteria before any of the methods can be used in a regulation.
- The additional research did not identify reasons to eliminate any specific test.
- Any further research of any of the six methods would benefit from company specific testing of real products currently available on the marketplace. The ADWG testing can only work with generic product designs, which may not uncover real life issues.
- After criteria for passing (eg. solvency criteria), the "option cost" has been identified as perhaps the most important factor in supportability testing.

**TABLE 1****Research Results for Renewal Credited Interest Rates**

<u>Test Method</u>	<u>12/97 Yield Curve</u>		<u>12/92 Yield Curve</u>		<u>Plus 3% Yield Curve</u>	
	Renewal	Difference	Renewal	Difference	Renewal	Difference
1. Stochastic Method	4.50%	—	4.60%	—	6.30% <sup>1</sup>	—
2. Defined Scenario Stochastic Method (using 1/2 NY 7 Volatility) <sup>2</sup>	5.15%	0.65%	5.55%	0.95%	8.60% <sup>3</sup>	2.30%
3. Static Scenario Method - Product Based	4.63%	0.13%	4.74%	0.14%	6.82% <sup>3</sup>	0.52%
4. Margin Approach <sup>4</sup>	4.35%	-0.15%	4.33%	-0.27%	6.81%	0.51%
5. Static Scenario Method - Standardized	4.33%	-0.17%	4.44%	-0.16%	6.52% <sup>3</sup>	0.22%
6. Fixed Asset Method (Treasury Approach)	4.53%	0.03%	4.32%	-0.28%	7.67% <sup>3</sup>	1.37%

## Footnotes:

<sup>1</sup> The Plus 3 scenarios "blew-up", in that an unreasonably large margin (25% IRR) was needed to pass the 85% solvency criteria. In real life, this would probably force a shorter investment strategy. If this method is chosen for further development, additional refinement in the methodology can be done to prevent the problem. A more realistic estimate of the appropriate renewal credited rate is 7.30%.

<sup>2</sup> The additional research started with the New York 7 Cash Flow testing scenario. Because of a strong excess lapse component in the modeling, it was not possible to pass the "up" scenarios even with a modification to the asset mix at issue. Credible results were obtained using one-half the upward increase in the "up" scenarios, which became the basis for completing the additional research. Refinements in the scenarios would be necessary if this method is chosen for further development.

<sup>3</sup> For the Plus 3 scenario, the Stochastic Method (#1) set the cost of capital parameter used in Methods #3, #4, and #5. This produced the similar renewal interest rates shown in the table. Methods #2 and #6 were independent of the cost of capital from Method #1, which resulted in the higher renewal interest rates shown.

<sup>4</sup> The Margin Approach (Method #4) used a passing criteria based on 50% of policies in force. The passing criteria could be refined further to improve accuracy, if this method is chosen for further development.

**TABLE 2**

**Yield Curves Used in Testing**

<u>Maturity</u>	<u>12/97 Yield Curve</u>	<u>12/92 Yield Curve</u>	<u>Plus 3% Yield Curve</u>
2	5.66%	4.77%	8.36%
5	5.71	5.93	8.64
7	5.77	6.40	8.84
10	5.75	6.71	8.98



## **Appendix C: Advantages and Drawbacks of Supportability Test Options**

This appendix summarizes the supportability test options identified in the June 1998 ADWG Report.

### **1. Stochastic Method**

*Description* Test illustrated benefits using modeling methods from cash flow testing and asset/liability management. Use many runs of different interest rate environments after issue to "stress test" a product and its supporting assets. Has strong reliance on actuarial judgment to set all key factors and their sensitivity to a dynamic interest rate. Criteria for passing is based on a solvency criteria (set in the regulation) and pricing criteria (set by each company and which may vary by each company and product).

*Advantages:* It is very complete from an actuarial perspective and addresses solvency testing and persistency issues. It looks at all factors from the unique position of the company selling the product.

*Drawbacks:* Relies on subjective actuarial assumptions, including how a company will react to different interest rate environments. Also, it is even stricter than the asset adequacy testing completed by Valuation Actuaries. It does not allow sufficiencies from one product to offset possible deficiencies in a different product. Requires the most time of any method to set assumptions and complete testing when new illustrated scales must be reviewed. Test results are only as valid as the actuarial assumptions used in the testing. It is also expensive, complicated and difficult to verify. It is likely too difficult to be completed for frequent interest rate changes.

### **2. Defined Scenario Stochastic Method**

*Description* The Regulation could define a limited number of future interest rate scenarios to be tested using the Stochastic Method described above. Again, company and product specific assumptions for lapses, expenses, etc, would be used, although an annuity generally recognized expense table could be developed. This concept is similar to the use of the New York 7 scenarios in Valuation Actuary cash flow testing. Specific scenarios would need to be identified for annuity supportability testing. The scenarios and the associated passing criteria would need to be developed.

*Advantages:* This may have rigor similar to the full stochastic method, but with the caveat that the method is applied to a well defined set of interest rate scenarios.

*Drawbacks* The drawbacks from the full Stochastic Method also apply here.

