PRODUCT DEVELOPMENT NEWS

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Chairperson's Corner

Where Do Great New Product Ideas Come From?

by Mark A. Milton

Occasionally, a great new product idea will come from "out of the blue." When this happens, you should not ignore it but neither should you rely on it to generate all the new product ideas for your company. This is like finding a dollar bill in the street. You're glad it's there, and you certainly can use it, but you wouldn't leave your house hoping to find one to pay for the groceries that day.

Good product developers typically have a very deliberate process that they use to generate new ideas. They use a balance of reactive and proactive approaches. Reactive approaches include listening to customers, agents, media, and management. They also proactively conduct market research and in-depth competitive analysis.

Good innovators also know where to look for new product ideas and they constantly monitor nine specific areas for changes that can be converted into new opportunities.

1. ***Regulation and Tax Change.*** A new nonforfeiture law would have a

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Prescribed Statutory Interest Rates for the Valuation of Life Insurance and Annuity Products—Statutory Calculations

by David G. Whittemore

Maximum Statutory Valuation Interest Rates

Moody's Investors Service has released its June 1998 Average Corporate Bond Yield Index. This index affects maximum interest rates under the 1980 Amendments to the Standard Valuation and Nonforfeiture Laws. This article reports the maximum statutory valuation and nonforfeiture interest rates for 1999 issues of selected life insurance products and the maximum statutory valuation interest rates for 1998 issues of selected annuity products.

The maximum statutory valuation interest rates for some typical insurance products are shown in Table 1.

The 1999 maximum statutory valuation interest rates for life insurance products with guarantee durations of over 20 years are the same as 1998. The rates dropped 50 basis points for products with guarantee durations of 20 years or less.

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TABLE 1
Maximum Statutory Valuation Interest Rates

Year of Issue	Whole Life Insurance	Typical Single-Premium Deferred Annuity	Single-Premium Immediate Annuity
1992	5.50%	6.25%	7.75%
1993	5.00	5.75	7.00
1994	5.00	5.50	6.50
1995	4.50	6.00	7.25
1996	4.50	5.50	6.75
1997	4.50	5.50	6.75
1998	4.50	5.25	6.25
1999	4.50	N/A	N/A

In This Issue

ACLI Update

by A. Micheal McMahon

The American Council of Life Insurance (ACLI) represents the life insurance business in legislative and regulatory matters at the federal and state level of government. Several of the issues that the ACLI is currently involved in affect the work of Product Development Section members. Three of those are:

- ***XXX* REVISION.** A group of interested industry representatives presented a proposal for amendment to Regulation *XXX* to the Life and Health Actuarial Task Force (LHATF) at the June NAIC meeting. The proposal had broad but tentative support within the industry. Several issues involving adequacy and tax questions have been raised by regulators and industry representatives. Work is underway to prepare a revised proposal that will address the questions for consideration at the September NAIC meeting. It is too soon to tell whether the effort will be successful. If it is not successful, it is likely that the existing Regulation *XXX* will be adopted by several states. Bill Schreiner is the ACLI contact on this issue.
- ***ZZZ* SUMMARY.** Actuarial Guideline *ZZZ* was received by the NAIC LHATF in June and exposed for public comment. *ZZZ* contains reserve methodologies which were originally developed by the American Academy of Actuaries. The only controversial provision is a reference to variable annuities containing guarantees in the Scope section. The Academy has suggested that the reference be deleted. *ZZZ* is expected to be adopted in December. Vince Donnelly is the ACLI contact on this issue.
- **ANNUITY ILLUSTRATION MODEL REGULATION.** The current industry proposal emphasizes disclosure through a "Buyers Guide" and a separate disclosure document. The NAIC Life Disclosure Working Group wants to split the effort between disclosure and illustration standards. The Working Group

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"Emerging Markets for the New Senior Citizen" Seminar Rescheduled

The Product Development and Nontraditional Marketing Sections will co-sponsor a seminar entitled "Emerging Markets for the New Senior Citizen" designed to help actuaries and other professionals learn more about the needs, desires, demographics, and influences baby boomers and their parents have in today's world. Attendees will find out how insurance companies and service providers might want to position themselves in the coming millennium to take advantage of changes in the health care system, tax reform, technological advances, and underwriting protocols. Topics to be addressed include:

- An overview of market demographics
- Implications of recent tax law changes
- Mortality trends and underwriting issues
- Potential changes being discussed relative to valuation and nonforfeiture regulations
- Distribution issues using state-of-the-art technologies
- Overview of current products and services
  - Life insurance
  - Reverse mortgages
  - CCRCs
  - Long-term care
- Insights into senior marketing.

This seminar, originally scheduled for March 1–3 in Charleston, South Carolina, has been rescheduled to November 16–17, 1998 at the Charleston Hilton Hotel. The day-and-a-half meeting will begin on November 16, with a reception that night.

For further details, please contact Sheri Abel at 847–706–3536, or visit the Continuing Education page of the SOA web site (www.soa.org).

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The Section would like to encourage articles and papers on product development topics or subjects of interest to product development actuaries. If you have an article or an idea for an article that you think might interest Section members, please contact:

David G. Whittemore, FSA
Product Development News Editor
Tillinghast/Towers Perrin
12377 Merit Drive, Suite 1200
Dallas, TX 75251

Phone: 972–701–2744 Fax: 972–701–2575 E-mail: whitted@tillinghast.com

UNDERWRITERS' CORNER

The Value of the Sentinel Effect (Revisited)

by Richard L. Bergstrom

The underwriting community has known about the Sentinel Effect (SE) concept—that self-selection process that directs unhealthy insurance applicants to apply for coverage at amounts where testing is not done, thereby minimizing the chances that their affliction(s) will be discovered—for many years. Yet accurately quantifying the value of the SE remains an illusive exercise at best, because we simply cannot directly measure what we cannot track, or so it would seem.

However, ways to indirectly derive surrogate measures for SE exist. This article proposes one such way that should help the insurance community more fully appreciate the contribution SE makes to the cost effectiveness of one specific underwriting protocol— laboratory testing.

In 1996 oral fluid testing (OFT) was introduced, its Western Blot HIV confirmatory test having finally been approved by the FDA. OFT currently screens for HIV antibodies, cocaine metabolites, and nicotine (cotinine). Because the oral fluid modality easily lends itself to agent collection, total test and lab analysis-related costs can be minimized (under $20 per applicant) thereby producing dramatically low protective value-testing thresholds. How does this help us quantify the value of the SE? Let's take a closer look.

Serum testing for HIV and urine testing for cocaine and nicotine have been available for many years. It is likely, therefore, that many insurance applicants are keenly aware that blood/urine profiles specifically target detection of these antibodies or metabolites. As such, it is not difficult to conclude that many such well-informed applicants might attempt to place their business in companies where testing is not performed at all amounts. Hence, the genesis of the SE.

In 1996, as companies began using OFT, statistics kept by the testing laboratories unveiled a dramatically different profile for the cohort of applicants tested at lower amounts than that of the blood/urine tested cohort. Table 1 compares the prevalence of HIV-positive applicants as tested by LabOne for serum versus OFT. At the $25,000 amount band, the HIV+ prevalence rate for OFT applicants is 70% greater than serum for all ages combined. But when one compares the under $25,000 OFT cohort to the low-band serum-tested cohort, OFT prevalence rates are 4½ times greater! Dramatic evidence of the SE in action. To be sure, these differences will narrow over time, as is always the case as testing methodologies "mature." I believe this phenomenon happens more because of customer awareness, however, than changing prevalence rates in the insurance-buying population—hence, the further proliferation of the Sentinel Effect. The effect is particularly enhanced by impairments dictated by lifestyle considerations, where the applicant more or less consciously chooses to live a risky lifestyle (smoking, drugs, etc.). Tables 2 and 3 show similar comparisons for urine versus OFT-tested cocaine and cotinine metabolites, respectively. "All ages" prevalence for cocaine detection is about two to three times higher than for urine testing, and cotinine detection by OFT exceeds urine tested detection by 30–45%. Significant differences!

TABLE 1
Positive HIV-Antibody Rates (Per 1,000 Tested)

Age	Serum $25–50K	OFT $<25K	OFT $25–50K
20–29	0.79	11.75	2.25
30–39	3.62	14.39	4.07
40–49	2.23	8.60	3.27
50–59	1.64	2.11	2.35
All Ages	1.70	7.67	2.88

TABLE 2
Positive Cocaine Rates (Per 1,000 Tested)

Age	Urine $25–50K	OFT $<25K	OFT $25–50K
20–29	8.36	15.77	7.36
30–39	16.20	36.84	18.37
40–49	10.07	27.37	12.11
50–59	2.86	7.43	3.31
All Ages	5.94	19.17	10.98

TABLE 3
Positive Cotinine Percentages

Age	Urine $25–50K	OFT $<25K	OFT $25–50K
20–29	21.0%	30.8%	29.0%
30–39	27.5	41.3	36.6
40–49	29.5	39.7	33.7
50–59	26.6	34.6	25.8
All Ages	24.0%	34.8%	31.8%

One final, sobering thought: As more and more companies begin screening at lower testing thresholds, knowledgeably impaired applicants seeking to secure coverage at standard rates will migrate to those companies that have chosen not to reduce their testing limits. This, of course, increases the relative prevalence of impaired risks in the markets of these companies, a phenomenon whose antiselection can actually lend to higher prevalence rates in some cells than in the general population.

If you think the value of the Sentinel Effect is significant now, what will you think when your company is the only one not testing?

Richard L. Bergstrom, FSA, is a consulting actuary with Milliman & Robertson, Inc., in Seattle, Washington, and a member of the Individual Life Insurance and Annuity Product Development Section Council.

Statutory Calculations
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The maximum statutory valuation interest rates for 1998 issues of annuities are all lower than those for 1997 issues. The reductions range from 25 to 50 basis points.

Explanation of Interest Rate Calculations

The maximum statutory valuation interest rates are dependent upon the values of "reference interest rates." Reference interest rates vary by product type and guarantee durations. Some reference interest rates for annuity products are calculated using the 12-month arithmetic mean of monthly corporate bond yield indices published by Moody's Investors Service for the period ending June 1998. Reference interest rates for all life insurance products and the other annuity products are calculated using the lesser of the 12-month and 36-month arithmetic means of those same corporate bond yield indices.

The 36 monthly indices used to calculate the reference interest rates are shown in Table 2.

