



# Product Matters!

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## SOA International Experience Survey— Embedded Value Financial Assumptions

Charles Carroll<sup>1</sup>, William Horbatt and Dominique Lebel<sup>2</sup>

Starting in 2003, the Society of Actuaries International Experience Study Working Group has been conducting surveys of published embedded value (EV) financial assumptions.<sup>3</sup> This article updates the survey with 2009 data.

The purpose of this survey is to provide international actuaries with benchmark assumption data. Since many companies make this information publicly available, no formal data request was issued. Instead, the survey was based on reports published on the Internet by 38 companies centered in Asia, Australia, Canada and Europe, many of which are active internationally. This compares to a total of 23 companies included in last year’s study. The authors decided to include a number of smaller, regional companies in this year’s study, which accounts for the increase in the number of companies. Two companies were dropped because they were acquired; one company did not publish an EV report this year; and 18 companies were added.

### COMPANIES INCLUDED IN SURVEY

Aegon	Allianz
AMP	Aviva
AXA	Chesnara
CNP	Dai-ichi
Delta Lloyd	Eureko
Fortis	Generali
Groupama	Hannover Re
Himawari	Ind. Alliance
Irish Life & Perm KBC	Legal & Gen
Lloyds TSB	KBC
ManuLife	Mediolanum
Mitui	Munich Re
Old Mutual	Prudential UK
Royal London	SCOR
SJP	SNS Real
SONY	Standard Life
Swiss Life	T&D
Uniqa	Vienna
Vital	Zurich

### FOOTNOTES

<sup>1</sup> Charles would like to thank Peter Duran for his assistance in interpreting the EV report for Mitsui Life

<sup>2</sup> Dominique would like to thank Grant Fredricks for his assistance in gathering the data for this article.

<sup>3</sup> International News, Issue 34, October 2004, Society of Actuaries, p. 19 – this can be found at: <http://library.soa.org/library-pdf/ISN0410.pdf>, International News, Issue 36, July 2005, Society of Actuaries, p. 28 – this can be found at: <http://library.soa.org/library-pdf/ISN0507.pdf> and International News, Issue 40, November 2006, Society of Actuaries, p.8 – this can be found at: <http://soa.org/files/pdf/ISN0611.pdf>, International News, Issue 46, December 2009, Society of Actuaries, p. 7 – this can be found at: <http://soa.org/library/newsletters/international-section-news/2009/december/isn-2009-iss46.pdf>



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## Articles Needed for the Next Issue of *Product Matters!*

While all articles are welcome, we would especially like to receive articles on topics that would be of interest to Product Development Section members based outside of the United States.

Please e-mail your articles to Christie Goodrich or Paul Fedchak by April 1st.

# Chairperson's Corner: Greetings to All

By Mitch Katcher

It is a great privilege to be writing to all of you as the new Chairman of the Product Development Section. I have been given an opportunity to help influence the role that this section can play in your professional lives. I want to offer some thoughts for the year ahead, but I want to first recognize several leaders in the Product Development Section.

At the top of the list is a big “thanks” to our outgoing members for their time, energy and ideas. It has been great to work with you. Great thanks go to John Currier for his leadership as the chairman over the past year. The section was able to accomplish a lot with the survey of topics that we sent out last winter and a rededication to research activities. Sue Saip deserves kudos for her tireless efforts as secretary, treasurer and whatever else needed to get done. And last but not least, a special thanks to Tom Phillips for all of his hard work as a very active member of the section including his work as liaison for Continuing Education meetings.

It will be hard to replace those Section Council representatives, but we had an excellent slate for the section election and I could not be more pleased than to welcome Rhonda Elming, Paula Hodges, Stephen Peeples, and Vera Ljucovic as new Section Council members.

This is a very challenging time to be involved with product development. The challenges of growing in a marketplace with record-low interest rates, continued volatility in the stock market and limited new capital is more daunting than ever. There are also challenges from regulations around the impact of financial reform, issue of retained assets, role of STOLI, etc. This makes it an ideal time for actuaries to continue to grow their knowledge and network, and the Product Development Section is the forum to come to for these opportunities.

The SOA sections are truly grass roots—we need to hear from the section members on your ideas, we welcome your input on the education and research that would be of greatest value to you. It is not about the people on the committee as much as it is about all of you, the 4,000 members of the Product Development Section. It is our goal to make the committee as relevant to you as ever. We do not need a lot from you, but to succeed we do need your engagement. As such we have begun discussing a letters to the editor section for the newsletter. It is just another way for us to hear from you and you to hear what other actuaries are asking and are concerned about.

Please feel free to contact me anytime with your thoughts or suggestions to help us build an even more relevant Product Development Section. I look forward to receiving your e-mail and to seeing and talking to you at the Society of Actuaries' events and meetings.

In closing, I want to thank you all for the opportunity to serve you—I'm looking forward to what promises to be a very interesting year! □

Best Regards,  
Mitch Katcher



Mitch Katcher

**LIMITATIONS**

Readers should use judgment when interpreting the results of the survey and note that:

- When comparing one assumption to another, it should be noted that different companies might be contributing data to different assumptions, so that differences between variables may reflect differences between companies, rather than differences between the assumptions.
- Some cells include data from many companies, while others include data from as few as one company.

Each financial assumption presented in this article is the average value of the assumption reported by all companies in their 2009 embedded value reports. If no companies reported a specific assumption in a given country, then that assumption is labeled “NA” to signify that data is not available.

Some companies vary assumptions by calendar year, while other companies use a single assumption; if a company varies an assumption by calendar year, the value for the earliest period is used in this study.

**Financial Assumptions from Survey**

Financial assumptions presented in this article include

- (1) Discount rate—for companies with traditional embedded value (TEV) calculations, the rate used to calculate the present value of future distributable earnings;
- (2) Implied discount rate – for companies with market consistent embedded value (MCEV) calculations, the TEV discount rate that when used to discount “real world” cash flows, would produce the MCEV;
- (3) Equity return<sup>4</sup> – the total return on common stock investments;
- (4) Property return<sup>4</sup> – the total return on investments in real estate;
- (5) Fixed return<sup>4</sup> – the yield on a corporate bond portfolio held by an insurance company;
- (6) Risk-free return – typically the yield on a 10-year bond offered by the local government or the 10-year swap rate (swap rates are commonly used as risk-free yields for MCEV purposes);
- (7) Inflation – the rate used to increase future expenses and, possibly, revalue policy terms that are tied to inflation; and
- (8) Tax rates – income tax rates by jurisdiction.

These results are presented in two separate tables. Table 1 provides the number of companies contributing data as well as discount rates for TEV companies and the implied discount rates for MCEV companies. Table 2 contains the rest of the financial data.

When reading Table 1, several thoughts should be kept in mind:

- The methodologies followed by the companies to determine discount rates were as follows:

Methodology	Number of Companies
MCEV	29
WACC	9

- A methodology is considered market consistent if conceptually each cash flow is valued consistently with traded instruments that display similar risks. Thus under the MCEV approach each cash flow is theoretically discounted using a risk discount rate (RDR) appropriate for valuing similar cash flows in the market.
- Companies following MCEV, strictly speaking, do not have risk discount rates that are comparable to those used by companies employing a more traditional approach. For companies employing an MCEV methodology, discount rates in Table 1 are the RDRs inferred from the MCEV calculation. That is, they are discount rates that would develop the MCEV value using TEV techniques and assumptions. Many companies that publish MCEV results do not publish implied discount rates.
- Companies that explicitly set risk discount rates are referred to as calculating traditional embedded values. A common method used by these companies to set the risk discount rate is the company’s own weighted average cost of capital (WACC).

