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# GROUP LTD

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| | TIMOTHY W. KNOTT |
| | STEPHEN J. MITCHELL |
| | WAYNE V. ROBERTS |
| Recorder: | JULIA T. PHILIPS |

MS. JULIA T. PHILIPS: I'm very pleased to be able to introduce a panel of four people who have significant expertise in group LTD. The first speaker will be Tim Knott. Tim is an associate group actuary of life and disability products at Fortis Benefits Insurance Company. He is responsible for pricing and product actuarial work for the LTD line for Fortis Benefits.

MR. TIMOTHY W. KNOTT: I plan to talk about the economy and its impact on LTD profits. Like myself, actuaries have traditionally associated increases and decreases in LTD profits with the ups and downs of the economy. And certainly the last 12 years have provided a wide range of economic scenarios from which to operate. My discussion will divide the last 12 years into 3 basic economic periods: the early 1980s, the late 1980s, and the early 1990s. I'll discuss the impact that these had on LTD, and then conclude with what the future economy might hold and what impact it might have on LTD.

The economy in the early 1980s was in a period of recession. It was characterized by high inflation, high interest rates, and high unemployment. Yet the impact on the LTD line was not as disastrous as one might expect. In the early 1980s, inflation hovered in the double-digit range. This quickly eroded the buying power of claimants on LTD fixed-income benefits. As a result, it created an incentive for the marginally disabled to either stay at work or to get back to work quicker than they normally would. As a result, the claim incidence rates were reduced and claim termination rates were increased. Another side effect of the high inflation was that it created payroll growth for LTD-insured clients. This resulted in premium level increases and helped offset any lost business due to reduced sales or increased lapses caused by the recession.

Another positive side of the recession was high interest rates. This was also a benefit to LTD insurers as it resulted in higher investment yields on LTD assets. This was significant at that time, because most claim reserves were set up using fairly conservative assumptions. As typical with recessions, the unemployment rate was high during the early 1980s. During this time, however, unemployment was most widespread for blue-collar and manufacturing-type jobs. Fortunately, most of the LTD business at that time had been written primarily on white-collar and professional-type groups. So, to the extent that companies wrote a good proportion of white-collar business, they were not affected as badly as a result of the unemployment.

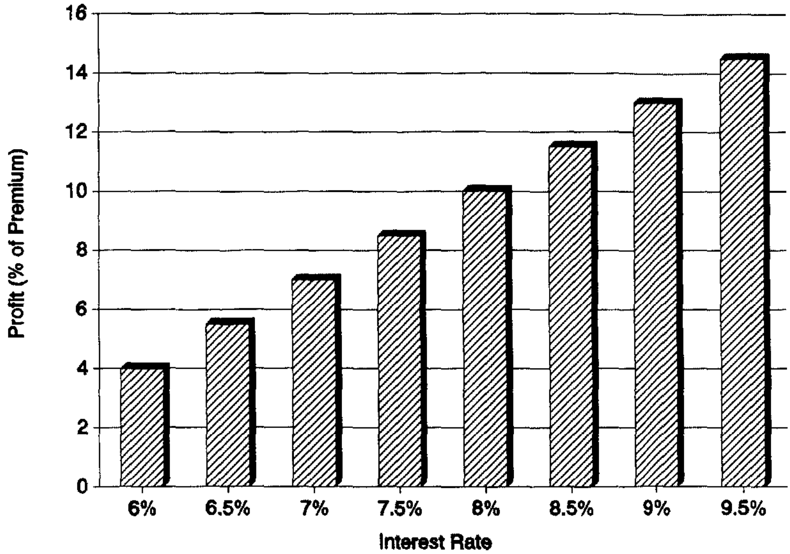
An often overlooked element of the economy in the early 1980s was the prevalence of one-income families, in particular, the employees that were fortunate enough to be insured by LTD. Most of those were from one-income families or were at least the primary wage earner from two-income families. Secondary wage earners were only a small percentage of the LTD insureds, and a high percentage of LTD claimants had no subsidy from a working spouse. Once again, there was a significant incentive for the marginally disabled to either remain at work or return to work, if they were the primary wage earner of the family. For most companies, the economy in the early 1980s had little negative impact on the LTD bottom line. The higher claim costs due to unemployment were mitigated by the white-collar nature of LTD, and additionally by high inflation and one-income family incentives to remain at work. High investment yields typically more than made up the difference for any remaining claim losses. We were, perhaps, given a false sense of security in thinking that the LTD line had some sort of immunity from recessions.