These rates generate a 12-month mean of 7.11% and a 36-month mean of 7.47% for the period ending June 1998.

The reference interest rate is used in specified formulas for calculating the valuation interest rates for the various product types and the resulting value is rounded to the near 0.25%. For annuity products, this rounded value becomes the new maximum statutory valuation interest rate. For life insurance products, if the rounded value is not at least 0.50% different than the prior year's value, the maximum statutory valuation interest rate remains at the prior year's level.

Maximum nonforfeiture interest rates for life insurance products are calculated by multiplying the maximum statutory valuation interest rate by 125% and rounding to the near 0.25%. There is a one-year grace period for nonforfeiture interest rate changes—a new interest rate is optional for the following year but mandatory for the succeeding year.

TABLE 2
36-Monthly Indices

July 1995	7.66%	January 1997	7.71%
August 1995	7.81	February 1997	7.59
September 1995	7.56	March 1997	7.83
October 1995	7.39	April 1997	7.99
November 1995	7.30	May 1997	7.86
December 1995	7.11	June 1997	7.68
January 1996	7.10	July 1997	7.42
February 1996	7.27	August 1997	7.48
March 1996	7.65	September 1997	7.40
April 1996	7.80	October 1997	7.26
May 1996	7.91	November 1997	7.13
June 1996	8.00	December 1997	7.03
July 1996	7.95	January 1998	6.89
August 1996	7.76	February 1998	6.95
September 1996	7.95	March 1998	7.00
October 1996	7.68	April 1998	6.99
November 1996	7.41	May 1998	6.98
December 1996	7.50	June 1998	6.83

Maximum Statutory Valuation Interest Rates for Future Years' Issues

The formulas used to determine maximum statutory valuation interest rates for life insurance products generally require large swings in yield indices before a change in the maximum valuation rate will occur. As stated before, the maximum statutory valuation interest rate for 1999 issues of whole life insurance products will be 4.50%. For the whole life maximum statutory valuation interest rate to change for 2000 issues, one of the following scenarios in Table 3 must occur.

TABLE 3

Target Maximum Statutory Valuation Interest Rate	Required 12-Month Mean for July 1998–June 1999
4.00%	6.21%
5.00%	10.22%

Recently, Moody's average corporate bond yields have been in the area of 7.00%. If the mean yield over the next 12-month period drops to 6.21%, a 4.00% maximum statutory valuation interest rate for 2000 issues of whole life insurance policies would be the result.

Annuity maximum statutory valuation interest rates are more volatile than those for life insurance. If the Moody's indices remain at current levels or drop slightly, an additional 25 basis point reduction in the maximum statutory valuation interest rates can be expected for 1999 issues of many annuities. If the Moody's indices increase, on average, by 25 basis points, maximum statutory valuation interest rates will increase for some annuities in 1999.

A complete listing of maximum statutory valuation interest rates for all life and annuity classifications is available from the editor of *Product Development News*.

David G. Whittemore, FSA, is with Tillinghast-Towers Perrin in Dallas, Texas and editor of Product Development News.

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significant immediate impact as well as implementation of *XXX*. The illustration regulation has also had some effect.

In the taxation area, you are quite aware of the government's occasional threats to tax the cash value buildup of ordinary life insurance policies. You also are aware of how government has expanded the IRA market. Any of these changes could create exciting new product ideas.

2. ***Social and Demographic Change***. How dramatic is demographic change? A man who is married to his first wife, who is the sole breadwinner in his family, and who has two children and a house in the suburbs, now represents less than 4% of the population.

If a company attempts to anticipate the demographic changes that will occur in its customer base of the future, it's bound to find opportunity. Four categories of demographic changes need to be monitored in a firm's end customers: income, age, education, and mix.

The right question is, "What demographic changes are happening or will happen in our customers in these four areas, and how can we convert these into new product or market opportunities?"

Here are some questions about demographics your firm can be asking:

- How is the age distribution of your customers changing?
- How will the education level of your customers change in the next few years?
- How will the income distribution of your customers change in the next few years?
- How might the geographic distribution of your customers change in the next few years?
- How might the buying habits of your customers change in the next few years?
- What are the customer demographics that might change in the next few years?
- How will the mix of your customers change in the next few years?

3. ***Financial and Economic Changes***. On the financial and economic front, we know recession affects health insurance and group insurance and that inflation affects permanent cash-value insurance.

How will you design attractive fixed annuities and universal life policies for today's low interest environment? The stock market's impressive performance has certainly helped support the dramatic increase in variable products being sold.

4. ***Competitor Analysis***. As for competition, your company must define who its competitors are before embarking on any marketing activity—not just product development.

Field force and industry sources are particularly useful in assessing your competitive environment.

Good industry sources are trade journals such as the SOA's *North American Actuarial Journal* (*NAAJ*), *Best's Review*, the *National Underwriter* and meetings sponsored by the SOA, LIMRA, LOMA, and other industry groups. In addition, the Internet also provides much useful information.

5. ***New Technologies***. There have been a number of developments on the technology side. In computer technology, new developments have affected the services we offer to both agents and clients and the manner in which we offer them. New underwriting technologies are helping us better assess life insurance risks.

6. ***Unexpected Successes***. Most organizations accept success readily enough, however, relatively few companies make the key determination that allows them to build still further on this success. Unexpected success can happen to both your own organization and those of your competitors. Most people, unfortunately, explain away unexpected successes as temporary aberrations that will soon disappear.

Here are some questions that may be useful to help mine opportunity from unexpected successes. By asking yourself these questions and by formalizing them as part of your company' work routine, you will tend not to overlook some unexpected successes, whether they be those of your peers or your own.

- What unexpected product successes have you recently had?
- In which geographic areas have you recently experienced unexpected successes?
- What customer segments have recently provided unexpected successes?
- What unexpected successes have your suppliers recently had?
- What unexpected successes have your competitors recently had?
- What unexpected customer groups have recently bought from you?

7. ***Unexpected Failures.*** Every organization has had new products that have failed. In some cases, people tend to spend the rest of their careers defending the failure. Instead, they should be asking, "what caused this failure and how can we turn it into an opportunity the next time?"

Ask yourself the same type of questions that you would for an unexpected success. Maybe you really can learn more from your failures than successes.

8. ***New Knowledge***. Obviously, discoveries or new knowledge will always lead to opportunities in the form of new products or markets.

The true innovator finds distinct applications of new knowledge that can benefit his or her business. New mortality research or investment vehicles are clear examples driving some of our new products today.

Some questions about new knowledge one can ask are:

- What new knowledge has recently become known about your business?
- What combinations of knowledge have created new insights into your business?

9. ***Your Customers***. One last source of product ideas too often forgotten is the customers themselves. Pay attention to the messages they send through their agents or your company complaint system. Get involved in consumer panels and surveys.

As you know, idea generation is an important step of the product development process. It can be managed as a

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process so you can systematically generate new product ideas.

It is also always important to have several ideas "in the bullpen." You never know when yesterday's crazy idea may become tomorrow's wildly successful product.

By systematically managing the idea generation process, you will never be without ideas—and it is almost guaranteed that you and your company will benefit dramatically.

Mark A. Milton, FSA, is Vice President and Associate Actuary at Kansas City Life Insurance Company in Kansas City, Missouri, and Chairperson of the Individual Life Insurance and Annuity Product Development Section.

ACLI Update
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would like to accomplish the disclosure portion as soon as possible so companies can start implementing it. The illustrations standards, which would include a "supportability" component, would be defined later. The industry will make another proposal on the disclosure draft at the September NAIC meeting. Julie Spezio is the ACLI contact.

A. Micheal McMahon, FSA, is Second Vice President and Actuary at The Principal Financial Group in Des Moines, Iowa, and a member of the Individual Life Insurance and Annuity Product Development Section Council.

Life Insurance Firms in the Retirement Market: Is the News All Bad?

by Paul Hoffman
and Anthony M. Santomero, Ph.D.

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ABSTRACT

The role of the life insurance industry in the retirement assets market is examined. General trends found include: the massive increase in total retirement assets, both in absolute levels and relative to total wealth; the decline in corporate pensions including a shift from defined-benefit plans to defined-contribution plans, driven by increasing investment in 401(k)s; the rise in total IRA assets; and the relative decline of insurance annuities. These trends, and the increasing dependence of insurance companies on annuity premium income, presage a difficult competitive future for life insurance companies in the retirement market.

The Popular Image: The Dying Insurance Dragon

The popular view of the role of insurance companies in the private retirement market is that of a dominant player that is rapidly fading in prominence. Mutual funds are rightfully perceived as having attracted both the general investor and those who are planning for retirement. Banks are also seen as a threat, though to a much lesser degree. Bank entry into the insurance market is much feared but, thus far, greatly exaggerated. While clearly a new competitor, the bank threat is merely one more piece of bad news—one more combatant in the war for retirement assets.

In this article, the authors take an objective look at where insurance companies and their products fit in the retirement asset market. The article surveys the literature and available data on the products that make up this growing segment of the financial landscape in order to help professionals both understand the trends and identify opportunities.

The news is not all disheartening. The industry is clearly a central part of the burgeoning retirement asset market with a major share of the assets accumulated so far. Its position over the last several years has been exaggerated and/or misrepresented by snippets of data that have led to an incomplete picture of the retirement asset market and the insurance industry's role within it.

Specifically, a broad overview of the private retirement asset market suggests that:

1. The market itself is growing rapidly as baby-boomers appear to be saving more rapidly than the preceding generation.

2. The retirement products used by this new generation have shifted substantially over the past decade, such that:
   a. pensions assets are not growing as quickly as other forms of retirement assets
   b. defined-benefit plans are declining both as a percentage of wealth and as a percentage of retirement assets
   c. corporate pensions are declining in favor of individual retirement assets
   d. annuities, offered by insurance firms, have grown in importance relative to wealth and have remained stable as a percentage of retirement assets.

3. The observed growth in mutual fund market share has been primarily at the expense of depository institutions, most notably in IRA and 401(k) assets.

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Life Insurance Firms

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This market overview suggests certain requirements for the future growth and profitability of insurance firms in the retirement market. The challenges are:

a. maintaining dominance of the annuity market
b. recognizing that the defined-benefit and defined-contribution pension categories are aged markets, subject to relative, if not absolute, decline
c. competing effectively in the 401(k) and IRA segments of the retirement arena.