When reading this and other tables, it should be noted that some companies use identical assumptions for multiple countries (on the basis that this results in immaterial differences), and this practice would tend to dampen differences between countries.

**FOOTNOTES**

<sup>4</sup> Note that for companies on an MCEV basis, the expected returns on assets are those that are used to derive the implied discount rate.

**Table 1: Average 2009 Explicit and Implicit Discount Rates**

<u>Country</u>	Companies	Traditional Discount Rate (1)	Companies	Implied Discount Rate (In Force) (2)	Implied Discount Rate (New Business) (3)
<b>Africa</b>					
South Africa	0	NA	0	NA	NA
<b>America Latin</b>					
Argentina	0	NA	0	NA	NA
Bolivia	0	NA	0	NA	NA
Brazil	0	NA	0	NA	NA
Chile	0	NA	0	NA	NA
Columbia	0	NA	0	NA	NA
Guatemala	0	NA	0	NA	NA
Mexico	1	12.5%	0	NA	NA
Panama	0	NA	0	NA	NA
Peru	0	NA	0	NA	NA
Uruguay	0	NA	0	NA	NA
Venezuela	0	NA	0	NA	NA
<b>America North</b>					
Bermuda	0	NA	0	NA	NA
Canada	3	7.7%	1	7.2%	7.2%
U.S.	4	7.9%	2	28.1%	24.1%
<b>Asia/Pacific</b>					
Australia	1	8.7%	1	6.7%	6.4%
China	2	11.0%	0	NA	NA
Hong Kong	2	7.1%	1	7.5%	5.5%
Indonesia	1	13.8%	0	NA	NA
Japan	2	5.8%	1	6.7%	3.4%
Malaysia	1	9.5%	0	NA	NA
New Zealand	1	9.2%	1	6.7%	6.4%
Philippines	1	15.8%	0	NA	NA
Singapore	1	6.8%	0	NA	NA
South Korea	1	8.4%	0	NA	NA

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**Table 1: Average 2009 Explicit and Implicit Discount Rates (Continued)**

Country	Companies	Traditional	Companies	Implied Discount Rate	
		Discount Rate (1)		(In Force) (2)	(New Business) (3)
Taiwan	1	7.5%	0	NA	NA
Thailand	1	13.0%	0	NA	NA
Vietnam	1	16.8%	0	NA	NA
<b>Asia/Mideast</b>					
India	1	14.3%	0	NA	NA
Israel	0	NA	0	NA	NA
Turkey	1	15.0%	0	NA	NA
<b>Europe Central</b>					
Bulgaria	0	NA	0	NA	NA
Croatia	1	9.7%	0	NA	NA
Cyprus	1	7.7%	0	NA	NA
Czech	1	8.3%	0	NA	NA
Greece *	1	8.3%	0	NA	NA
Hungary	2	12.0%	0	NA	NA
Poland	2	10.3%	2	6.5%	6.3%
Romania	3	15.2%	0	NA	NA
Russia	0	NA	0	NA	NA
Slovakia	2	8.4%	0	NA	NA
<b>Europe Western</b>					
Austria *	0	NA	0	NA	NA
Belgium *	0	NA	1	8.2%	7.9%
Denmark	0	NA	0	NA	NA
Finland *	0	NA	0	NA	NA
France *	3	7.3%	3	9.0%	7.8%
Germany *	0	NA	3	6.2%	5.6%
Ireland *	2	7.2%	2	5.5%	5.5%
Italy *	0	NA	3	6.8%	6.7%
Lichtenstein	0	NA	0	NA	NA
Luxembourg *	0	NA	0	NA	NA
Netherlands *	4	7.3%	1	8.1%	8.1%
Norway	1	7.4%	0	NA	NA
Portugal *	0	NA	0	NA	NA
Spain *	1	8.4%	1	8.4%	8.4%
Sweden	0	NA	0	NA	NA
Switzerland	0	NA	1	4.9%	5.0%
UK	4	7.9%	3	8.2%	7.8%

\* euro currency zone

A few observations can be made concerning Table 1 when compared to similar data published last year:<sup>5</sup>

- Traditional and implied discount rates generally increased.
- Other than for Thailand, where the average discount rate increased from 9.5- to 13.0-percent, the average traditional discount rates did not change by more than 1.8 percent. While it should be noted that only one company in our survey reported discount rates for Thailand in 2009 (compared to two in 2008), the increase in the average discount rate is relatively consistent with the increase in the risk-free return.
- Other than for the United States, the implied discount rates did not change by more than 2.2 percent. The implied discount rate for the United States increased significantly, but this was caused by the very high implied discount rates for one company. It should be noted that only two companies in our survey reported implied discount rates for the United States in 2009 (compared to one in 2008).

The second table presents the balance of the financial assumptions used in embedded value calculations. Note that:

- Equity and property returns normally include both cash income (that is, stockholder dividends and rental payments) and asset value appreciation (or depreciation), and these yields may be reported net of investment expenses. Alternatively, equity returns may represent a fund appreciation prior to any fees or charges made against the fund. In all cases, equity and property returns will be influenced by company investment strategy.
- Fixed returns reflect the investments in an insurer's bond portfolio. Amortized book yields are typically used in countries where book profits are based on amortized book value, while current market redemption yields are used when profits are calculated using market values. Companies generally do not disclose whether the fixed income returns are net of defaults or investment expenses.
- The inflation assumption may differ from general inflation (for example, the increase in a consumer price index).
- Tax rates are dependent upon individual company circumstances (for example, the existence of tax loss carry forwards) and thus these rates cannot necessarily be applied to other companies.

#### FOOTNOTES

<sup>5</sup> See footnote 1

**Table 2: Average 2009 Financial Assumptions**

Country	Companies	Equity Return	Property Return	Fixed Return	Government Return	Inflation	Income Tax Rates
		(4)	(5)	(6)	(7)	(8)	(9)
<b>Africa</b>							
South Africa	2	12.7%	10.7%	NA	9.2%	7.7%	34.7%
<b>America Latin</b>							
Argentina	0	NA	NA	NA	NA	NA	NA
Bolivia	0	NA	NA	NA	NA	NA	NA
Brazil	1	NA	NA	13.2%	NA	4.5%	40.0%
Chile	0	NA	NA	NA	NA	NA	NA
Columbia	0	NA	NA	NA	NA	NA	NA

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Table 2: Average 2009 Financial Assumptions (Continued)