The economy rebounded strongly from the recession in the early 1980s, and by the late 1980s, it was as strong as ever. Some 90% of previously laid-off workers were able to find similarly paying positions. Inflation rates were low, and interest rates were moderate. The late 1980s provided ideal conditions for LTD profits. The low unemployment rate greatly reduced incidence rates and increased termination rates due to the availability of jobs for recovering claimants. A large proportion of LTD assets had been invested during the early- and mid-1980s at high investment yields, and the earnings on these assets contributed significantly to the LTD bottom line in the late 1980s. Earnings for most insurers were at all-time highs, despite the fact that we were lowering rates and liberalizing benefits in an effort to attract a larger market share.

The economic boom of the late 1980s has come to a halt in the early 1990s. Unemployment rates have increased sharply. At the same time, interest rates have continued to fall, and inflation has remained low. As I am trying to explain to senior management, "This isn't good for LTD." From most viewpoints, low inflation is seen as a positive for the economy. But this is not the case for the LTD line because the low inflation causes less erosion of the fixed-income benefits. It thereby creates less incentive for the disableds to return to work or remain at work. As a result, LTD claim costs in the early 1990s have increased as incidence rates have gone up and existing claims malinger. In addition, falling interest rates have a significant impact on the LTD bottom line. As new investments have lower yields and maturing investments are rolled over at lower yields, the effect on LTD profits varies by company based on investment strategies and asset allocation methods. But as an example, a typical company may have LTD assets that are approximately 300% of annual premium (Chart 1). It doesn't take an actuary too long to figure out that a one point drop in the investment rate is equivalent to a 3% loss of annual premium.

The rise in unemployment is particularly hard on LTD profits this time around. While earlier recessions harmed mostly blue-collar and manufacturing jobs, the latest layoffs have hit more white-collar and professional groups. The traditional LTD markets, including law firms, architects, engineers, banks, real estate companies, and even insurance companies, are showing the effects of unemployment. Geographically, unemployment is higher in California and the northeast, and these are traditionally large LTD marketplaces. Companies with large concentrations of business in these industries or geographic areas are certain to have greater claim costs than they typically would have.

CHART 1
Profit by Interest Rate
Premium Rate Constant
Assets = 300% Premium




Another phenomenon negatively impacting LTD results is the prevalence of the two-income family. A growing percentage of LTD claimants now have working spouses. In the past, the typical LTD claimant faced a 40% loss of income. As Table 1 shows, the typical primary wage-earner claimant may incur only a 20-30% loss of family income, and the secondary wage-earner claimant may face only a 10-20% loss of family income. Many times, there's little motivation for these claimants to return to work, especially considering the added costs of working such as child care, travel, clothing, and so forth.

The economic forces of the 1990s have resulted in increases in the percentage of claims that are subjective in nature. Fortis Benefits has seen a significant increase in the percentage of back pain, mental illness, chronic fatigue syndrome, and sprains-and-strains-type diagnoses in our claims. Other companies are reporting similar results. At Fortis, these claims represented 18.5% of all active claims in early 1990. In early 1992, they represented 20.7% of all active claims. A 2.2% increase doesn't sound like a lot until you start relating the dollar increase in reserves to annual premium.

The benefits are primarily centered on a three- to six-month elimination period. One of the reasons we believe some of these claims are subjective was evidenced by a test our claim department performed. On a trial basis, we solicited use of a back machine, which can measure range of motion via a computer, and supposedly can tell if a claimant is lying about the pain he or she is experiencing. This trial was going to be performed on ten claimants. The second claimant that we asked to take the test decided to go back to work instead.