Make no mistake about it, however; the retirement market as a whole is growing and as such is an extraordinarily attractive segment of the financial market. By year-end 1996, private retirement assets were nearly $5.1 trillion.[1] Retirement assets have increased their proportion of wealth from 10.6 percent in 1983 to 13.6 percent at year-end 1996 (see Table 1). It is therefore possible, given the scenario of an increasing market, for an industry segment to lose market share and yet increase sales and profits. Since 1990, this has been the case for insurance firms. Prior to 1990, the insurance industry market share was increasing. Subsequently, however, its share has dramatically shifted as consumers changed the asset categories selected.

Life insurance companies were never able to achieve a significant market share in the fastest growing retirement asset markets such as 401(k)s and IRAs. This lost share can and should be viewed as a lost opportunity. Offsetting this loss is the industry's annuity market dominance. It has been projected, based upon historical trends and economic forecasts, that the market for individual annuities is expected to increase annually at an 8 percent rate.[2] Therefore, it is wise to take some of the dire predictions with a grain of salt.

Many data services and consulting firms track the retirement asset market, and their data are often the source of predictions of a collapse of the insurance industry's market share. In the past, headlines such as "Insurers Lose Ground to Competitors in IRA Market," "Insurers Losing the Retirement Asset Battle," or, to take a specific example, "Insurers Lose 401(k) Market Share to Mutual Funds,"[3] have been commonplace. The last of these articles was based upon data reporting that the insurance company's share of the 401(k) market slipped from 34 percent to 30 percent in the two-year period from 1992 to 1994. Mutual funds were declared victorious because they were able to increase their share from 26 percent to 37 percent.

TABLE 1
Retirement Asset Reserves
(% of Total Wealth)

The charts for this article are not available on line.
Please contact Susan Martz at smartz@soa.org
or (847) 706–3543 for a hard copy.

Industry pundits do make some important points. For example, well-known publications such *as Best's Review* [4] cite fundamental weaknesses that impair insurance companies from competing effectively in the retirement asset market. Life insurance products have been contrasted with those offered by mutual funds and are frequently found wanting. Some of the citations are well worth repeating.

Most insurance companies offer a limited selection of investment choices. If they do offer mutual funds, they tend to be conservatively managed, not unlike the pattern exhibited with their general funds. This has lead to relatively poor investment results or, at least, significantly less appreciation than averages achieved elsewhere during the recent stock market boom. Returns from insurance products are often further diminished by front- or back-end fees, or deferred sales charges that are generally higher than those of competitors. In aggregate, these factors predispose poor performance and will lead the public to move to other better-performing institutions.

The traditional stronghold of life insurers, the annuity market, is not immune to gloomy reports and projections. In thriving areas such as variable annuities, direct insurance company sales are slipping. The Variable Annuity Research and Data Service [5] reports that direct sales of variable annuities decreased to 43 percent in 1995 and are projected to further decline to 30 percent by the year 2000. Banks are identified as the primary culprit in this sales decline. The insurance industry can passively watch further erosion in this market, or it can fight to keep the second largest segment of the market.

Through all of these assessments, the reader is cautioned to keep one caveat in mind: Data in the retirement market can be misleading and at times extremely opaque. Some segments of the financial sector do not clearly report assets held for retirement in such vehicles as 401(k) or IRA accounts. Others do not indicate the purpose for which purchases are earmarked. For example, annuity figures are most certainly higher than are reported. Many annuities do not qualify for tax advantaged status, and therefore, are not reported as being

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retirement assets. A further example is contained in the Pension and Welfare Benefits Administration's report on defined-benefit and defined-contribution plans; a total of $128.5 billion is reported as being held in insurance company general accounts. A significant portion of this is most certainly earmarked for annuities. [6]

Nonetheless, extrapolating from available data, with all its pitfalls, the bottom line is that the insurance industry's portion of the retirement asset market is huge. Life insurance company assets and reserves of annuities alone have increased from $172.0 billion in 1980 to $1.315 trillion in 1996 [7] (these totals include nontax-advantaged annuities as is the practice of the Federal Reserve). These figures represented 2.06 percent of 1980 wealth and 3.52 percent of 1996 wealth, respectively, and reveal a relatively healthy insurance industry sector.

The Contest: The Retirement Asset Market

Any discussion of the competitive position of insurers in the retirement asset market must begin with an understanding of the market itself and its trends. The retirement asset market consists of multi-year assets established to facilitate the accumulation of wealth in anticipation of decumulation upon retirement. Such assets are usually tax advantaged, with the tax liability of either principal and interest (or both) deferred until withdrawal. Because of this feature, the category itself is imprecise, as some may attempt to save for retirement beyond tax-advantaged products while others may use the products' tax-advantaged status for multi-year nonretirement savings. It is for this reason that the numbers produced by different reporting entities are often at odds; such data problems represent a substantial challenge to any useful analysis of the market.

At its heart, however, the retirement asset market involves multi-year horizon investment plans by whole generations of households. For these individuals, saving for an event that will occur on the distant horizon requires discipline and foresight. Both attributes have been examined in the popular and academic spheres.

It is commonly thought that the quantity of saving for retirement by the current U.S. population is inadequate to ensure acceptable living standards at retirement. An Organization for Economic Cooperation and Development (OECD) comparison of savings rates in Canada, France, and Great Britain reveals that the United States has the lowest savings rate and the highest percentage of its population entering the retirement portion of their life cycle. [8] While providing a relative picture, this ranking begs the questions of what is adequate and whether U.S. retirement asset accumulation is sufficient in light of this generation's expectations and existing government social programs.

A major hindrance to past research has been the lack of adequate data. The situation has improved with the advent of the Health and Retirement Survey (HRS). Beginning in 1995, commentators have shifted their views about wealth adequacy based upon the data provided in the HRS, which offers evidence that wealth is being accumulated at a faster pace than has been commonly thought. [9] Other researchers [10] have since contributed further evidence to the 1993 study by the Congressional Budget Office that used cohort data in demonstrating that baby boomers are saving at a faster rate than their parents did. [11]

This research is hopeful for the retirement asset market, but one should remember that in all studies there is the problem of defining and measuring wealth. The authors of this article employ a relatively simple definition using only standard financial assets including equity, debt, cash, and short-term instruments. Other analysts have a much more extensive definition of individual wealth, which includes such items as housing equity and retirement wealth inclusive of Social Security, minus outstanding debt. [12] They have determined that households on the verge of retirement have average total assets of $499,187 and median total assets of $339,725. [13] These numbers are reduced significantly—to $163,087 and $59,335 respectively—using the definition employed in this article. The difference in the mean and median statistics in both these measures reflects the upward skew imparted by the holdings of the wealthy.

Determining whether these resources are adequate for acceptable post-retirement living standards is a difficult task and is investigated using many different methods. However, in every case, the problem is compounded by the differing percentage in post- retirement income needs demonstrated by different income levels. [14] The poor definitely need a higher fraction of preretirement earnings, known here as the replacement rate. Generally, whatever examination tool is used, the conclusion reached is that the current level of aggregate savings is inadequate for a clear majority of the general public. In addition, future changes to the Social Security system, which put the onus on individual responsibility, will deepen the need for increased saving. [15]

There is extensive literature on governmental measures to remedy this situation and their efficacy in stimulating saving. [16] Despite a great deal of contention, the general view is that tax advantaged programs can induce greater saving but not nearly at the proportions desired. One pair of analysts suggests that retirement accounts that are rolled over should require that a minimum percentage be maintained. [17] This would decrease retirement asset slippage and may in fact be more effective than new tax-advantaged vehicles, though aggregate saving would not substantially increase.

The previously stated notwithstanding, the new evidence on accelerating savings accumulation is hopeful. This is true from a public policy point of view, as it reduces concern for the numerous aging baby boomers and implies substantial growth for those portions of the financial sector offering retirement asset products. While evidence suggests that not all financial products have experienced proportional growth, this broad category of financial assets has been flourishing and is likely to continue to do so.

The Products: Instruments of the Retirement Market

Not long ago, a listing of retirement assets would have been quite short. Pensions offered by large firms made up the bulk of nongovernment retirement assets, with most individuals using

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standard depository institution deposits or retail mutual funds as additional assets earmarked for retirement. However, the last half century has seen the development of a number of tax- advantaged, retirement-specific asset categories, which now make up the bulk of retirement savings. To begin the discussion of the relative share of these asset categories, each is reviewed as follows.

DEFINED-BENEFIT PLANS

Defined-benefit plans are provided by employers to their employees and promise to pay a specified benefit upon vesting and subsequent retirement. Benefit payments generally continue until the death of one or more of the covered persons, and as such, these plans are a standard insurance product. To finance the liability, employer contributions are determined actuarially. Funding by the employer is tax deductible, as long as it is a qualified plan according to IRS regulations. Once instituted, employer funding is inflexible; that is, proper levels must be maintained, and the employees have certain legal rights to coverage. Employer contributions are pooled and can vary over time depending upon the investment performance of the pooled assets. However, regardless of investment performance, the employer is legally liable for benefit payouts. Therefore the firm is the full bearer of risk.

From the point of view of the individual worker, this type of plan eases the difficulty of retirement planning. Benefits are easily and accurately determined. However, for the employer, the combination of the actuarial mortality risk, the vagaries of financial performance, and high administration costs have made these programs increasingly burdensome. These factors have figured prominently in the movement toward defined-contribution plans.

Under the defined-benefit label, there are a number of different benefit plans with varying methods of payout. A worker may accrue units—which are tied to his or her compensation—or fixed dollar amounts. Other types of benefits may be tied to career average salary, or some variation thereof, and/or linked to years of service. Payouts are generally in the form of an annuity.

DEFINED-CONTRIBUTION PLANS

Defined-contribution plans are employer-sponsored plans that do not promise a fixed benefit, but rather have benefits related to contributions and asset performance. There are a wide variety of plans of this type. If contributions are within specified limits, they are considered tax-sheltered and are therefore deductible by both employee and employer. Generally, these plans are structured so that the firm contributes a certain sum or salary percentage per covered worker; thereafter, the employer has no additional rights or responsibilities associated with these dedicated assets. Contributions tend to be related to salary but do not ordinarily recognize past service.

Employers favor defined contribution plans because they are not generally liable for asset performance, and administration is less costly and complex. These are the same reasons why employees may find these plans less attractive than defined-benefit plans. Determining expected asset levels at retirement is complex, and administration time and cost is non-trivial to the employee.

" … the last half century has seen the development of a number of tax-advantaged, retirement-specific asset categories, which now make up the bulk of retirement savings."