Country	Companies	Equity Return	Property Return	Fixed Return	Government Return	Inflation	Income Tax Rates
		(4)	(5)	(6)	(7)	(8)	(9)
Guatemala	0	NA	NA	NA	NA	NA	NA
Mexico	1	NA	NA	NA	6.5%	4.2%	40.0%
Panama	0	NA	NA	NA	NA	NA	NA
Peru	0	NA	NA	NA	NA	NA	NA
Uruguay	0	NA	NA	NA	NA	NA	NA
Venezuela	0	NA	NA	NA	NA	NA	NA
<b>America North</b>							
Bermuda	0	NA	NA	NA	NA	NA	NA
Canada	6	8.0%	8.6%	4.7%	3.9%	1.7%	27.4%
US	15	8.2%	6.7%	6.3%	3.8%	2.5%	30.0%
<b>Asia/Pacific</b>							
Australia	3	8.9%	7.7%	6.9%	5.7%	2.8%	30.0%
China	3	10.2%	NA	5.3%	6.1%	3.5%	25.0%
Hong Kong	5	9.2%	NA	7.1%	3.7%	2.3%	16.5%
Indonesia	1	NA	NA	NA	10.3%	6.0%	NA
Japan	9	5.0%	3.8%	2.4%	1.7%	0.2%	36.0%
Malaysia	2	12.4%	NA	NA	6.5%	2.8%	16.4%
New Zealand	2	9.2%	8.2%	6.7%	6.2%	3.0%	NA
Philippines	1	NA	NA	NA	9.3%	5.0%	NA
Singapore	1	10.2%	NA	NA	4.3%	1.8%	NA
South Korea	3	10.4%	6.5%	NA	5.5%	2.8%	23.1%
Taiwan	2	NA	NA	NA	5.5%	2.3%	NA
Thailand	2	NA	NA	NA	6.8%	3.0%	NA
Vietnam	1	NA	NA	NA	10.3%	6.0%	NA
<b>Asia/Mideast</b>							
India	1	NA	NA	NA	9.3%	5.0%	NA
Israel	1	NA	NA	NA	2.7%	NA	NA
Turkey	1	15.0%	NA	NA	9.0%	5.0%	20.0%
<b>Europe Central</b>							
Bulgaria	0	NA	NA	NA	NA	NA	NA
Croatia	1	NA	NA	NA	5.7%	NA	20.0%
Cyprus	1	6.4%	5.4%	3.4%	2.9%	3.8%	25.5%
Czech	6	7.4%	6.9%	NA	4.4%	2.5%	18.9%
Greece *	2	8.2%	7.2%	5.2%	4.7%	3.3%	25.0%
Hungary	5	12.0%	12.0%	NA	8.0%	3.0%	20.1%



**Table 2: Average 2009 Financial Assumptions (Continued)**

Country	Companies	Equity Return	Property Return	Fixed Return	Government Return	Inflation	Income Tax Rates
		(4)	(5)	(6)	(7)	(8)	(9)
Poland	7	9.8%	7.8%	NA	6.3%	2.8%	19.0%
Romania	4	14.7%	15.4%	13.4%	10.6%	4.9%	16.0%
Russia	0	NA	NA	NA	NA	NA	NA
Slovakia	3	7.9%	6.4%	4.4%	3.8%	3.0%	19.0%
<b>Europe Western</b>							
Austria *	2	NA	NA	NA	NA	2.0%	25.0%
Belgium *	4	7.5%	6.6%	4.6%	3.8%	1.5%	34.0%
Denmark	0	NA	NA	NA	NA	NA	NA
Finland *	0	NA	NA	NA	NA	NA	NA
France *	13	7.4%	5.4%	4.7%	3.5%	2.3%	34.3%
Germany *	11	7.3%	5.4%	4.6%	3.6%	2.2%	31.5%
Ireland *	8	7.1%	6.1%	4.2%	3.9%	3.0%	12.5%
Italy *	9	7.4%	4.9%	NA	4.0%	2.2%	32.7%
Lichtenstein	1	NA	NA	NA	NA	NA	13.0%
Luxembourg *	2	6.6%	5.6%	NA	NA	NA	22.0%
Netherlands *	7	7.1%	6.0%	4.1%	3.6%	2.1%	24.9%
Norway	1	7.6%	6.6%	4.1%	NA	3.6%	NA
Portugal *	1	NA	NA	NA	NA	NA	26.5%
Spain *	6	7.4%	6.6%	5.1%	3.8%	2.2%	30.0%
Sweden	3	6.7%	5.7%	NA	3.7%	2.4%	28.0%
Switzerland	5	7.3%	4.3%	2.3%	NA	1.2%	21.4%
UK	17	7.8%	6.8%	5.2%	4.4%	3.6%	27.8%

\* euro currency zone

A few observations can be made concerning Table 2 when compared to similar data published last year:<sup>6</sup>

- Equity, property, fixed and risk-free return assumptions generally increased. Inflation assumptions also generally increased, while tax rate assumptions generally decreased.
- Equity return assumptions in Romania and Hong Kong increased the most (2.4- and 2.2-percent respectively).
- Property and fixed-return assumptions in Romania increased the most (4.8 percent for each), but our survey includes data for only one company.
- While most countries showed increases or relatively small decreases in average risk-free returns, Mexico

showed a 2.0 percent decrease, but again our survey includes data for only one company.

- Similarly, while most countries showed small changes in average inflation, South Africa showed a 2.2 percent increase, but again our survey includes data for only one company.
- The biggest decrease in tax rate assumptions (-9.6 percent) occurred in Malaysia, where our survey includes data for only one company.

**FOOTNOTES**

<sup>6</sup> See footnote 1

CONTINUED ON PAGE 10

It should be noted that several companies calculating MCEVs as of year-end 2009 adjusted their risk-free rates by including an illiquidity premium adjustment resulting in a higher risk-free return.

### Investment Premiums and Other Marginal Relationships

Investment premiums are the additional yield an investor is expected to receive by purchasing an asset other than a government bond.

- Equity Premium – the excess yield from investing in common stock over the risk free return,

- Property Premium – the excess yield from investing in real estate over the risk free return, and
- Credit spread – the excess yield from investing in a mix of corporate and government bonds over the risk-free return.

In addition the following two marginal relationships may be of interest:

- Risk premium – the excess of the traditional embedded value discount rate over the risk-free return, and
- Real return – the excess of the risk-free return over inflation.

Table 3 presents the marginal relationships derived from Table 2. The column numbering continues the numbering in the prior table.

**Table 3: Investment Premiums and Other Marginal Relationships**

Country	Traditional Risk Premium (10)=(1)-(7)**	Equity Premium (11)=(4)-(7)**	Property Premium (12)=(5)-(7)**	Credit Spread (13)=(6)-(7)**	Real Return (14)=(7)-(8)**
<b>Africa</b>					
South Africa	NA	3.5%	1.5%	NA	1.5%
<b>America Latin</b>					
Argentina	NA	NA	NA	NA	NA
Bolivia	NA	NA	NA	NA	NA
Brazil	NA	NA	NA	NA	NA
Chile	NA	NA	NA	NA	NA
Columbia	NA	NA	NA	NA	NA
Guatemala	NA	NA	NA	NA	NA
Mexico	6.0%	NA	NA	NA	2.3%
Panama	NA	NA	NA	NA	NA
Peru	NA	NA	NA	NA	NA
Uruguay	NA	NA	NA	NA	NA
Venezuela	NA	NA	NA	NA	NA
<b>America North</b>					
Bermuda	NA	NA	NA	NA	NA
Canada	3.8%	4.3%	4.8%	1.0%	2.2%
US	4.1%	4.0%	4.1%	2.9%	1.5%