### **3. Static Scenario Method - Product Based**

*Description* A product specific "option cost" determined periodically using stochastic methods would be used in a static scenario test (similar to the Life Insurance Illustration Regulation self-support and lapse-support tests). Other factors would also need to be incorporated, possibly include a decrease in gross interest rates due to the shortening of investments to maintain asset liability matching and also the capital costs associated with risk-based capital needs. Other factors could be similar to the life self-support test - e.g., persistency, expenses with possible use of a generally recognized expense table, FIT, premium taxes, etc.

Additional persistency stress tests could also be developed.

*Advantages:* Uses modeling methods familiar to most actuaries and is compatible with many pricing methods.

*Drawbacks:* The "option cost" (asset/liability charges) must still be calculated by the company, which could involve a significant amount of work (especially for smaller companies that do not perform cash flow testing). Also, early profits (or losses) from terminating policyholders are accumulated and affect the passing criteria in later years. The cost of capital calculation may result in unanticipated variations in illustrated rates. For example, the proposed test may result in highly capitalized companies illustrating lower interest rates than companies with lower capitalization (all other items being equal).

### **4. Margin Approach**

*Description:* Standardizing assumptions are used for asset liability charges ("option costs") Asset shares are not used. Instead, an accumulation formula uses an annual margin (or spread) between the gross interest rate and the credited interest rate, with appropriate adjustments for any bonuses, expenses, and cost of capital charges (possibly based on the risk-based capital method described in the Static Scenario Method). Reserves, FIT, and DAC Tax items are all excluded from the calculations for simplicity. Lapse rates are not part of the accumulation formula and are only used for determining the earliest year in which a positive accumulation must be present. This is somewhat similar to assuming a 100 percent persistency assumption in the Static Scenario test.

*Advantages:* It limits the factors involved in testing the illustrated interest rate and relies on the other regulatory standards to determine if the company is being managed appropriately (including reserves, valuation actuary testing and risk-based capital measures). It standardizes areas that are difficult for actuaries to determine (e.g., asset/liability matching for changes in interest rates). In other areas, such as earned interest rates and risk-based capital, it still uses company specific factors that are easy to verify. Each tested year has to "stand on its own". This means that each benefit or year tested meets the passing criteria on a stand alone basis and does

not provide or receive subsidy from any other policy benefit or year. It may be simple enough to be completed by a non-actuary, once actuarial assumptions are provided. It may be possible for companies to complete testing more frequently than other more complex methods.

*Drawbacks:* Standardized assumptions do not fit all situations. It does not have as strong of a theoretical foundation as asset adequacy or asset share testing. It is different than approaches currently being used by pricing or valuation actuaries. Also, the test does not capture losses from early surrenders if cash values are too high. If the regulation allows for tests to be completed by non-actuaries, actuarial professional standards may not apply and other regulatory controls may need to be developed.

## **5. Static Scenario Method - Standardized**

*Description* The Standardized Static Scenario Method is most similar to the Life Insurance Illustration Regulation self-support test. An asset share projection is performed using current experience assumptions, including the assumption of a static (i.e., unchanging) interest rate environment. The same type of items are included, such as expenses (possibly with a generally recognized expense table), FIT, persistency, etc. Extra factors to be included are standardized "option cost" charges for asset/liability risk and a standardized "cost of capital" charge. Different passing criteria would be needed, compared to the life tests, and would be based on the percent inforce compared to the life test requirements.

*Advantages:* It is a familiar method (similar to the life test). The standardized asset/liability charge makes the calculations simpler than stochastic calculations. By using the expected persistency method, the criteria for passing reflects variations in product design and experience.

*Drawbacks:* If a standardized asset/liability charge is used instead of a company's own stochastically calculated charge, then the charge will not fully reflect a product's individual risk situation. (Using RBC criteria adds some product specificity, however.) Ideally, the required capital objectives could be inconsistent with those assumed by the company. However, these objectives may not be well defined for a company and may be difficult to apply in a regulation, which is why the test utilizes standardized values. Using risk-based-capital factors in the cost of capital charge will introduce an element of extra charge for extra risk.

## **6. Fixed Asset Method (Treasury Approach)**

*Description:* For the Fixed Asset Method, the asset base used for the illustration is standardized to be the treasury yield curve plus an additional margin identified in the regulation (the additional margin to be determined by thorough research by the Academy). The resulting yield is reduced for expenses. Asset liability management is assumed to be satisfied by determining the appropriate investment horizon for the liabilities (illustrated values). This supportability test relies on other regulatory tools to identify problem companies (via reserve, risk-based capital or other methods).

*Advantages:* It includes the actual investment horizon appropriate for a product, but does not reflect asset/liability matching or the actual assets used by a company. It does produce a conservative, standardized illustrated interest rate that reflects differences based on the yield curve position for treasury interest rates and the level of company expenses.

*Drawbacks* While the rate should be supportable, in actuality it may or may not be supportable for a specific company. The standardized asset base means that the test results do not reflect the actual assets used by a company. This means that any extra value added by companies can not be illustrated for consumers. Nor can illustrations reflect the extra risks associated with items such as lower quality assets, incomplete asset/liability management, higher risk-based capital costs, or higher profits or contributions to surplus. Calculating the investment horizon for a product design is not easy, but it would only need to be calculated once. The “additional margin” over Treasury rates would need to be reevaluated from time to time.