TABLE 1
Mr. & Mrs. L.T. D'Insured

| | Annual Income |
|---|---|
| Primary Earner<br>Spouse | $40,000<br>25,000 |
| Total | $65,000 |
| Both are covered at 60% benefit rate for LTD | |
| Disability Impact on Family Income | |
| If Primary Earner is disabled<br>Annual LTD Benefit<br>Spouses Income | <br>$24,000<br>25,000 |
| Total Family | $49,000 |
| % of Predisability Income 75% | |
| If Spouse is disabled. . .<br>Annual LTD Benefit<br>Primary Earner | <br>$15,000<br>40,000 |
| Total Family | $55,000 |
| % of Predisability Income 85% | |

One final element of the economy that is affecting LTD profits is the health care crisis. The escalating cost of employer-sponsored medical plans has led employers to shop for the lowest rate, share more of the costs of benefits with employees, or eliminate ancillary benefits altogether. At the time, health insurers realize that reform may jeopardize their traditional medical insurance markets, and therefore, they're looking to diversify into LTD and other ancillary coverages. Employers who are shopping for lower rates have found a buyer's market in the early 1990s as new LTD insurers attempt to gain a critical mass, and the established LTD players are struggling to protect their market share. The result of this is churning of business to less-profitable premium levels at precisely the same time that the economy is putting a strain on profits. Needless to say, the economy of the early 1990s has not been as kind to LTD profits as the recession of the early 1980s. Low inflation, low interest rates, two-income families and increased competition, which were not elements in the early 1980s, are having a significant negative impact on profits in the 1990s.

What does the future hold? Any recovery will most likely be slower than prior recessions. Since the election in November 1992, only about 90,000 new jobs per month have been created, versus 200,000 per month that were created after the recession in the early 1980s. Most of the forces currently causing unemployment, including high debt, growing global competition, and rapid technology change, will continue to exist for some time. Many jobs, a great deal of which are white-collar positions, have been eliminated permanently. President Clinton is promising defense cuts and other government cutbacks, while at the same time promising new jobs to rebuild the infrastructure. This is certain to have an impact on LTD experience across various industries and geographic areas. Higher taxes also appear to be certain, especially for high-income workers. The two-thirds of income LTD benefit may suddenly become more attractive to people who have a claim. There's also been some rumblings about taxation of Social Security benefits, and even Social Security benefit cutbacks. These, of course, would have a significant impact on LTD. Interest rates and inflation have remained low for some time. Questions remain as to whether the Treasury Department will continue to hold interest rates down, and whether increased taxes will push inflation up. Health care reform is another hot topic, and the outcome of reform will certainly have an impact on LTD. We have yet to see the full impact of the two-income family. Most two-income families are currently in the younger or middle age brackets. As these families get older, pay off the mortgage, and pay for their childrens' education, there may be great incentive, particularly for the second wage earner, to use the LTD benefit as a form of early retirement.

The role of the LTD actuary is as important today as ever. Rather than simply blaming the economy for the less-than-expected results, we must be proactively involved in dealing with the economy and its effect on LTD. This includes appropriately reflecting current and anticipated interest rates and inflation rates in pricing and reserving; recognizing industries and geographic areas that are impacted by changes in the economy; becoming involved in the claim process to actively manage claims that are economy-related rather than health-related; and designing products that provide economic incentives for the marginally disabled to remain at work or to return to work following a disability. If we can accomplish some of these items, we can certainly reduce the need to find a scapegoat when explaining LTD results to upper management.

MS. PHILIPS: Our next speaker is Fred Brown. Fred is chief operating officer and actuary with John Hewitt & Associates, a reinsurance risk underwriting manager focused on LTD. He has been there for two months. Before that, he was at UNUM Life Insurance Company for 20 years, where he had financial and sales responsibilities.

MR. FREDERICK R. BROWN, III: I've been asked to present an overview of the current LTD market environment:

- Its overall growth rate;
- Market share positions;
- Some observations regarding claim cost trends; and
- Some observations regarding pricing and underwriting trends.