**Table 3: Investment Premiums and Other Marginal Relationships (Continued)**

Country	Traditional Risk Premium (10)=(1)-(7)**	Equity Premium (11)=(4)-(7)**	Property Premium (12)=(5)-(7)**	Credit Spread (13)=(6)-(7)**	Real Return (14)=(7)-(8)**
<b>Asia/Pacific</b>					
Australia	3.0%	3.0%	2.0%	0.5%	2.7%
China	4.9%	6.2%	NA	1.3%	2.6%
Hong Kong	3.4%	5.0%	NA	NA	1.6%
Indonesia	3.6%	NA	NA	NA	4.3%
Japan	4.1%	3.5%	NA	NA	NA
Malaysia	3.0%	5.9%	NA	NA	3.8%
New Zealand	3.0%	3.0%	2.0%	0.5%	3.2%
Philippines	6.5%	NA	NA	NA	4.3%
Singapore	2.6%	6.0%	NA	NA	2.5%
South Korea	2.9%	NA	NA	NA	2.8%
Taiwan	2.0%	NA	NA	NA	3.3%
Thailand	6.3%	NA	NA	NA	3.8%
Vietnam	6.5%	NA	NA	NA	4.3%
<b>Asia/Mideast</b>					
India	5.0%	NA	NA	NA	4.3%
Isreal	NA	NA	NA	NA	NA
Turkey	6.0%	6.0%	NA	NA	4.0%
<b>Europe Central</b>					
Bulgaria	NA	NA	NA	NA	NA
Croatia	4.0%	NA	NA	NA	NA
Cyprus	4.8%	3.5%	2.5%	0.5%	-0.8%
Czech	4.0%	3.0%	2.4%	NA	1.4%
Greece *	3.6%	3.5%	2.5%	0.5%	1.4%
Hungary	4.0%	4.0%	4.0%	NA	5.0%
Poland	4.0%	4.0%	NA	NA	3.2%
Romania	4.6%	3.8%	2.5%	0.5%	6.1%
Russia	NA	NA	NA	NA	NA
Slovakia	4.6%	4.1%	2.5%	0.5%	0.8%
<b>Europe Western</b>					
Austria *	NA	NA	NA	NA	NA
Belgium *	NA	4.2%	2.7%	-0.5%	1.3%
Denmark	NA	NA	NA	NA	NA
Finland *	NA	NA	NA	NA	NA
France *	3.9%	3.6%	1.8%	0.7%	1.0%

CONTINUED ON PAGE 12

**Table 3: Investment Premiums and Other Marginal Relationships (Continued)**

<u>Country</u>	Traditional Risk Premium	Equity Premium	Property Premium	Credit Spread	Real Return
	(10)=(1)-(7)**	(11)=(4)-(7)**	(12)=(5)-(7)**	(13)=(6)-(7)**	(14)=(7)-(8)**
Germany *	NA	3.1%	1.9%	-1.0%	1.1%
Ireland *	3.0%	3.2%	2.3%	0.1%	0.8%
Italy *	NA	2.3%	0.6%	NA	1.7%
Lichtenstein	NA	NA	NA	NA	NA
Luxembourg *	NA	NA	NA	NA	NA
Netherlands *	3.7%	3.6%	2.5%	0.5%	1.6%
Norway	NA	NA	NA	NA	NA
Portugal *	NA	NA	NA	NA	NA
Spain *	4.6%	4.6%	4.6%	1.3%	1.8%
Sweden	NA	3.0%	2.0%	NA	0.9%
Switzerland	NA	NA	NA	NA	NA
UK	3.6%	3.4%	2.5%	1.0%	0.5%

\* = euro zone

\*\* = calculated including only companies with complete data

A few observations can be made when comparing Table 3 to last year's results:

- Equity and property premiums and real returns generally increased, while credit spreads generally showed decreases and risk premiums were mixed.
- While equity premiums did not change much overall, Turkey (+3.0 percent) saw a relatively large change.
- Spain (+2.3 percent) saw the most significant change in property premiums.
- The largest changes in real returns occurred in Mexico (-2.2 percent) and Hong Kong (+2.2 percent).
- No country showed an increase in credit spreads. The largest decrease was the United States with a decrease of 3.2 percent.
- While risk premiums did not change much overall, Taiwan (-2.3 percent) saw a relatively large change.

Please note that the data is relatively sparse outside of Western Europe and North America, so observations and conclusions could be different if additional data was available.

### Stochastic Market Assumptions

A number of companies are calculating the values of options and guarantees following stochastic approaches. Twenty-eight of the 38 companies surveyed disclosed some level of stochastic market assumptions in their 2009 embedded value reports. Averages of several of these assumptions are shown in Table 4 (volatility may also be referred to as standard deviation). While not strictly a stochastic assumption, we included illiquidity premium in Table 4.

**Table 4: Sample Stochastic Assumptions**

Country	Risk Free		Equity		Property		Liquidity	
	Rate	Volatility	Rate	Volatility	Rate	Volatility	Premium	
<b>Africa</b>								
South Africa	9.0%	NA	12.7%	26.2%	10.7%	14.1%	0.50%	
<b>America Latin</b>								
Argentina	NA	NA	NA	NA	NA	NA	NA	
Bolivia	NA	NA	NA	NA	NA	NA	NA	
Brazil	NA	NA	NA	NA	NA	NA	NA	
Chile	NA	NA	NA	NA	NA	NA	NA	
Columbia	NA	NA	NA	NA	NA	NA	NA	
Guatemala	NA	NA	NA	NA	NA	NA	NA	
Mexico	NA	NA	NA	NA	NA	NA	NA	
Panama	NA	NA	NA	NA	NA	NA	NA	
Peru	NA	NA	NA	NA	NA	NA	NA	
Uruguay	NA	NA	NA	NA	NA	NA	NA	
Venezuela	NA	NA	NA	NA	NA	NA	NA	
<b>America North</b>								
Bermuda	NA	NA	NA	NA	NA	NA	NA	
Canada	4.0%	NA	NA	NA	NA	NA	NA	
U.S.	4.2%	15.9%	8.2%	26.0%	4.9%	14.2%	0.48%	
<b>Asia/Pacific</b>								
Australia	6.4%	NA	NA	NA	NA	NA	NA	
China	NA	NA	NA	NA	NA	NA	NA	
Hong Kong	3.6%	24.7%	6.6%	26.9%	5.6%	28.5%	0.50%	
Indonesia	NA	NA	NA	NA	NA	NA	NA	
Japan	1.3%	20.1%	5.3%	24.7%	3.8%	23.2%	0.20%	
Malaysia	NA	NA	NA	NA	NA	NA	NA	
New Zealand	NA	NA	NA	NA	NA	NA	NA	
Philippines	NA	NA	NA	NA	NA	NA	NA	
Singapore	NA	NA	NA	NA	NA	NA	NA	
South Korea	5.4%	11.7%	10.4%	29.4%	6.5%	13.8%	NA	
Taiwan	2.3%	NA	NA	NA	NA	NA	NA	
Thailand	4.6%	NA	NA	NA	NA	NA	NA	
Vietnam	NA	NA	NA	NA	NA	NA	NA	

CONTINUED ON PAGE 14

**Table 4: Sample Stochastic Assumptions (Continued)**

Country	Risk Free		Equity		Property		Liquidity Premium	
	Rate	Volatility	Rate	Volatility	Rate	Volatility		
<b>Asia/Mideast</b>								
India	NA	NA	NA	NA	NA	NA	NA	NA
Isreal	2.7%	NA	NA	NA	NA	NA	NA	NA
Turkey	NA	NA	NA	NA	NA	NA	NA	NA
<b>Europe Central</b>								
Bulgaria	NA	NA	NA	NA	NA	NA	NA	NA
Croatia	NA	NA	NA	NA	NA	NA	NA	0.25%
Cyprus	NA	NA	NA	NA	NA	NA	NA	NA
Czech	3.7%	14.8%	6.5%	28.3%	5.4%	15.0%	0.25%	0.25%
Greece *	NA	NA	NA	NA	NA	NA	NA	NA
Hungary	7.2%	14.4%	NA	NA	NA	NA	NA	0.25%
Poland	5.8%	17.3%	NA	NA	NA	NA	NA	0.25%
Romania	NA	NA	NA	NA	NA	NA	NA	0.25%
Russia	NA	NA	NA	NA	NA	NA	NA	NA
Slovakia	NA	NA	NA	NA	NA	NA	NA	NA
<b>Europe Western</b>								
Austria *	4.0%	14.4%	NA	28.8%	NA	NA	0.23%	0.23%
Belgium *	3.9%	14.7%	7.3%	27.9%	6.1%	22.3%	0.38%	0.38%
Denmark	NA	NA	NA	NA	NA	NA	NA	NA
Finland *	NA	NA	NA	NA	NA	NA	NA	NA
France *	3.6%	15.5%	7.2%	28.2%	4.9%	18.4%	0.25%	0.25%
Germany *	3.7%	15.4%	7.4%	28.1%	4.9%	14.6%	0.15%	0.15%
Ireland *	4.0%	10.6%	4.7%	26.5%	4.7%	25.7%	NA	NA
Italy *	3.6%	15.6%	7.2%	26.8%	4.5%	14.8%	0.16%	0.16%
Lichtenstein	NA	NA	NA	NA	NA	NA	NA	NA
Luxembourg *	3.6%	14.4%	6.6%	26.3%	5.6%	29.6%	0.20%	0.20%
Netherlands *	4.2%	7.4%	7.5%	24.3%	6.5%	19.2%	0.39%	0.39%
Norway	NA	NA	7.6%	25.4%	6.6%	6.2%	NA	NA
Portugal *	3.5%	14.0%	NA	28.0%	NA	15.0%	0.25%	0.25%
Spain *	3.6%	15.4%	6.6%	26.5%	5.6%	19.6%	0.19%	0.19%
Sweden	3.7%	NA	6.7%	NA	5.7%	NA	NA	NA
Switzerland	2.7%	16.7%	8.1%	23.5%	3.7%	11.5%	0.13%	0.13%
UK	4.2%	9.7%	6.4%	25.0%	6.6%	14.6%	0.44%	0.44%