With defined-contribution plans, employees can determine—indeed they are responsible for—asset selection, risk-return trade-offs, and their own retirement planning. On a positive note, the compounding of interest and/or dividends can lead to large sums at retirement, but generally require long accumulation periods. Poor asset performance, however, can lead to inadequate retirement funds, a fact that may be lost on a generation that has never seen a bear market.

The types of defined-contribution plans are quite varied; planners should consult a dedicated pensions text for full and detailed information. [18] A sampling of the form that defined-contribution plans can take includes the following:

- *Profit-Sharing Plans* whereby employer payments are tied to corporate profits (within limits). In such cases, there must be a definite allocation plan, and payouts are tied to account balances.
- *Employee Stock Purchase Plans* where shares of the employer are purchased, often with the employer matching a portion of the purchase price. In many cases, other equities may be purchased, but at least 50 percent must be in employer stock.
- *Thrift Plans* in which the employee contributes a fixed percentage of his or her salary. There may be some degree of employer matching. The employee is often offered a choice as to how funds are invested. Funds are segregated into separate accounts, and interest and dividends are reinvested.
- *401(k) Plans* in which payments are tied to firm profits. This is the newest and fastest growing portion of this category. In reality, it is a variation of profit-sharing plans. Contributions are considered to be salary reductions and may be matched by the employer. Assets accumulate tax free until withdrawal.
- *403(b) Plans* are the counterpart of 401(k) plans for nonprofit organizations. While not properly described as a profit sharing plan, salary reduction and employer contributions mirror their private sector counterparts. In fact, for data purposes, these are often aggregated into the private sector 401(k) totals.

INDIVIDUAL RETIREMENT ACCOUNTS

Beyond employer-sponsored retirement plans, individuals have access to tax favored investment through individual retirement accounts, known as IRAs. Once extremely popular, they have fallen out of favor since the tightening of the tax code in 1986. Contributions are deducted from earned income and

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can be up to $2,000 (or total compensation, whichever is lower) for individuals and $4,000 for married couples.

However, if the employee participates in another qualified plan, the limit declines to zero in the $25,000 to $35,000 income band. Beyond this income level, contributions are no longer tax deductible. [19] An employer may contribute funds, but these are considered to be compensation and are taxed as standard earned income in the year in which it is paid. However, tax on all interest and dividends is deferred until withdrawal.

Funds are transferable to other providers of IRA services, but withdrawals are restricted. Assets can be invested in a wide range of investment choices including fixed-term savings accounts, certificates of deposit, annuities, mutual funds, and self-directed brokerage accounts. As is the case with all defined-contribution programs, however, the effects of these investment decisions accrue to the program recipient for better or worse.

Recently, IRA accounts have also been used for at least two other purposes. If an employee receives a lump sum transfer from a defined contribution plan, associated with early termination or an early withdrawal from the tax-sheltered plan, the employee may establish an IRA with the transferred assets and maintain their favorable tax status.

The second area that has seen recent growth is the use of simplified employee pension plans or SEPs. This program is aimed at small employers with less than 25 employees (there has been discussion about increasing this number). Administrative paperwork is kept to a minimum by the adoption of one of two model plan documents. Contributions are essentially salary reductions and are tax deductible by both employee and employer. This retirement class has been termed "super IRAs" because of their much higher limits. The employer may contribute 15 percent of annual compensation or $30,000, whichever is less. The employee may contribute up to $7,000 annually. SEP creation requires a SEP-linked IRA account into which funds are transferred in standard defined-contribution fashion. Thus, the IRA market has experienced some of its growth because of its ability to participate in the rapid expansion of the defined-contribution market discussed previously.

ANNUITIES

This investment type is singled out because of the sheer size of its investment market. Generally speaking, an annuity can be many things. Annuities can be both a method of payout and an investment vehicle in itself. Annuities may begin paying benefits immediately, or payments can be deferred to some future date as, for example, expected retirement. Annuities may be purchased by a single lump sum payment, or through a series of payments over a number of years.

There are also different types of annuities depending upon contract terms over the accumulation phase. In some cases, the annuity declares a return each period based upon market performance. In other cases, the return is specified for a predetermined period of months or years. Guaranteed Investment Contracts (GICs) offer a guaranteed interest rate for a specified period. With a multiple guarantee contract, multiple payments are made, each with its own interest rate. This market is large, but has been waning in recent years.

Variable annuities are growing in popularity. In these products, accretion of funds may be tied to an index such as insurance company general fund returns, the Consumer Price Index, or some other index. It may also be directly related to the performance of the segregated assets invested on behalf of the annuity. The holder is often given latitude as to how funds are invested and granted permission to transfer funds to other sectors of the financial market.

The variation in the types of annuities makes it difficult to talk about the market in simple terms. However, its flexibility is one of its major benefits. Annuity contracts can be structured for pre- or post-tax dollars, fixed or variable terms, and fixed or variable returns. In all cases, however, these contracts include tax advantages for interest and dividends and actuarial risk of some type. The latter has developed into both an attribute and Achilles' heel, discussed as follows.

Recent Trends: The Dynamics of the Product Markets

The retirement asset market is experiencing rapid change. On an aggregate level, retirement assets have been growing more rapidly than either overall economic activity or aggregate financial wealth. However, the real story is the changing shares within the market. To best understand these changes; it is helpful to first review the dynamics of individual product markets, and then consider institutional market shares. Given the nature of the data available, the breakdowns between the two are somewhat different, but are nevertheless highly descriptive.

PENSION ASSETS

As noted previously, the term "pension" was at one time synonymous with a corporate pension plan, which was provided solely by a worker's employer. This category was divided between defined-benefit (DB) plans, where contributions are variable and the benefits are fixed, and defined-contribution (DC) plans, where contributions are fixed and benefits variable. It is on the defined-contribution side where the picture can be a little opaque. In many cases the employee is able to contribute with the corporation matching these contributions to some degree. This employee aspect has become increasingly important in recent years. Therefore, it has become difficult to divide the retirement market strictly into employer and employee sectors.

Over the period from 1980 to 1993, [20] the combined assets of both DB and DC plans grew from $563.6 billion to $2.3 trillion (see Table 2). Insurance company totals, which are usually reported separately, increase the total to $3.1 trillion. With inflation and wealth increasing over this period, these figures do not convey much more than that the retirement market has grown precipitously. The combined market benchmarked against total wealth has fluctuated in the 10.62 to 13.62 percent range over the period 1983 to 1996. The general trend has been upward, with the single exception of the period 1985 to 1988.

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However, the decidedly upward drift conceals a dynamic shift in the makeup of this sector. As Table 3 illustrates, the market has demonstrated a strong shift away from the defined-benefit plans toward defined contribution plans. In 1980, the defined-benefit assets were 2.5 times that of defined- contribution assets. By 1993, the last date available, defined-benefit assets were only 1.17 times that of defined-contribution plans. The trends indicate that it is likely the two plans are now nearly at parity.

The rise of individual saving for retirement, through such vehicles as 401(k) accounts, further alters the analysis. Gross defined-contribution figures include 401(k) balances in the totals. Deducting 401(k) assets yields the data reported in Table 4, which reveals that the percentage of wealth represented by other defined-contribution plans has declined slightly over the period. More importantly, it is apparent that the total employer-related portion of the retirement assets market is declining. Defined-benefit programs have been declining precipitously from 5.41 percent to 4.41 percent of total wealth over the reported decade, as DC plans have drifted only slightly lower.

Additional evidence illustrates that DC programs have substantially replaced DB plans within the corporate pension fund market over this period. [21] This is true even while their total is declining as a percentage of wealth. This result is hidden by the dramatic increase in 401(k) assets, but is evident in Table 4.

TABLE 2
Assets of Private Pension Plans (Excluding Insurance Companies)
($ Billions)

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TABLE 3
Defined-Benefit and Defined-Contribution Assets
as a Percentage of Wealth

401(K) ACCOUNTS

Legislative action led to the creation of 401(k) accounts in 1978. However, this retirement program did not become popular as a savings vehicle until its operation was clearly defined by the Treasury Department in 1981. At that time, the requirements of the market were set forth. As noted previously the availability of 401(k) accounts is dependent upon employer sponsorship, but it is essentially an individual's account. Because the employer may match a portion of the employee's contribution, 401(k)s are listed as defined-contribution plans. However, the employee's choice of contribution level and the method of fund investment have led many to consider 401(k)s as being individual accounts.

Contributions to 401(k) accounts began at modest levels in comparison to both DB plans and IRAs. Contributions in 1984 were $16.29 billion but nearly doubled in the next two years. However, unlike IRAs, 401(k)s were not materially affected by the Tax

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Reform Act of 1986. Therefore, contributions continued to increase each year over the last decade. Annual contributions in 1993 were $69.3 billion, well beyond the peak levels of IRA contributions (see Table 5).

Total 401(k) assets continue to rise both absolutely and relatively. The period from 1984 to 1993 saw total assets increase from $91.8 billion to $616.3 billion. These gross dollar amounts correspond to 0.74 percent and 2.18 percent of total wealth respectively. The current value of outstanding 401(k) assets is lower than its IRA counterpart and can be attributed to a smaller time frame for contributions (see Table 6).

TABLE 4
Modified Defined-Benefit and Defined-Contribution Assets
(% of Total Wealth)

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TABLE 5
Annual 401(k) and IRA Contributions
($ Billions)

INDIVIDUAL RETIREMENT ACCOUNTS

Many view individual retirement accounts as beginning with the Tax Act of 1981. However, IRA contributions were $1.4 billion as early as 1975. In 1981, however, IRA saving became tax advantaged, thereby becoming particularly attractive. At this point, contributions rose from $4.8 billion in 1981 to $28.3 billion in 1982. Contributions increased rapidly until their peak of $38.2 billion in 1985. Subsequently, the Tax Reform Act of 1986 changed the code once again, this time to the IRA's disadvantage. Savers responded by reducing contributions to levels only slightly higher than those prior to 1981. Table 5 illustrates the sensitivity of IRA annual contributions to the tax code changes; annual contributions declined immediately following the 1986 legislation.

The importance of individual retirement accounts is perhaps better seen by looking at total assets. In 1983, total IRA assets were $91.3 billion. By year-end 1996, total assets had expanded to $1.35 trillion. Table 6 shows that the 1984 figure represents 1.06 percent of wealth, and the 1993 total represents 3.07 percent of wealth. Thus, despite flat contributions since 1987, total assets have dramatically increased. To be sure, much of the growth is a result of the gains in the equity market over this period, but it nevertheless represents a large and vibrant asset pool.