My focus today is the U.S. insured LTD market. My presentation is based on data from John Hewitt & Associates annual market surveys:

- Our annual premium and sales data cover over 90% of LTD insured premium in force in the U.S.;
- Our annual rate and risk management participants account for 72% of annual insured LTD sales in the U.S.

Anyone who has tried to work with published LTD market data knows frustration; but these data are good. A lot of effort has gone into filling in missing pieces and ensuring consistent data over time.

In the following charts, you will see that I have split the market into shares held by:

- UNUM, as the market leader;
- The "Next 10" competitors*, based on 1985 premium in force. They each had more than $60 million in force in 1985; and
- "All other" writers.

Please note that, to the extent that I have singled out UNUM as the market leader, I have been careful to use only data that are published and publicly available. Also I have comprehensive, accurate share data on these "all other" writers only back to 1985. That's why their data starts in 1985.

Let's start with in-force premium growth. Chart 2 shows that the market, in total, continues to grow; however, it continues to slow its pace of growth. Compared to an average annual growth of 8.1% from 1985 through 1990, the market grew 5.0% in 1991 and 4.7% in 1992.

Market shares have remained (fairly) stable over time. Some of this has been the result of corporate mergers or sales of blocks of business, but the point is that the leaders back in 1985 are generally still the leaders in 1992.

CHART 2
LTD In-Force Premium
(U.S. Only)

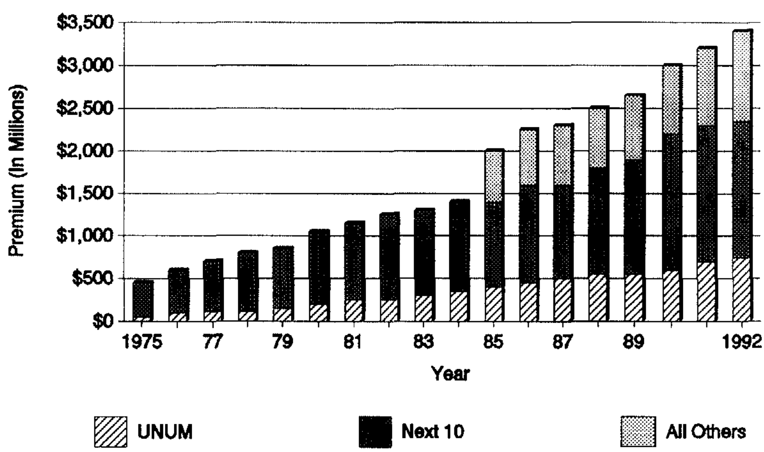



Chart 3 shows what market share looked like in 1985. Seventy percent of LTD premium was held by UNUM and the "next ten" carriers. Out of the 60 "all other" companies, the top 20 held 25% of the market; the last 20 were effectively non-players in 1985.

* Companies are: Allstate/Met, CIGNA/Equicor, Prudential, Metropolitan, Travelers, Hartford, Standard, and Fortis.

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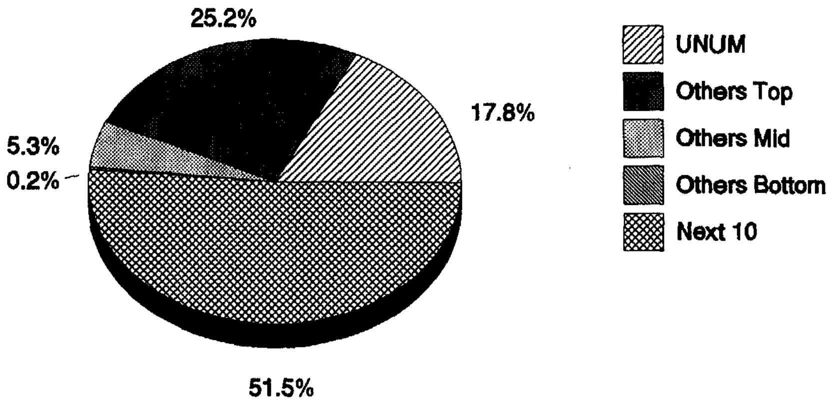
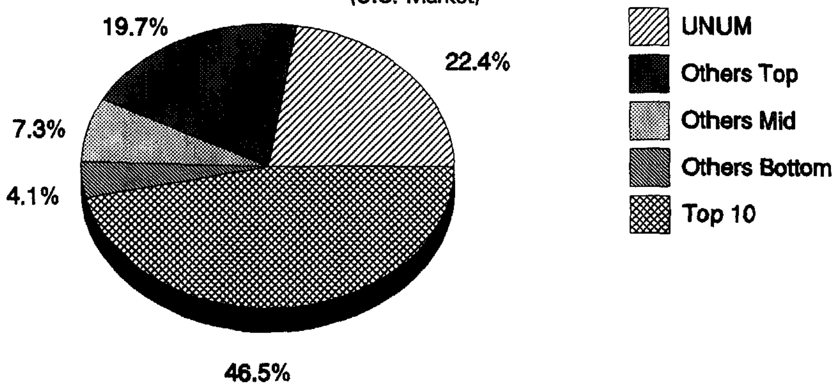
CHART 3
1985 Market Share of Premium
(U.S. Market)