\* = euro zone

\*\* = calculated including only companies with complete data

Note that some companies reported volatility without reporting yields. Some companies determined volatilities from historical market experience while others measured the implied volatility in current derivative prices, which may result in significant differences between companies.

Some observations can be made regarding stochastic and other elements of EV calculations this year:

- Not surprisingly, illiquidity premiums and volatilities were lower as of year-end 2009 vs. year-end 2008. For example, in the United States the average liquidity premium declined from 1.48 percent at year-end 2008 to .5 percent at year-end 2009.
- Property volatilities and illiquidity premiums vary significantly from country to country, while volatilities of equities show much less variation by country.
- In last year's study, we found that companies used implied volatilities as of a wide range of dates in 2008 rather than simply using those as of year-end 2008. This was due to the high implied volatilities as of year-end 2008. In this year's study companies for the most part used implied volatilities as of year-end 2009.

## New 2009 Disclosures

The CFO Forum's Market Consistent Embedded Value Principles specify that the residual cost of non-hedgeable risks should be reflected in the calculation of EV. Non-hedgeable risks consist of certain non-financial risks, such as mortality risk and operational risk, and certain financial risks not reflected in other components of the EV. (The other components of EV are the present value of future profits, the time values of options and guarantees and frictional cost of capital.) Twenty-three of the companies in the study mentioned their basis for calculating the provision for the cost of non-hedgeable risks in their EV disclosure statements. Seventeen of the 23 indicated

that they used the cost of capital approach. Under this approach, a cost based on a certain percentage of capital is assessed each year. The cost of non-hedgeable risks is then the present value of this stream of costs. The percentage applied to the amount of capital is somewhat arbitrary since there is no standard approach to quantify non-hedgeable risks. The percentages disclosed by the companies in the study ranged from 0.75- to 7-percent per year. The definition of the amount of capital used in the calculation also varied. Several companies indicated that they used an amount of capital based on their internal economic capital models specifically related to non-hedgeable risks. Other companies appear to apply the percentage to the total amount of required capital. For the six companies that did not specifically mention the use of a cost of capital approach, the disclosures varied. Some simply mentioned that the cost of non-hedgeable risks was included. Some indicated that the cost of non-hedgeable risks was reflected in other aspects of the calculation, such as the choice of experience assumptions for lapse and mortality.

## Summary

The SOA International Experience Study Working Group (IESWG) publishes this survey to enhance the knowledge of actuaries about current international market conditions and practices. Practices continue to evolve and we wish to encourage an open discussion on appropriate methodologies and further disclosure of both assumptions and the thoughts behind their formulation.

The IESWG intends to update this survey annually. We invite additional companies to provide data, on a confidential basis, to be included in this and future surveys. Please contact Ronora Stryker (rstryker@soa.org) or Jack Luff (jluff@soa.org) at the Society of Actuaries for further information. ■



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# 2011 Election Results

By Christie Goodrich



Christie Goodrich

**A**s we embark upon the new year, it is that time again when we welcome new members to the leadership of the Product Development Section and wish well the members who have served our section for the past three years. It is with deepest regard that we say thank you to our retiring members John Currier (outgoing chairperson), Sue Saip and Tom Phillips.

Last fall, you cast your votes and we are pleased to announce the newest members of the Product Development Section Council are Rhonda Elming, Stephen Peeples, Paula Hodges, and Vera Ljucovic. We look forward to the perspective that the new members will bring to the Section Council and are pleased to share a little about each of them.

**Rhonda Elming** is senior vice president, Product Management for Aviva USA. Her responsibilities include product development, pricing and ongoing product management for all of Aviva's product lines including life insurance, annuities and managed account-guaranteed investment contracts. With more than 20 years of experience in the insurance industry, Rhonda has utilized her actuarial expertise and strong leadership skills to lead the development of several innovative products spanning multiple distribution channels including captive and independent agents, financial institutions and direct response. Prior to joining Aviva, Rhonda led the fixed annuity product development team for ING US Financial Services (Des Moines, Iowa) and held a variety of actuarial positions at Allstate Life Insurance Company (Northbrook, Ill.). Rhonda is considered an industry expert on indexed products and has spoken at several insurance industry functions on the topic. She is a graduate of the University of Iowa with a B.S. degree in Actuarial Science. Rhonda is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries.

“... it is that time again when we welcome new members to the leadership of the Product Development Section ...”

**Stephen Peeples** is vice president, Life Products for Genworth Financial. In his current role, he is responsible for leading the product development of the term life insurance portfolio. Stephen has 16 years of product development expertise, including actuarial leadership roles at Transamerica Reinsurance and Protective Life Insurance Company. He has worked with a wide spectrum of life insurance products, and has been involved in the industry's response to the many regulatory changes that have occurred over the last 19 years. Stephen holds a bachelor's and master's in Mathematics from Stamford University and Dartmouth College, respectively. He has also earned his fellow, Society of Actuaries (FSA) and member, American Academy of Actuaries (MAAA) accreditations.

**Paula Hodges** is a senior manager at Allstate Financial. Key responsibilities include management of the in-force life and annuity business as well the pricing governance framework. She has previous experience working with modeling and illustration software. She has been an active volunteer with the Society of Actuaries, serving on the Technology Council and the Management and Personal Development Section Council, prior to her current role on the Product Development Council.

**Vera Ljucovic** is vice president, Marketing for Canada Life Reinsurance based in the Toronto, Canada office overseeing a team that focuses on the U.S. Life Reinsurance business. In this role, she is primarily responsible for working with clients to negotiate and price traditional reinsurance products to meet client's risk and capital needs. Vera has held a variety of roles throughout her career at Canada Life Re and several other U.S.-based reinsurance companies and a direct writing Canadian company. These roles have provided experience working with the many aspects of the insurance operation including marketing, mortality research, financial reporting, in-force management, product development, valuation, and treaties. Vera is a fellow of the Society of Actuaries, a fellow of the Canadian Institute of Actuaries, a member of the American Academy of Actuaries and holds a B.Math degree with a major in Actuarial Science from the University of Waterloo. □



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#### Actuary Listed Best Career of 2011

FSA Stuart Klugman quoted in this article about his profession.