The combination of large outstanding balances, transfers from other retirement asset accounts, and the rise of SEP programs (which comprised 5 percent of 1995 IRA assets invested in mutual funds [22] make this an attractive market. As such, competition for the $1.3 trillion aggregate total is fierce. Within this category, rollovers and small business SEP programs are a more important active battleground than are new IRA accounts. However, the lack of data does not permit a detailed analysis.

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THE ANNUITIES MARKET

Group annuities come in many shapes and sizes, but are usually purchased by employers on behalf of their employees. Group and individual annuities can be components of either defined-benefit or defined-contribution plans. Variable annuities differ in that their funds are usually invested in equity. They are sometimes classified as defined-contribution and can also be either group or individual.

By any measure, the annuity market has grown increasingly active in recent years. Sales of group and individual annuities (including taxable) were $19.45 and $15.20 billion respectively in 1982. By 1996, these figures had risen to $92.23 and $84.07 billion. However, the figures disguise the fact that group annuity contributions have traditionally been greater than those of individual annuities. In 1986, they were more than double. The differential peaked during the period 1986 to 1990 (see Table 7).

On the other hand, contributions to individual annuities rose steadily through 1995. By 1994, individual annuity contributions had overtaken group contributions, with a slight backing off in 1995 and 1996. A similar pattern of growth is shown in Table 8, where annuity premiums are scaled by total wealth. Growth is obvious, with the largest relative gains over the last decade accruing to the individual annuity market.

Shifting from premium income to numbers of contracts, Tables 9 and 10 show the growth in the number of people holding fixed and variable annuities. Noticing the differential scale, it is obvious that the fixed annuity market still dominates, but the recent dramatic growth of both individual and group annuities is startling. In fact, recently reported data suggests that there are over 47 million annuity contracts in force. [23]

Turning to assets held in connection with the annuities in force, Table 11 reports on assets and reserves of annuity contracts and shows a similar dynamic. Assets and reserves in 1980 were $140.42 billion and $31.54 billion for group and individual annuities respectively, while the 1996 totals were $657.06 billion and $658.35 billion (these totals include non tax-advantaged annuities). Normalized as a percentage of wealth, the 1980 figures were 1.68 percent and 0.38 percent respectively. These figures rose steadily to 1.76 percent in 1996. Group annuity assets and reserves peaked in 1990 at 2.32 percent. On the other hand, individual annuities steadily increased to their current levels by year-end 1996 (the data from 1996 is not directly comparable to previous years due to accounting change).

As Table 10 illustrates, the growth in the market has been particularly

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TABLE 6
IRA, 401(k), and Annuity Percentage of Wealth

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TABLE 7
Annual Annuity Premiums Received
($ Billions)

Life Insurance Firms

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spectacular in the variable annuity sector. Several factors account for this recent growth:

1. The relative decline in defined-benefit plans
2. The increased interest by the more affluent and educated baby boomer cohorts
3. The increased acceptance of equity investment for asset accumulation.

This latter point may be particularly relevant. Returns on variable annuities devoted to equity investment tend to be higher than traditional annuities because of their similarity (in spirit, if not in fact) to equity mutual funds. While the rate of inflow of funds to mutual funds has been quite rapid for over a decade, the rise in variable annuities has been even more so. Contributions increased fourfold since 1991, rising from $17.3 billion in 1991 to $73.8 billion in 1996.

The shift to variable annuities is further demonstrated by viewing their increased share of annual premium income. In 1983 only 9.85 percent of premiums were for variable annuities; by 1996 the share had risen to 31.54 percent. While this total is still substantially below the fixed annuity counterpart, the relative growth is noteworthy (see Table 12).

TABLE 8
Annuity Premiums as a Percentage of Total Wealth

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TABLE 9
Number of Fixed-Individual Annuities (Millions)

Market Shares: The Changing Fortunes in Retirement Products

With the changing nature of the retirement market, it is obvious that the product mix is dramatically changing. Defined-benefit plans are giving way to defined-contribution plans, 401(k)s, IRAs, and annuities. The battlefield of future competition is going to be in these four product areas, as the defined-benefit market is aged and in decline. This fact has several implications for the astute observer.

First, institutions that have a large portion of the defined-benefit market will inevitably lose their relative position in the broader retirement asset market. This means that insurance firms and bank trust departments, which traditionally have been strong in this market, will find it virtually impossible to maintain their relative position.

Second, the changing product mix implies that the future growth of these firms will depend upon their ability to garner market share in the four growth areas enumerated previously. Furthermore, with the move toward individual pension planning, the real contest will center on the control of the retail market. In short, the future depends upon maintaining, acquiring, and/or growing assets in the IRA, 401(k), and annuity product areas. Three products are discussed in greater detail as follows.

INDIVIDUAL RETIREMENT ACCOUNTS

During the period from 1984 to 1993, IRA assets rose impressively from 9.93

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TABLE 10
Number of Persons Possessing Variable Annuities (Millions)

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TABLE 11
Total Annual Assets of Life Insurance Companies (% of Wealth)

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percent to 23.41 percent of total pension assets (see Table 13). As mentioned previously, this increase is in spite of the fact that direct IRA contributions have fallen considerably since their peak in 1985. The increase in total assets can be attributed to appreciation in asset value, lump-sum rollovers, and the expanded use of IRA accounts in the nascent SEP market.

The four main institutional players in the IRA market are depository institutions (commercial banks, thrifts, and credit unions), investment brokerage firms, mutual fund complexes, and insurance companies. Table 14 demonstrates the dramatic changes in relative share experienced by these institutions between 1985 and 1996. Mutual funds and brokerages have made sizeable inroads into depository institutions' share. Depository institutional share declined from 61 percent in 1985 to 18.4 percent in 1996. Mutual funds and brokerages picked up 43.2 percent of this drop, with mutual funds increasing from 15.8 percent to 37.9 percent and brokerages from 14.7 percent to 35.8 percent. Part of this change is explained by the appreciation of equities. At the same time, insurance companies exhibited a pronounced decline from a 10.4 percent market share in 1990 to 7.8 percent in 1996.

With contributions at a low point, competition for lump-sum rollovers will likely heat up in coming years. The Employee Benefit Research Institute looked at the IRA contributions market during the period from 1987 to 1990. [24] During this period, for every newly initiated rollover account, contributions continued in 3.85 existing accounts. The pattern is reversed however, when considering dollar amounts. A typical rollover account has an annual contribution 3.21 times that of a regular account. Of course this figure is statistically misleading since it incorporates the large initial amount that is rolled over. Both the number of accounts and the dollar amounts were moving in favor of rollover accounts during this period. The ratio of existing accounts to rollover accounts decreased from 4.92:1 in 1987 to 3:1 in 1990. The dollar ratio of rollovers to regular contributions increased from $1.99:1 to $4.58:1. IRA rollovers, which are invested in the mutual fund market, show a similar trend. The share of rollover assets increased from 27.39 percent to 34.17 percent of total IRA assets over the period extending from 1992 to 1994. [25]

As previously noted, IRA contribution rates are sensitive to changes in the tax code. At present, the majority of fee income is derived from management of the existing huge asset pool. Changes in relative institutional share will likely be dependent upon making inroads into the rollover market and the new SEP-IRA and Roth IRA markets. However, the data suggests that

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depositories are clearly losing share to mutual fund complexes and brokerage firms. Insurance firms can only gain IRA market share by being more aggressive in the rollover competition. This implies a need to be more responsive to the desires of retail customers to participate in equity ownership, as fixed rate asset choices seem to be losing market share to equity participation across the board.

401(K) ACCOUNTS

Currently, this segment of the retirement market is slightly over 70 percent of the size of IRA balances. As of year-end 1993, the most recent date available, total assets were $616.3 billion. With the downturn in IRA contributions, 401(k) accounts have rapidly taken up the slack. As noted before, annual contributions rose uninterrupted from 1984 to 1993. Unlike IRAs, both contributions and asset levels have increased rapidly. This has led to an increasing share of the total assets of the pension market. In 1984, 401(k) accounts represented only 6.91 percent of total retirement assets. By 1993, their share had risen to 16.63 percent (see Table 13 [using Department of Labor figures]).

Data on the institutional makeup of the 401(k) market is sparse. The mutual fund industry is the only industry that regularly reports its market share. During the period from 1986 to 1995, mutual funds saw their 401(k) share rise from 8.39 percent to 38.67 percent (see Table 15). The rapid growth in the 401(k) market provides opportunities for both new accounts and maintenance of outstanding accounts for all segments of the financial sector. As with IRAs, rollovers are another avenue by which to make market in-roads. However, success of the insurance industry depends upon its ability to offer products that permit equity participation and to offer a wide range of investment options. Depository institutions have been losing 401(k) market share because they have not offered their customers a wide range of choices. The insurance industry cannot afford to make the same mistake.

TABLE 12
Life Insurance Annuity Premiums

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TABLE 13
Instrument Share of the Retirement Asset Market

ANNUITIES

Annuities represent the second largest segment of the retirement market. In the last year in which aggregate totals are available, 1993, annuities held 19.81 percent of the market (IRAs were first with 23.41 percent and 401(k)s followed with 16.63 percent) (see Table 13). As would be expected, insurance companies are dominant in this area. Their share of the distribution market for annuities in 1993 was 75.91 percent. In raw dollar amounts, annuity reserves totaled $1.041 trillion, of which $733.93 billion was classified by insurance companies as being retirement targeted. It must be kept in mind that

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these figures understate retirement annuity totals. Many individuals make purchases of annuities that do not qualify for tax deferred status.

Nonetheless, Table 16 reveals that the share of total retirement assets for tax deferred insurance company annuities has declined over the current decade. Their market share slipped from 20.38 percent in 1983 to 16.61 percent in 1996, having peaked in 1990 at 22.56 percent. The picture is somewhat better when following the Federal Reserve's practice of including nontax- advantaged annuities. Insurance annuities would then start with a market share of 24.17 percent in 1983, rise to 30.26 percent in 1990, and decline to 25.89 percent in 1996. Using these totals, annuities displace IRAs as the largest retirement asset instruments.