In 1992, the market-share pie looks similar (Chart 4). New entrants – that is, the nonplayers in 1985 – now account for 4% of the market, or about $140 million of the in-force premium. The market leader increased market share by 5%. The "next ten" lost market share by 5%, and the top echelon of the "all other" group lost as well.

CHART 4
1992 Market Share of Premium
(U.S. Market)




Insured plans in force also have grown steadily, even accelerating in the last year (Chart 5). Yet insured lives growth appears to have slowed significantly (Chart 6). This is probably due to at least two factors: decline in the market for "jumbo" insured groups; and expansion of the market into blue-collar and smaller groups. The "next ten" grouping, in particular, is feeling this trend. Despite significant growth in new plans sold and in force (maybe overstated), lives in force declined from 1991 to 1992 after peaking in 1990-91. The average size of a new case sold for this grouping was two-thirds of the average size of an in-force case.

CHART 5
LTD Plans In Force
(U.S. Only)

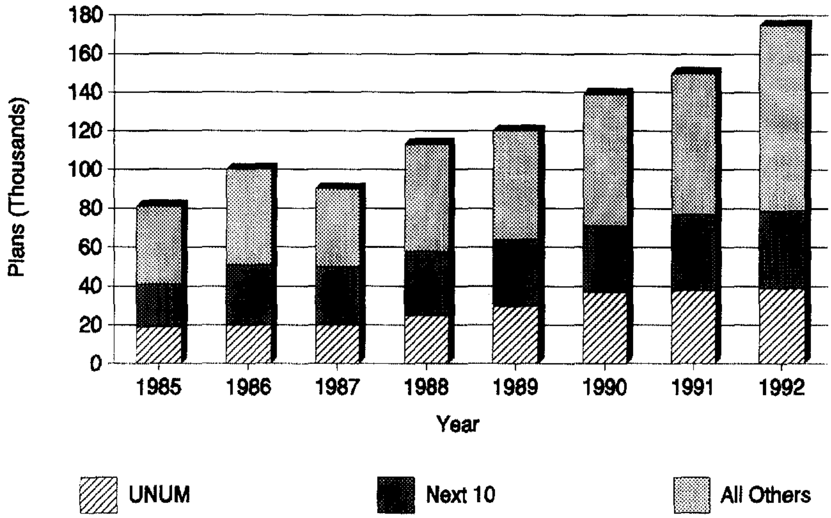
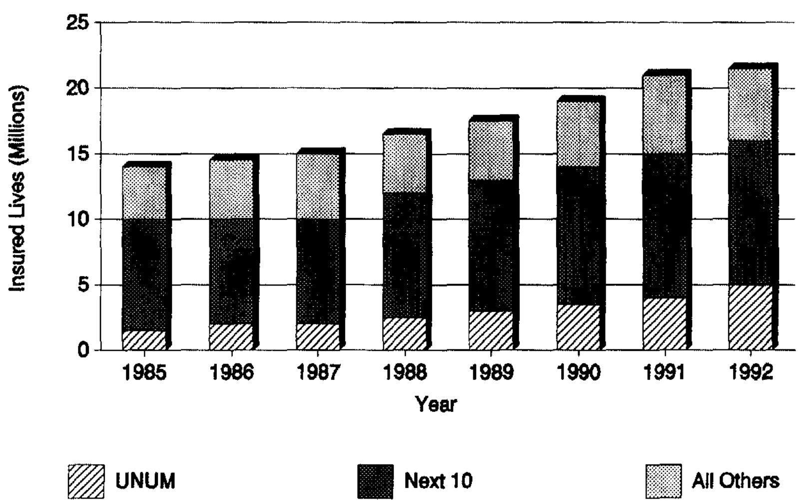