#### Women Outlive Men, But Don't Plan for It

FSA Anna Rappaport is quoted in *Reuters* about the impact of retirement on women. The article reports that half of American women will live past age 85, but very few are planning for it.

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# Is this Correction Good for Life Insurance?

By Ross Zilber



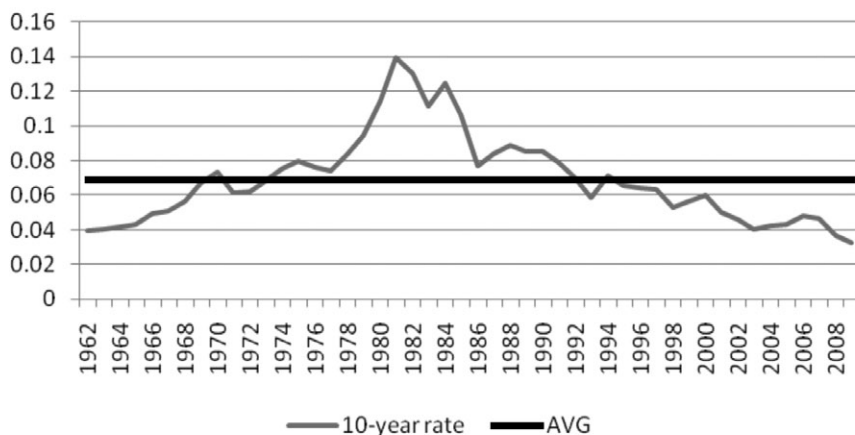
Ross Zilber, FSA, MAAA, CFA, FRM, CLU, ChFC is a AVP at Sun Life Financial. He can be reached at rosskougoun.zilber@sunlife.com.

About three years ago I dialed-in to a conference call with Alan Greenspan (at that point a consultant for Deutsche Bank). He was explaining the correlation between a long period of risk mispricing and the strength of the correction. At that point, only few anticipated the events that unfolded over the past three years could result in the largest economic and financial decline since the 1930's. Had the correction come sooner, a smaller bust would likely have followed a lesser level of excessive leverage.

Regardless of the view one takes on future economy and interest rates, rates are low now and it should matter to a life insurance company. This article will discuss the potential impact that low interest rates can have on the Life Insurance industry, even if they occur for a short period of time. They are:

1. Variable Annuity (VA) products have been de-risked. Life products have not gone through this process.
2. Shareholder tolerance for not managing to risk-neutral principals.
3. Asset returns. Illusion of real estate and equity returns.
4. Capital. Can you remain solvent longer than markets can remain irrational?
5. The future. IFRS.

## 10-year U.S. Treasury Rates



To get your interest in further reading this article I will address two common myths that I heard from practitioners:

“Implied forward rates are predictors of the future interest rates. The yield curve is steep, so we expect rates to increase in the future and just need to weather the storm.”

Antti Ilmanen in “Market’s Rate Expectations and Forward Rates: Part 2,” examined forward rates as forecasts of future spot rates and risk premia. The study found, “that forward-spot premia are negatively correlated with future changes in long-term interest rates. That is, when yield curve is upward sloping, long-term rates do not tend to increase. ... Instead long-term rates tend to decline. ...” For shorter rates (terms), forward rates predict the direction of rate changes correctly, but not for long rates.

The current yield curve is not a predictor of future interest rates, but represents equilibrium rates market participants use as reference rates for transactions. This means that if history is a guide, the current steep yield curve is not predicting increasing interest rates in the future.

“Interest rates mean revert and current low rates will be followed by higher interest rates.”

The chart below (left) shows a history of 10-year treasury rates since 1962. Rates do mean revert, but very slowly, and in a manner that defies precise statistical estimation. One complete cycle took from 1973 to 1992 (19 years). The data would show longer periods of low rates if the 1930s–1950s were included.

### 1. VA products have been de-risked. Life products have not gone through this process.

VA products have gone through a process of de-risking, as VA market returned to rational pricing of equity guarantees during 2008–2009. However, the impact of mid-2010 rate declines has not yet been reflected, with no evidence yet at the time of writing of another round of de-risking. It is interesting to note that life insurance

products have barely changed pricing. The chart on the right shows how average credited rates have changed for the top 11 (Appendix A) writers of (current assumption) cash accumulation focused UL.

These products are portfolio rate products and there is an argument for time delay in changes in credited rates. This argument should be examined in light of actuarial guidance on fairness in setting credited rates and self/lapse support tests. UL no-lapse guarantee (NLG) products do not generally offer cash values, and should be considered closer to new money products. Still, out of 12 UL NLG carriers (Appendix B) there were three product re-pricing actions; although most product pricing remains unchanged. Similar observations can be made about survivorship products.

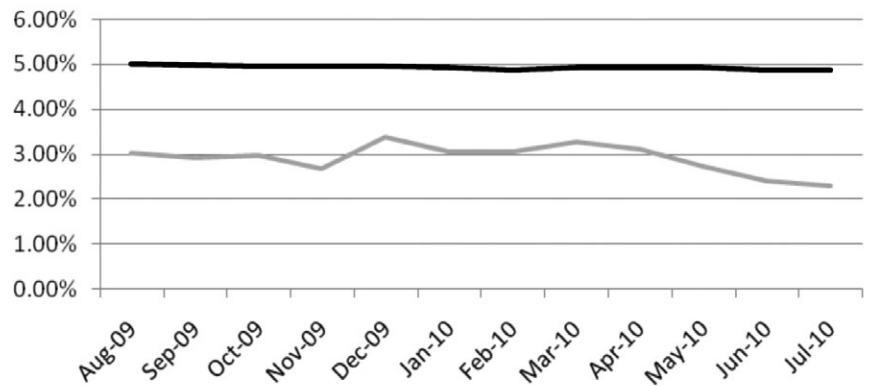
The de-risking for life products has not occurred yet, and the industry has not re-priced to reflect the low rate environment. Companies have been somewhat more responsive with some other general account guarantees, such as deferred fixed annuities, in which many companies have reduced guaranteed crediting rates on new business from 3 percent to the 1- to 2-percent range.

**2. Shareholder tolerance for not managing to risk-neutral principals.**

What drove VA writers to de-risk was the shareholders' intolerance of not managing their business to risk-neutral principals (with the exception of FAS 133/157 valuation of guarantees without life contingencies), and the realization during 2008 that under extreme market stress, capital at risk could be far greater than US GAAP reported earnings volatility. Insurance stocks are still traded at depressed levels. The chart on page 20 is a price history of IAK fund. The fund invests in large U.S. insurers.

What are the reasons that the investment community thinks that insurance stocks are worth about 60 percent of the value they had four years ago? I think one of the reasons is that the investment community has experienced unprecedented levels of earnings volatility from insurance companies, underlying that although insurance business is long-term, earnings emergence is important. This is from Eric Berg, sell-side analyst for Barclay

**Current Assumption UL credited rates vs. 7-year treasury**



Capital, who reviewed a life insurance company that did not hedge, resulting in “a greater than expected loss, erosion of its capital ratio, and a significant increase in unhedged ‘at risk’ variable annuity guarantee levels ... hedging program was not implemented aggressively and investors remain painfully exposed. ...” The stock of that company decreased over 10 percent on announcement of earnings. On the same day, Eric Berg also reviewed a company that hedged and commented that earnings were as expected and capital ratios were well managed. Analysts care about earnings and capital volatility, and whether or not the business is hedged.