Annuities are sold through many avenues in addition to direct sales by insurance companies. Banks are a new and increasingly important distribution channel. An ominous note for insurance companies is that their share of initial sales fees may be declining. Their share of revenue in the increasingly popular area of variable annuities was 55 percent in 1994 and decreased to 43 percent in 1995. Some commentators project the share will drop to 30 percent by the year 2000. [26] This trend could be compounded by the announced intention of banks to create and market their own annuities as opposed to merely selling those of insurance companies. [27]

Looking Ahead: The Future of the Insurance Industry

At $5.1 trillion in assets and reserves, the private retirement market is massive. It is growing both absolutely and relatively. Millions of workers are dependent upon it for their livelihood. Millions more are dependent upon it for their future.

Much has been written about the eroding competitiveness of insurance companies in the retirement asset market. While not as severe as portrayed in the popular press, it is undeniable that their share has been decreasing. Overall, from 1983 to 1996, insurance company share slipped from 22.74 percent to 18.03 percent (see Table 17). This long-term trend accelerated between 1990 and 1996, with a decline of 8.35 percent from their 1990 peak. Insurance companies should be troubled by this greater than one percent decline per year.

TABLE 14
Institutional Share of the IRA Market

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TABLE 15
Mutual Fund Share of 401(k) Assets

In their traditional stronghold of annuities, insurers remain preeminent, as demonstrated by the number of annuity holders in Table 18. Many investment firms and banks have proclaimed their intention to challenge the insurance industry in this area, but have yet to do so with much visible success. Of greater relevance is the industry's

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own need to maintain effectiveness and cost efficiency in its delivery systems to remain competitive. In areas such as variable annuities, insurers are under increasing attack by mutual fund houses that wish to gain market share at the expense of an insurance industry that, at times, fails to take advantage of its market leadership.

The similarity of variable annuities to mutual funds has been a major reason for their success. But therein may lie the problem. Variable annuities tend to have higher fees than traditional mutual funds. [28] Part of these fees go to options such as life insurance attachments and principal protection. But, as with load mutual funds, these fees will hurt long-term performance. Performance may be further affected by low risk portfolio choices. As consumers become more knowledgeable, these inhibitors may nullify the value of insurance attachments, and variable annuities may subsequently lose their luster.

In fact, the success of insurance annuities is somewhat problematic. Annuity premium income has eclipsed traditional sources of income such as life and health insurance (see Table 19). There has been a fundamental shift to a dependence on the retirement market. It is for this reason that insurance companies should be particularly wary of encroachment upon their annuity share.

As far as the industry's potential in other areas, the picture is decidedly mixed. Insurers slipped from their 10.8 percent IRA market share peak in 1990 to 7.8 percent at year-end 1996. However, at the same time, IRA assets' proportion of insurance company pension assets increased from 3.34 percent in 1983 to 12.04 percent in 1996 (see Table 20). Therefore, despite losing market share, IRAs have become increasingly important to insurance companies' earnings and asset growth. Insurers cannot afford to passively lose this market to the mutual fund industry, as depositories have done. They must compete with a wider array of products and at a competitive fee structure. Otherwise, their share will follow that of banks and thrifts in the last decade.

Finally, the explosion in the 401(k) market should be a signal to all players in the retirement market that complacency can lead to missed opportunity. This area, as with that of IRAs, is marked by rapid account turnover. The rollover market is many times larger than that of account initiation. [29] Perhaps this is the method whereby insurance companies can win back market share from mutual funds. It is a market clearly too big to ignore, and a key competitive opportunity. It remains to be seen if the industry is up to the challenge.

Overall, insurance companies have slipped in their share of the retirement assets market over the last decade. Their niche and strength is annuities.

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TABLE 16
Insurance Company Annuities–Share of the Private Retirement Market

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TABLE 17
Insurance Company Share of the Private Retirement Market

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This segment is growing in absolute terms but is losing share relative to 401(k)s, IRAs, and the retirement market in general. Insurance companies should be wary of inroads here associated with delivery system weaknesses or excessive fees. At the same time, they must look for opportunities for expansion in the IRA and 401(k) markets.

Opportunities may come via traditional routes such as the rollover market, or by creative avenues such as product innovation. If they are unsuccessful or choose to ignore these areas, insurance companies risk becoming minor players in the retirement market. They are not likely to show a disastrous loss in market share akin to that experienced by depository institutions in the IRA market, but attention should be directed to shoring up their annuity strength and diversifying to guard against the inefficacy of these measures. Insurance companies should ask themselves a fundamental question: Do they want to link their survival solely to the annuities market?
(I/R Code No. 4400.00/2750.07)

Editor's Note: This study is part of the Wharton Financial Institutions Center-KPMG Peat Marwick project on the Retirement Asset Market.

Paul Hoffman has been a Senior Fellow at the Wharton Financial Institutions Center since 1996. Prior to that, he was a Huebner Fellow from 1992 to 1996 and concurrently a Sloan Fellow from 1993 to 1996, both at the Wharton School. Mr. Hoffman received his bachelor's degree in statistics—Phi Beta Kappa and Magna Cum Laude—from the University of Rochester in 1992.

Anthony M. Santomero, PhD, is the Richard K. Mellon professor of finance and director of the Wharton Financial Institution's Center at the University of Pennsylvania. He received an AB in economics from Fordham University in 1968, a PhD in economics from Brown University in 1971, and has received an honorary doctorate from the Stockholm School of Economics in 1992.

TABLE 18
Life Insurance Retirement Annuities (Number of Persons–Millions)

The charts for this article are not available on line.
Please contact Susan Martz at smartz@soa.org
or (847) 706–3543 for a hard copy.

TABLE 19
Premium Income of Life Insurance Companies

END NOTES

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Life Insurance Firms
continued from page 19

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18. See for example, Dan M. McGill, et al., Fundamentals of Private Pensions, 7th ed., (1996); Pensions and Profit Sharing, 6th ed. (1994).
19. The income bands for deductible IRAs were raised in 1997. In addition, a new IRA Plus was created.
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TABLE 20
IRA Share of Insurance Company Pension Assets

The charts for this article are not available on line.
Please contact Susan Martz at smartz@soa.org
or (847) 706–3543 for a hard copy.

New York's Revised Expense Limitation Law

by Jonathan Hecht, John M. Fenton, and Douglas A. French

In late 1996, a proposed revision to Section 4228 containing considerable liberalizations to the law was submitted to the New York State Assembly. However, that bill did not pass into law. Industry representatives, working together with the Life Insurance Council of New York, the American Council of Life Insurance, and state regulators drafted a new bill that modified key provisions of the 1996 bill that some constituencies (including state regulators) found objectionable. After much negotiation, the legislature passed the bill during the first week of August 1997. It was signed into law by the governor in September and became effective January 1, 1998.

This article summarizes and analyzes the provisions of New York's Section 4228. It also discusses the implications of the law on the design and structure of sales compensation plans.

Key Elements of the Law

New Inside Limits. The law contains revised inside limits, which include commission limits for agents and general agents (GAs) that apply on a per-policy basis, and expense allowance payment (EAP) limits that apply on a per-agent basis or a per-agency basis for GAs. The inside limits are similar to those in the previous law for the first year, but are very different for renewal years. In addition, renewal-year limits apply only in policy years two through four, and there are no inside limits in years five and later.

The first-year inside limits are shown in Table I. The first-year commission on life insurance is payable on the premiums received up to the qualifying first-year benchmark premium, as defined by the law. Commissions payable on premiums received in excess of the qualifying first-year premium are limited to 7% for agents and 8% for GAs. All extra commission allowances to GAs are only payable on business not personally produced by the GA. Qualified annuities are annuities issued under Internal Revenue Code sections 401, 403 or 457.

Table 2 shows renewal-year limits. The commission limits can be redistributed to an extent. Unused commission payments from the first policy year or from earlier renewal years may be shifted to later renewal years on a percentage-for-percentage basis. Unused expense allowance payments from the first policy year may be paid in later years on a dollar-for-dollar basis.

Total Selling Expense Limits

The Schedule Q limits in the old law (first-year field expense limit, total field expense limit, and total expense limit) are replaced by the total selling expense limit. This is an aggregate limit on all "selling" expenses that may be incurred for acquiring new individual life and annuity business and applies on a total-company basis. The total selling expense limit is based on many factors but is considerably less complicated than the old Schedule Q limitations. However, unlike the prior law, the limit includes expenses incurred in the home office to help produce new business.

Each year, an officer of the company must complete and sign an annual statement schedule attesting to compliance with this limit.

Compensation Based on Assets Under Management (Fund-Based Compensation)

Compensation may be payable based on assets under management instead of as a percentage of premium. This is a significant shift away from the historical New York position that compensation may only be paid when premiums are paid. Although the old laws technically permitted fund-based compensation, it was effectively discouraged. The allowable trade-off between percent-of-premium commission and fund-based compensation was generally viewed as unattractive to agents.

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TABLE 1
First-Year Inside Limits—Percent of Premium

Product	Per Policy: To Agent	Per Policy: To GA Including Override	Per Agent Including EAP	Per Agency Including EAP and Override
Life insurance	55.0%	63.0%	91.0%	99.0%
Single-premium life and annuity	7.0	8.0	7.0	8.5
Qualified annuities	14.5	16.0	14.5	16.0

TABLE 2
Renewal-Year Limits—Percent of Premium

Product	To Agent: Year 2	To Agent: Year 3	To Agent: Year 4	To GA (Including Override): Year 2	To GA (Including Override): Year 3	To GA (Including Override): Year 4
Life insurance	**22.0%**	**20.0%**	**18.0%**	**27.0%**	**23.0%**	**20.0%**
Qualified annuities	4.5	4.5	4.5	6.0	6.0	6.0

Note: There are no inside limits in years five and later.

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The law states that the per-policy commission limits may be converted to fund-based compensation, subject to the following provisions:

- For life insurance other than single-premium, a company may convert 1% of renewal commission in years two through four to 0.30% of fund-based compensation in years two through four.
- For single-premium life and all annuities, a company may convert 1% of premium-based commission and EAP to 0.30% of fund-based compensation in years one through four.

For example, instead of paying a commission equal to 7% of premium on a single-premium deferred annuity, a company may pay 2.1% fund-based compensation in years two through four (and in all years thereafter).

With prior approval from the Insurance Department, a company may pay fund-based compensation using different trade-offs as long as the factors are equivalent using reasonable assumptions.

In addition, the total selling expense limit contains provisions for fund-based compensation. The per-premium allowances in the total selling expense limit may be converted to fund-based allowances, using factors similar to those used for the per-policy limits.