CHART 6
LTD Lives In Force
(U.S. Only)



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Premium sold has only held level since 1989 (Chart 7). Here's the market share of sales in 1988 (Chart 8). Here's the sales share pie in 1992 (Chart 9). New entrants since 1988 now account for 7% of market sales; the market leader grew share of new sales by 4.5%; and the other groupings all lost.

CHART 7
LTD Premium Sales
(U.S. Only)

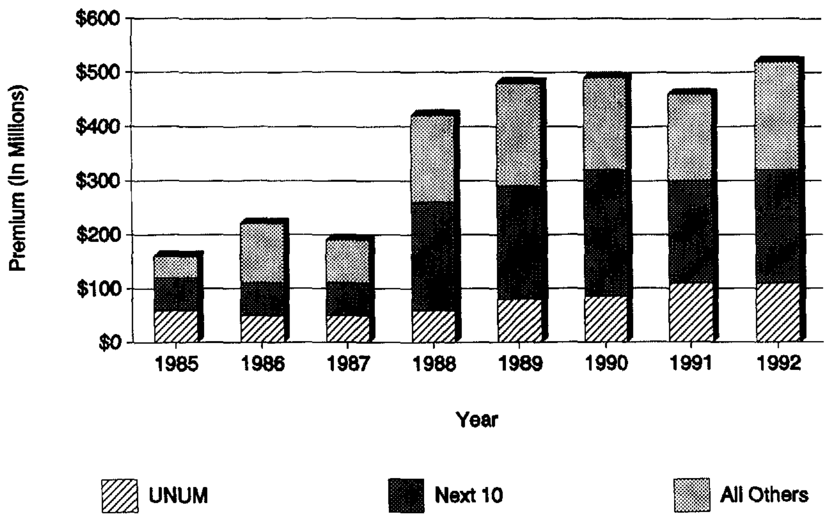



CHART 8
1988 Sahre of Premium Sales
(U.S. Market)