**3. Asset returns. Illusion of real estate and equity returns.**

During times of low interest rates and historically tight corporate spreads, many companies turn to real estate and other alternative classes. Real estate is illiquid; there is infrequent trading in the commercial real estate market. An optimistic long-term assumption about real estate returns and duration can make this asset class very attractive. What should real estate return assumption be? Rents are typically tied to inflation and economic growth. Low interest rate periods are typically associated with periods of deflation or disinflation and economic weakness. This implies low rents and higher vacancies, as most rents are renegotiable every few years and typically follow inflation. An actuary should be careful not to assume appreciation assumptions out of line with the market consensus, especially in low interest rate scenarios.

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### Insurance Stock Performance (IAK fund)



Rent resetting also makes it difficult to estimate duration of real estate. Is it duration zero to a few years due to rents resetting or very long duration because of a longer holding period? This discussion is beyond the scope of this article, although the near zero empirical duration of REIT index returns provides one market view.

U.S. equity history suggests that stocks always have always outperformed bonds over sufficiently long periods, such as 20–30 years. However, this fortunate history has not occurred everywhere, with the last (lost) two decades in Japan, with near -65 percent cumulative Nikkei 225 price return being a noteworthy counterexample.

#### 4. Capital. “Can you remain solvent longer than markets can remain irrational?”

The quote above is commonly attributed to John Keynes. RBC C3 Phase 3 is a principle-based approach for determination of interest rate risk that is coming to the industry within a year. Life insurance products are in scope. The basis is CTE90 (average of the worst 10 percent of scenarios). Since life insurance companies already hold assets equal to normally large redundant NAIC reserves, the impact of stochastic reserves might be moderated. However, the direction of regulatory attention is worth noting, as the focus has been shifted from deterministic to stochastic approaches. Life insurance companies that have based their business model on long-term guarantees that appeared conservative in a high- to moderate-rate environment can find themselves under relentless pressure in a sustained low

rate and low return era, such as occurred in the United States in the 1930s, or Japan more recently.

#### 5. The future. IFRS.

Current accounting framework for most U.S. life insurers is based on US GAAP, which has a deficiency in timely recognition of interest rate changes in the unlocking of the DAC assumptions. Ernst & Young published an analysis of IFRS treatment of insurance liabilities. Although the details are still not resolved, the IFRS framework is principle-based. The methodology makes use of CTE levels, policyholder behavior options, and participating features (i.e., credited rate logic). The exposure draft is expected to be completed in 2011, and FASB is expected to adopt it. An interesting distinction from the current FASB approach is that there is explicit re-measurement of risk at each period, eliminating the benefit of locking-in DAC assumptions.

### Conclusion

In modern finance textbooks, the Modigliani-Miller capital irrelevance theorem is extended to risk management. The theorem is extended to the irrelevance of risk management and hedging, as shareholders can manage interest rates on their own. The reality is that shareholders cannot hedge the interest rate exposure of the life insurance liabilities, as the interaction of earnings emergence, new business, and capital makes it impractical.

Insurance companies have only partially de-risked in the fixed income space. I think insurance companies understand risk and exposure, but are hoping to wait out for higher interest rates. Jack Welch said, “Hope is not a strategy.” If low rates are here to stay for an extended period of time, the delay in de-risking will result in a harder landing. □

#### Appendix A.

Rates examined for: Sun Life, Hartford, Prudential, John Hancock, Lincoln National, PacLife, New York Life, ING, AXA, MetLife, and Phoenix.

#### Appendix B.

UL NLG carriers examined: Hartford, ING, Sun Life, Protective, AXA, PacLife, Lincoln National, Protective, John Hancock, TransAmerica, Lincoln Benefit, and Principal.

# NAIC Update – October 2010 Meeting

By Donna R. Claire

The October 2010 NAIC meeting was Oct. 16–17, 2010 in Orlando—yes, it was only two months after the last meeting—they had rescheduled the meetings this year to reduce them from four meetings to three meetings, so the timing of the meetings was a bit unusual.

The following summarizes my take on the meetings I attended, or the reports I got from friends:

## Life and Health Actuarial Task Force

**Mortality:** Mary Bahna-Nolan is chair of the American Academy of Actuaries Life Experience Subcommittee. She gave updates on several mortality issues:

**Payout Annuity:** Mary gave an update on the joint SOA/Academy payout annuity group. Mary's group had not yet developed a final recommendation on the margins and suggested projection factors for a new table, but was expecting to have this ready by December of 2010.

**Guaranteed/Simplified Issue:** Mary also gave an update on an SOA/Academy group that is looking to develop new valuation tables for guaranteed issues and simplified issues. There will be a data call going out shortly. The regulators are quite interested in this study, and want to encourage companies to participate.

**2012 (?) VBT/CSO:** A third topic Mary discussed was an update on work being done on medically underwritten life contracts. There will be new Valuation Basic Tables that may be used for new CSO tables. At this point, the 2012 title will likely be changed to 2013 or 2014 (The hope is to establish new tables just before PBA goes into effect.)

## Update from the Nonforfeiture Improvement Working Group:

John MacBain gave an update on this Academy of Actuaries group. They plan on having a full report in the next few months on nonforfeiture issues. The benefits for nonforfeiture reform could increase the number of product choices available to consumers, the potential for lower costs for some prod-



ucts, and provide minimum values that better reflect the guarantees inherent in the policy.

**Standard Nonforfeiture Law changes:** Since the current nonforfeiture law links interest rates and mortality to the valuation rates, there are some changes needed to the Standard Nonforfeiture Law because of changes in the Standard Valuation Law. John Bruins of the ACLI discussed some changes needed to the SNFL. The ACLI expected to have wording changes prior to publication of this article.

**PBA Feedback Loop:** Larry Bruning led a discussion on how a feedback loop can be created for PBA. It was determined that it would likely require a few different types of feedback loops: one would be company specific—what is working and what is not, on a company level; probably part of examination. Other issues would be more global—are assumptions and experience being captured and lined-up with each other—some of which is part of the Experience Reporting (VM-50, -51) and Report Reporting (VM-30, -31) requirements in the current Valuation Manual. Another feedback loop involves getting information from industry, the actuarial profession, and others as to what is and is not working. Leslie Jones and Kerry Krantz were appointed



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“Two new standards were adopted; one for graded benefit life and another for longevity annuities.”

co-chairs of the LHATF group to develop a white paper on feedback loops.

**IFRS Insurance Contracts Exposure:** Ed Stevenson, representing Group of North American Insurance Enterprises, gave their update on the proposal draft on determining the value of insurance contracts by the International Accounting Standards Board. He pointed out certain potential problems, e.g., that the proposed discount rate is a risk-free rate, which may be a disconnect from how the companies run their business.

**Variable Annuity Statutory Framework Review Initiative:** Representatives from Oliver Wyman gave a presentation on its observations regarding VA statutory results under AG43 and RBC C3 Phase II. There is a report available on Oliver Wyman’s website. They suggested possible changes so that hedging will not produce results that are sometimes counter-intuitive. They are still testing out the results of the possible changes, so this is still a work in progress.

**VM-20 Impact Study:** Larry Bruning gave a brief update on the testing of VM-20. Towers Watson consulting firm will be assisting LHATF on the project to “kick the tires” of VM-20 to see if anything needs to be changed. There has been a letter sent out to about 60 companies asking them to participate in the study.

**VM-20 Amendment:** There was a proposed amendment to VM-20 to cover Variable Life Products. This was an Academy proposal presented by Gary Falde. This was adopted by LHATF for use in the VM-20 testing project as an option in VM-20.

**VM-00, -01, Process and Coordination:** Mike Boerner heads the LHATF team on this part of the Manual (as well as heading the Academy team on the Valuation Manual in general). There were some minor wording changes to these sections to clarify that future changes will also be shared with the accountants to ensure there are no conflicts. An amendment from the ACLI clari-

fying the treatment of riders was also accepted. These documents were exposed for comment.