Bonus Plans

As to the design of bonus plans, the law is more flexible including the use of retroactive factors, provided the maximum is within the inside limits. In the prior law, pure bonus plans were not permitted, although persistency plans with a bonus element were allowed. In addition, bonus plans were not permitted on a first-dollar retroactive basis. Requiring the use of the maximum rate does differ from the current law, which generally permits use of an average rate.

Other Forms of Compensation

Compensation plans, including salary plans, based on factors other than per-premium or percent-of-fund are permitted. A company may start a salary plan and operate under it for a period of two years. After the two-year period, the company must obtain approval from the Insurance Department to continue using the plan. To receive approval, the company must demonstrate that agents will not receive more compensation over their projected careers than they would have earned under a plan consisting entirely of commissions and expense allowances that comply with the inside limits. This demonstration must use reasonable assumptions for mortality, persistency, interest, agent sales, and agent turnover. The demonstration may be done in the aggregate for all agents covered under the plan.

Training Allowance Plans (TAP) for New Agents

The law modifies and clarifies the requirements on training allowances to new agents.

Agency Development Allowance (ADA)

ADA for new GAs is allowed on a basis that is similar to the prior law.

Prizes, Awards, Conventions, and Conferences

The law also clarifies and liberalizes the treatment of prizes, awards, conventions, and conferences relating to the expense limitations. Awards and prizes are not counted against the inside commission limitations as long as no single award/prize exceeds $250 and their total value in any year does not exceed $1,000. Also, an additional award/ prize of up to $25 in value may be paid as frequently as once a month.

The expenses associated with conventions, conferences, or business meetings are not included in the inside limits as long as they meet the IRS standard for ordinary business expenses and are not includable in the recipient's gross income for federal tax purposes. However, these expenses are counted against the total selling expense limit.

Extraterritoriality

Section 4228 remains extraterritorial—that is, it applies to all individual life and annuity business sold in the United States by a company licensed in New York State.

Product Self-Support Requirement

The law contains stricter language as to the requirement that all actively sold policy forms be self-supporting, using reasonably expected assumptions including only the expenses incurred as allocated to the new sales.

A self-support certification must be signed by a qualified actuary and submitted with the policy form filing. Also, such a statement must be submitted with any filing of an increased compensation plan. Documentation supporting the statement must be kept in the home office while the policy form is being offered and for six years thereafter. Finally, the law requires the Insurance Department to promulgate a regulation that establishes guidelines for demonstrating compliance with this requirement.

Transition Rules

The law contains several provisions designed to ease the transition from the previous law. These rules are also intended to prevent companies from subverting certain provisions:

- A company may continue to use, for a period of one year, any approved compensation plan that it was using as of the effective date of the new law.
- For up to four years after the effective date of the law, a company may continue to use an existing approved plan of compensation that provides for the payment of renewal commissions on in-force business that may exceed the inside limits of the law.
- For the first year after the effective date of the law, the total selling limit will be increased by 5%.
- Within four years of the law's effective date, if an increased commission is paid after the fourth policy year for a policy in force as of the law’s effective date and the increase is contingent upon the volume of new business written, then such an increase that exceeds 1% of premium will be counted against the expense allowance limits.

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- Similarly, if an increased fund- based commission is paid after the fourth policy year for a policy in force as of the law's effective date and within four years of the law's effective date, and the increase is contingent on the volume of new business written, then such an increase that exceeds 0.30% of the fund will be counted against the expense allowance limits.

These last two provisions were included in the law to prevent a company from paying large renewal commissions on in-force business that really serve as first-year commissions and may subvert the first-year limit.

Compensation Plan Filing Procedures

The law specifies three levels of filing requirements, depending on the type of plan: informational filings, file and use, and filing for prior approval. Pre-approval of all compensation plans is no longer required.

Most basic plans require only annual *informational filings*. They include:

- Plans where the compensation percentages (including EAP) do not exceed the inside limit maximums without taking into account any redistribution of commissions
- Plans where fund-based compensation does not exceed 2.0% annually in the first four policy years
- Agency development allowance plans.

These filings should fully describe the compensation arrangements. They must be completed by the end of February following the year in which the covered plans became effective.

File and use is required for:

- Plans that redistribute commissions in years two, three, or four
- Plans that pay a commission rate in any year after year five that is greater than that allowed in year four
- Agent training allowance plans
- Salary plans that have been in effect for less than two years
- Expense allowance plans that provide goods and services as well as cash payments
- Plans that are affected by the transition rules due to certain increases in renewal commissions on business in force at the effective date of the new law.

A company may implement these plans immediately upon filing. The superintendent then has 90 days to respond. If the superintendent finds objections to the plan and the company does not satisfy them within 60 days, the superintendent may order the company to stop using the plan.

Filing for prior approval is required for plans using:

- Fund-based compensation based on nonstandard trade-offs
- Training allowance payments containing nonstandard provisions
- Expense allowance payments that are redistributed from the first year to renewal years
- Salary plans that are continued beyond two years—the filing must demonstrate that the value of the payments under the plan does not exceed the value of payments that would otherwise have been paid under a plan of commissions
- Any other nonstandard arrangement.

These filings must contain descriptive information, including assumptions and techniques, in enough detail for the Insurance Department's review. If the superintendent does not object to the plan within 90 days, it is deemed to be approved.

Impact on Various Types of Compensation Plans

Fund-Based Compensation. As mentioned earlier, fund-based compensation arrangements are explicitly recognized in Section 4228**.** These plans can be implemented, subject to per-policy limits that are similar to the limits on commissions based on percent-of-premium factors. Further, fund-based compensation plans that comply with certain standards can be included in an informational filing and do not require prior approval.

Levelized Commission Plans. Significant changes to commission plans can be made in the area of level commissions. The commission limits in years two through four are more flexible than in the old law and no limits apply in years five and later. Further, the new law contains explicit provisions for redistributing commissions and EAP between early policy years and later years, for both the inside limits and the total selling limits.

Under the inside limits, unused commission payments from the first policy year or from earlier renewal years may be shifted to later renewal years on a percentage-for-percentage basis. Therefore, commissions can be structured in a number of ways. For example, the commissions payable to a selling agent could be 55% in year one followed by 20% in all renewal years or, alternatively, 28.75% in all years. (The limits for a general agent would be slightly higher.)

If expense allowance payments are taken into account, the allowable total compensation (to a selling agent) may become:

- 91% in year one followed by 20% in all renewal years, or
- 36% in year one followed by 38.33% in all renewal years (assumes the entire 55% first-year commission limit is shifted to later years), or
- A level 37.75% in all years (shifts 53.25% of the 55% first-year commission limit to later years, in order to obtain a completely level commission design).

Per-policy commission levels are also indirectly affected by the total selling expense limit. Although this limit operates on an aggregate basis and applies to all of a company's individual life and annuity business, many companies wish to have each product stand on its own when it comes to these allowances.

The percent of premium commission allowances under the total selling expense limit are 55% of first-year premium, plus an additional 60.5% of first-year premium (expressed in the

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law as 110% of 55%), plus 12% of renewal premium. However, the 55% factor may be shifted to renewal years on a three-for-one basis. Therefore, the effective inside limits (including EAP) under the total selling expense limits may be:

- 115.5% in year one, followed by 12% in all renewal years, or
- 60.5% in year one, followed by 30.33% in all renewal years (if the entire 55% first year allowance is shifted to later years).

Therefore, the limits needed to comply with the total selling expense limit may be different from those that result from an analysis of the inside limits alone. Both limits must be taken into account in structuring a levelized commission arrangement. Of course, self-support must always be demonstrated and may also be a limiting factor in designing a compensation plan.

Since renewal-year commission limitations are considerably more liberal in the long term under the law, companies have a real opportunity to explore level commission alternatives, if desired.

Salary Plans. Salary plans will also be easier to design and implement. Salary plans may be started and operated for two years without prior approval. After two years, a company must be able to demonstrate that the plan does not provide more compensation than would otherwise have been paid under a plan of commissions and expense allowances.

Bonus Plans. Bonus plans are also permitted. Essentially, all compensation plans are permitted, provided that they do not exceed the inside limits and they comply with the total selling expense limit.

Potential Industry Reactions to the Law

The past few years have been challenging for many life insurance companies and their sales forces. Several factors have contributed to losses in the distribution side of the business including flat or declining agent productivity, deteriorating agent retention, and a shift in sales away from the core life insurance products to investment products.

To reverse this trend, companies are exploring new approaches to the selling proposition including enhanced sales support and lead generation programs, greater consumer focus, and revised compensation plans. Until recently, the existing laws on field compensation in Section 4228 have been an impediment to change. They have significantly constrained a company's ability to design flexible compensation plans that align company objectives with those of the field.

While the new version of the law does not provide complete flexibility in designing new plans, companies may implement the following changes in agent and/or manager compensation plans:

- Agent plans that defer a larger portion of compensation into later years through the use of levelized commissions (although most likely not level) and/or payments based on assets under management
- Plans that provide incentives to the field to achieve certain broad-based objectives such as increased household penetration and product cross-selling and higher consumer satisfaction levels
- Increased training allowance payments to new agents that may enable insurers to target better recruits with the expectation of generating higher agent productivity and retention
- More flexible bonus programs designed to reward agents for writing larger volumes of quality business
- Plans similar to those commonly used in non-career-agency channels (for example, grid-based payouts and asset-based trailers to stock-brokers and independent broker/dealers).

Overall, the new filing procedures should enable insurers to respond more quickly to market developments in bringing new plans to market. However, given increased competition for consumers' savings dollars from other financial services companies (generally at lower distribution costs), it is unlikely that insurance companies will be able to use the new law to increase commissions as a means of expanding distribution. While revisions in compensation plans may help increase sales force effectiveness, other changes will likely be needed.

Jonathan Hecht, FSA, John M. Fenton, FSA, and Douglas A. French, FSA, are with Tillinghast-Towers Perrin in New York, New York, Atlanta, Georgia, and Stamford, Connecticut respectively.

Ten Years Ago …

The July 1988 issue of *Product Development News* featured the following articles:

Risk-Adjusted Profit (Part 3)
by Shane A. Chalke

In this article, Shane Chalke addressed some comments that had appeared in the April issue, which were responses to ideas presented in a series of seminars. It discussed that risk-adjusted profit (or economic value) is an indispensable analysis tool in the product development process. He stated that the primary advantages of risk adjusted profit measures were:

- Risk-adjusted profit was a better measure of the true value of a venture to the company than an expected value
- Risk-adjusted measures were ordinal in nature and could be used to choose between ventures with differing distributions of risks.