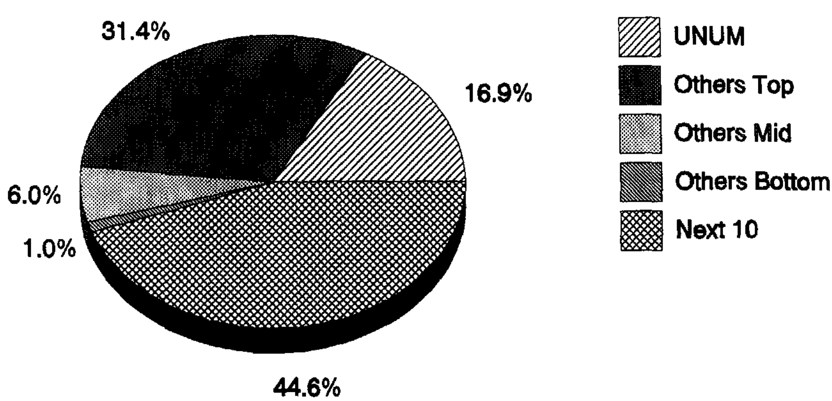
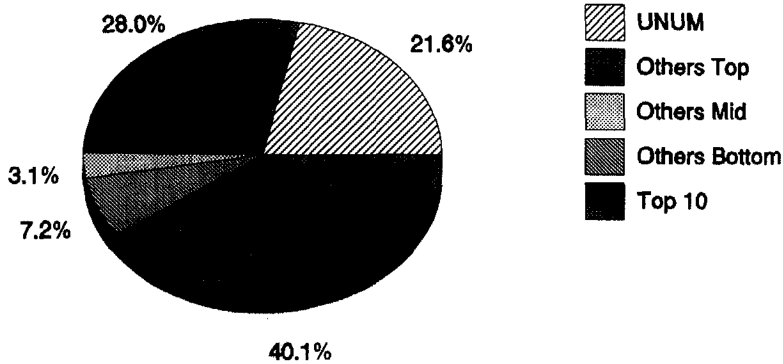
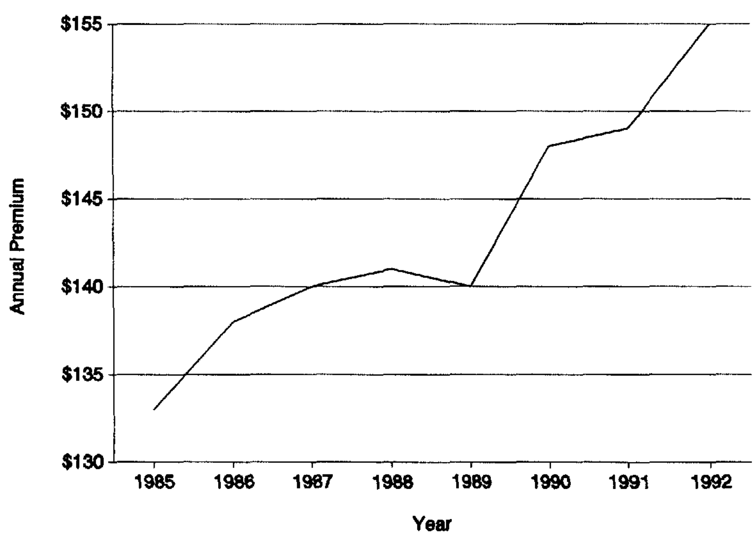


CHART 9
1992 Share of Premium Sales
(U.S. Market)



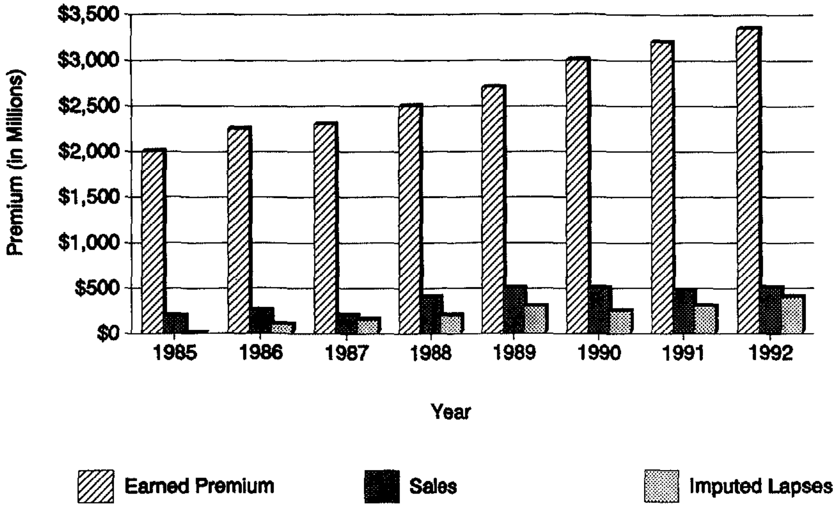

In-force premium per life has grown at an average of 2.1% since 1988 (Chart 10). While that is a healthier growth rate than experienced in the 1986-89 period, it is still well below that increase in claim cost to insurers due to salary inflation, benefit liberalizations and lower interest rates. Maybe the level of competition rate cutting has abated somewhat since the 1986-89 period, but not by much.