**VM-30, -31, PBR Reporting and Review:** Katie Campbell heads this effort. VM-30 has already been adopted for the preliminary Valuation Manual. There were some minor changes made to VM-31 at the request of the ACLI; VM-31 is essentially done and will be reviewed after the testing is completed.

**VM-50,-51, PBR Experience Reporting:** Fred Anderson is heading this effort. The draft of VM-50 and 51 is essentially done; the New York Department has requested that the Academy and SOA assist the regulators in developing additional templates for other policyholder behaviors, e.g., lapses.

**Report from the Interstate Compact:** Alice Fontaine gave a verbal report regarding the Interstate Compact. Two new standards were adopted; one for graded benefit life and another for longevity annuities. Two other standards were exposed for comment, and a few others are to be discussed by the Products Committee. One product getting some attention is separate account indexed annuities, specifically what rules need to apply, e.g. nonforfeiture and insulation from general account. Work will continue on these matters.

**Health Items:** The Accident and Health Working Group of LHATF met Sunday morning. The medical loss ratio group has finished their work needed for the Federal Health Reform Act and has disbanded. The LTC group has defined “moderately adverse” as 20 percent lifetime and future adverse claims. In 2011 the SOA will have a data call on cancer claim costs.

## Life Risk Based Capital Working Group

Philip Barlow ran the RBC meeting from noon to 1:30 p.m. on Monday, Oct. 18, 2010.

Philip would like work on RBC C-3 Phase 3 to continue. He wants all issues surfaced, with the goal to expose the proposal at the March 2011 NAIC meeting for potential adoption for year-end 2011.

The ACLI provided an update with respect to commercial mortgage loans which would go into effect year-end 2012 at the earliest.

The ACLI addressed basic and intermediate hedges in the work it is doing regarding a Derivatives Risk Mitigation Proposal. This has been exposed for comment by the Life RBC Working group.

The committee adopted a change in how non-U.S. affiliates would be treated in RBC that will go into effect in 2011.

### Solvency Modernization Initiative

The Solvency Modernization Initiative (SMI) group is a new Commissioner level group based on an NAIC

initiative to examine reserves and solvency on a broad basis, also considering what is happening globally. The PBR (EX) group, which is charged with shepherding the PBA project through the various NAIC Committees, is a subgroup of this group. The SMI had a number of meetings at the Orlando meeting. There is much work being done on U.S. statutory regulation versus some proposed International Standards.

### Summary

PBA has made significant progress over the past couple of years and the testing that will be done over the next few months should point out any possible changes needed. The goal is that a final law and first valuation manual be adopted by the full NAIC in 2011 and go to legislatures in 2012 and 2013. ■



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# Fixed Annuities Complement Investment Planning

By Kim O'Brien



Kim O'Brien is the Executive Director of NAFA, the National Association for Fixed Annuities. She can be reached at kim@nafa.com.

The investment community has historically used fixed annuities as a stable value component of an integrated investment strategy. Now, two recent innovations within the fixed annuity insurance industry are expanding the role of these products to provide more guarantees to diversify risk and may complement the investment-side of an individual's retirement plan.

The innovations are deferred lifetime annuities and fixed annuities with long-term care benefits.

## The Challenge of Retirement Planning

To understand how these annuities are used, it is helpful to examine the core challenge facing retirees and individuals planning for retirement. To retire with confidence, most retirees need:

- Sufficient income to cover their expenses;
- Income that increases over time to bridge the gap between Social Security and any other income;
- Certainty that they cannot outlive their income;
- Emergency income for long-term care or assisted living assistance; and
- Life Style income for unexpected trips for vacation, graduations or weddings.

An investment portfolio can create a desired income and provide a prospect of value and income growth over time. However, without an insurance portfolio the investment-only portfolio creates uncertainty and troubling variability for retirees. And when retirees don't prepare in advance, the cost of adding solutions to provide for these contingencies, increases significantly year after year.

Consider the need to guarantee income for life or longevity risk. Ignoring longevity risk, a typical investment-only approach is to build a portfolio that creates a desired income and asset value through the individual's life expectancy and perhaps a few years beyond that. However, there remains the possibility that the individual could be the outlier, the person who lives 15 years or more beyond the typical life expectancy. How do you deal with that?

Often a solution has been to use immediate annuities and guaranteed lifetime withdrawal and income benefits on variable annuities. Unfortunately, creating a sufficient income with these products often requires committing a large chunk of the retiree's assets. Thus, the longevity risk "tail" ends up wagging the investment strategy "dog."

## New Annuity Innovation #1: Longevity Insurance

The first solution is a form of longevity insurance called a deferred payout annuity. The basic idea is that the consumer, who is perhaps age 65, purchases a guaranteed stream of life-contingent income starting at an age well in the future, such as age 85. The payout can be based on a single life or the lives of a married couple. Because the income is delayed until far into the future and because it is only paid if the individual is then alive, it is cost efficient.

This annuity solution can be a win-win. Since less money is needed to fund the guaranteed lifetime income stream that can increase over time, more money can be available to create an optimal investment portfolio to take the individual to age 85. Retirees are free to live their early retirement years with confidence, perhaps traveling more, because they know the later years are covered.

Next, consider the issue of long-term care. Medicare typically does not cover such care beyond a short period following a hospital stay, and Medicaid will typically not pay for long-term care until after an individual's assets are depleted. The federal government estimates that half of nursing home residents are paying out of their own pockets. Thus, this is a risk that is clearly the family's to bear, and it can be costly.

Genworth Life Insurance Company, in their 2010 Cost of Care Survey, indicated that nearly two-thirds of Americans over age 65 will need long-term care at home or through adult day care, an assisted living facility, or nursing home. Median national costs range from \$38,220 to \$75,190 annually depending on the type of care needed, and these costs are in addition



to—not a replacement for—the individual’s current living expenses.

Historically, this risk solution has been long-term care insurance (LTCI), but consumers tend to be cool to the idea since they often believe such care will be unnecessary or prefer a home-care solution and either wait until it is too late or too expensive. This mind set is demonstrated by the fact that LTCI sales have fallen six out of the last seven years.

### New Annuity Innovation #2: Long-Term Care Benefits

This solution is an annuity that automatically increases the benefits it pays if long-term care is needed. Congress included some helpful provisions in the Pension Protection Act of 2006 that went into effect on Jan. 1, 2010 that provide for such benefit payments to be income-tax free.

Under these annuity designs, policyholders do not pay out-of-pocket for the long-term care coverage. Rather, the carrier deducts charges from the interest that is credited to the annuity. These charges are less than the amount of interest being credited to the annuity, so the annuity balance continues to grow. Moreover, these monthly charges are not included in the owner’s income, but instead simply reduce the income-tax cost basis of the annuity.

The benefits to the consumer are easy to see. They can do a 1035 exchange of their existing annuities and get something more—sometimes up to triple their money if long-term care is needed. They get long-term care coverage and don’t need to invade their savings. And,



they can receive benefits for care received at home. But wait, it is not use it or lose it ... if they never use the long-term care benefits, their annuity balance grows.

Finally, almost all deferred fixed annuities provide many surrender-free liquidity options for unexpected expenses such as trips or to purchase a special gift. So retirees can still enjoy the spontaneity and joy of visiting loved ones or the smile from a treasured gift. Many consumers are considering these affordable and powerful benefits. The insurance industry is innovating all the time and these product features are a great balance to an investment portfolio. To ensure suitability, NAFA encourages investment advisors to consider these insurance options to complement investment planning solutions. Visit NAFA at [www.nafa.com](http://www.nafa.com) for more information. □

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