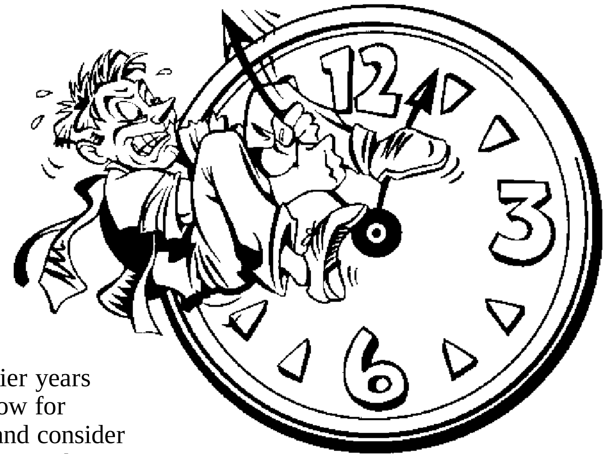
The risk-adjusted profit calculation used exponential utility functions. Advantages of such a utility function over dealing with raw data were stated as:

- The use of a utility function resulted in a more disciplined and consistent posture toward contingent situation
- The use of a utility function made decision making possible where the raw data was too complex for mental digestion.

AIDS Pricing and Product Design
by Thomas W. Reese

Tom Reese started his article with a suggested mid-1990s actuarial exam question. This question assumed that AIDS claims had become 15% of total company death claims. The question asked what measures should have been taken back in 1988 to prevent this scenario? He suggested in his answer that sound product design against the threat of AIDS should have focused on two basic principles.

- Control the insurance coverage you provide including design features such as limiting term renewals to one additional period, allowing term conversions only during the first five years of the policy, and strengthening the premium payment requirements under indeterminate premium products.
- Maximize company pricing options including higher guaranteed premiums and higher guaranteed charges, reduce dividends in earlier years to build up a fund to allow for worsening experience, and consider the capability to vary charges by state.



While the AIDS impact on life insurance has not reached the level expected, many insurance companies have certainly felt the impact.

Acceleration of Death Benefit on Catastrophic Illness
by Guy V. Barker

This benefit provided a portion of the death benefit from a life policy if a person had certain conditions that have a high probability of indicating likely death within a brief number of years. Pricing for this additional benefit is a challenge, as available population statistics must be adjusted for the insurance population. The benefit also required careful underwriting for family history of certain health conditions. It stated that conditions covered must be those that can be identified by objective tests as opposed to subjective opinions of physicians. The article noted that these benefits had real value to the consumer and would help provide a competitive edge to life products.

Impact of Black Monday on Variable Product Sales
by William E. Connor

This article summarized the impact of Black Monday on variable products offered by Pruco Life. The biggest shift was noted overall in where the money in variable products went. In September 1987, only one dollar in seven was going into fixed rate options, while in May 1988, about six dollars in seven were going to fixed rate options. Additional observations were shared about specific products. The variable universal life product saw both a decrease in the

nu
mber of applications (about 15%),

as well as a shift in the investment options chosen toward fixed. Within the single-premium annuity and life products, the sales level before Black Monday was about 60% in variable and dropped to 30% after Black Monday. In the flexible-premium variable annuity, the shift in percentage of fixed option went from 2½% to 21% by May 1988. Sales of a fixed-premium variable life insurance product without a fixed option declined significantly. The author stated the company was committed to variable products as solid long-term products. We are seeing great interest in variables today. If and when the market reverses its current trend, will we see some of the above shifts repeating themselves?

A Universal Life Nonforfeiture Proposal

by John M. Bragg

In this article, Jack Bragg described a proposal concerning universal life cash values that he had made to the NAIC Actuarial Task Force. Under the proposed method, the minimum cash value would be based on a fixed, static accumulation. Premiums actually paid were accumulated and expense allowances and statutory mortality charges deducted. Interest was at a specified fixed rate. The concept was to provide that traditional products would have the same cash values using either the new accumulation process or the traditional prospective method.

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Reversionary Incomes
by Kenneth Faig, Jr.

In this article, the author made the point that he believed reversionary annuities would have the potential to provide adequately for financial needs that would be prohibitively expensive to provide for with life insurance. He discussed both reversionary annuities following the normal pattern where the life triggering the contingent event was older as well as where that life was younger. That instance would provide for the parents of severely impaired children to provide for income to care for those children upon the parents' deaths. He noted that two of the biggest obstacles for this form of annuity were probably (1) existing rigidities and unanswered questions as to Standard Valuation Law and Internal Revenue Code and (2) potential criticism of the "forfeiture" which occurred if the *y* predeceased *x* (*y* being the one to whom benefits would be paid upon the death of *x*). He noted that period certain options might alleviate some of the second concern.

AIDS Term Price Increases in the U.K.
by Thomas W. Reese and Mark E. Turner

The authors reported that premium rates for term assurance in the U.K. were being increased during 1988. For males, the percentage increase ranged from 156% at age 30 down to 5% at age 60. Some of the increases were prompted by recommendations to use new reserves that provided for AIDS. The article also reported that permanent plan rates had not seen the impact of the increases in term. This was due to the fact that with-profit policies paid substantial bonuses reflecting experience. Since the bonuses were not guaranteed, they could be adjusted to reflect the impact of AIDS on experience. The products similar to universal life had mortality charges that could be reviewed at any time. (It would be interesting to see a follow-up on what has happened in the ten years since 1988 to such premium rates.)

NAIC and Elsewhere
by Bill Carroll

Bill Carroll reported on four items that would have been of interest to product development actuaries that had been discussed at the June 1988 meeting of the NAIC. They were:

- Proposed regulation for the valuation of universal life insurance being considered for adoption in California
- Actuarial guideline dealing with the valuation of structured settlements
- Actuarial guideline dealing with the valuation of annuities on substandard lives
- Proposed change to the reserve liability article of the Variable Life Insurance Model Regulation dealing with reserves for guaranteed minimum death benefits.

Modified Guaranteed Life and Annuity Regulations
by Donald R. Sondergeld

The article reported that there had been slow progress in getting the states to adopt a model regulation on MGAs. It also stated that the ACLI had begun to take steps to encourage statewide adopting of the regulation and called for support in getting the regulations adopted.

Tax Notes
by John J. Palmer

John Palmer reported on activity on the "single premium" issue since the last newsletter. At the time of the article, there had been initial provisions for a class of Section 7702—qualifying life insurance contracts known as "modified endowments." He reported on some of the evolution that had gone on in getting to the initial provisions. Rather than seven pay, initial proposals were for up to 20 pay. Penalties for early withdrawal were proposed to be 15% rather than 10%. The initial thought was for no grandfathering of existing contracts. Limits on mortality and expenses for the limits were discussed. (In looking back at some of the early considerations, this rule might have been even more onerous than the final provisions.)

Thanks to 1998 Hawaii Spring Meeting Participants

The Product Development Section Council wishes to express its sincerest appreciation for all those who participated in the sessions sponsored by the Product Development Section. The sessions were very well received due to the commitment and talents of these individuals.

- **UP-TO-THE-MINUTE NEWS FLASH ON REGULATORY DEVELOPMENTS**
  Donna R. Claire, Claire Thinking Inc.
  Thomas C. Foley, North Dakota Insurance Dept.
  Sheldon D. Summers, California Department of Insurance
  Jeffrey P. Newnam, PT AJ Principal Egalita IO

- **MILLENNIUM UNDERWRITING**
  Richard L. Bergstrom, Milliman & Robertson Inc.
  H. Michael Gaines, PMSI
  Henry C. (Hank) George, Lab One Inc.

- **MARKET CONDUCT ISSUES FOR PRODUCT DEVELOPMENT ACTUARIES**
  Mark A. Milton, Kansas City Life Insurance Co.
  Bruce F. Deal, Analysis Group Economics
  Marc-Andre Giguere, Tillinghast-Towers Perrin
  Robert Schwab, Milliman & Robertson

- **INSIDE THE MEDICAL INFORMATION BUREAU**
  John A. Luff, Society of Actuaries
  John R. Avery, MIB Inc.
  John Detwiler, MIB Inc.
  Stacy Gill, MIB Inc.

- **INSURANCE COMPENSATION TRENDS AND OUTLOOK**
  Joel I. Wolfe, Massachusetts Mutual Life Insurance Co.
  Deanne L. Osgood, Milliman & Robertson Inc.
  Jeffrey M. Robinson, Life Insurance Financial Essentials/HAS

- **CURRENT ISSUES IN SALES ILLUSTRATIONS**
  John D. Branscomb, Milliman & Robertson Inc.
  David N. Karo, ECTA Corporation
  Wm. Harold Phillips, California Department of Insurance
  Forrest A. Richen, Standard Insurance Co.

- **PREFERRED RISK PLANS: SHOULD WE HAVE THREE CLASSES OR SIX?**
  Allen M. Klein, CNA Life Re
  James D. Atkins, First Colony Life Insurance
  Carl J. Macero, Transameric Reinsurance
  David A. Rains, Security Life Reinsurance
  Jennifer K. Richards, The Principal Financial Group
  Shaun D. Parks, First Colony Life Insurance

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  Timothy Simon Millwood, Milliman & Robertson Inc.
  Ian Arthur Glew, CIGNA Individual Insurance
  Christopher L. Parker, Clark/Bardes Inc.
  Gary Thomas, William M. Mercer, Inc.

- **EQUITY-INDEXED PRODUCTS—NOW THAT YOUR HAVE THEM, WHAT ARE YOU GOING TO DO WITH THEM?**
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  Ann R. Bryant, Lutheran Church Missouri Synod
  Jean B. Liebmann, SAFECO Life Insurance Co.

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  Donna R. Claire, Claire Thinking Inc.
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  Deborah A. Gero, SunAmerica Inc.
  David S. Kimmel, JP Morgan & Company, Inc.
  James H. Overholt, Milliman & Robertson, Inc.
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- **TERM WARS**
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  Jeffrey K. Dellinger, Lincoln National Life Insurance Co.
  Lilia M. Sham, Tillinghast-Towers Perrin
  Terry J. Simpson, Lincoln National Life Insurance

- **EXPENSES AND PRICING**
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  Sam Gutterman, Price Waterhouse LLP