CHART 10
Average LTD Premium Per Life



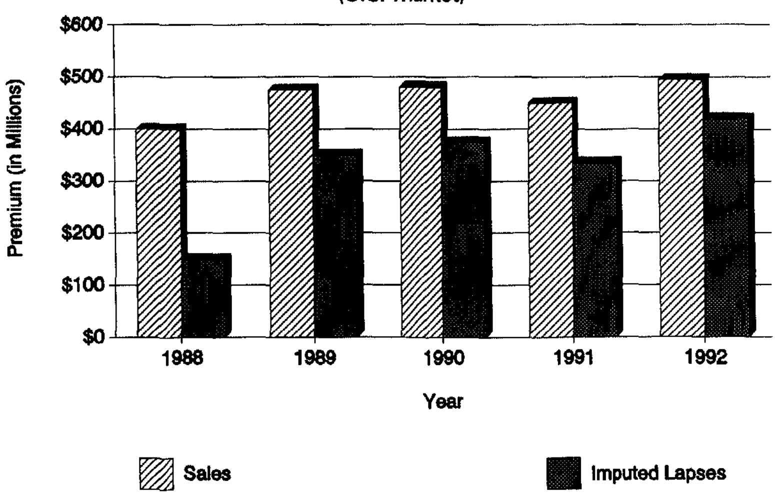

Knowing market in-force premium growth and sales, we can impute aggregate market lapses. A healthy spread between sales and lapses is the sign of a market with continuing growth potential. On the other hand, a pattern of no growth in gross sales and increasing trend in lapses suggests a maturing market (Chart 11).

CHART 11
Elements of Market Growth
(U.S. Market)




Focusing on the sales and lapse data, we see a trend of no growth in sales and increasing lapses (Chart 12). Real market growth -- that is, new sales net of replacements and before salary inflation -- was only $80 million in 1992, a growth rate of 2.5%.

CHART 12
Elements of Market Growth
(U.S. Market)



Putting it all together, we see the classic markings of a maturing marketplace: Consolidation of share with the market leader; some churning of the market due to late entrants grabbing share; lives insured and premium sales not growing, and new sales net of replacements diminishing; slowed pace of significant new product innovation and development; premium per life not increasing nearly as fast as the cost of claims, reflecting increasing price pressure.

Of course, we saw this same trend in the mid-1980s. Rather than "mature" then, the market expanded to new occupations and industry segments. However, I believe strongly that marketing managers need to be prepared to deal with marketing, pricing, and profitability challenges that relate to the traditionally marketed LTD product within the context of a maturing marketplace.

This will include intense organizational focus on the product, attention to cost (including claim costs, as well as expenses), leadership, exploitation of defensible market niches, and sales support focused on differential advantage rather than pure price competition.

With such a large part of the civilian employment untapped for LTD, it is hard to accept that the market has, indeed, begun to mature. I believe that there is continuing opportunity in the disability marketplace, but these opportunities lie in areas untapped by the traditional product and distribution design: blue-collar; payroll deduction; etc. These will be less efficient and slower-growth markets offering plenty of challenges, but the opportunity is there.

Now, let's turn to trends in the cost of doing LTD business:

- Interest earnings (lower interest rates make the cost of claim run-out obligations more expensive);
- Claim incidence and termination patterns; and
- The pace of Social Security disability award approvals, which insurers use as an offset to their own liability.

Interest rates have fallen dramatically since 1989 and early 1990 (Chart 13). Roughly, LTD claims costs increase 5% for every percentage point decline in discount rate assumption (Chart 14). All other things being equal, the cost of an LTD claim today is 20% higher that it was through the 1988-90 period.

This is a significant cost swing that eclipses the pretax LTD profit level of most insurers. How this plays out in terms of financial results will vary from insurer to insurer.

In our risk management survey, we ask some questions about claim experience trends. Most respondents reported claim incidence rates, for 180-day elimination period claims, near the average 3.6 claims per thousand insureds (Table 2).

Slightly more respondents reported claim incidence getting worse than claim incidence getting better. The same is true regarding claim termination rates: slightly more respondents reported lengthening claim persistency.

CHART 13
Falling Interest Rates
(Five-Year Treasury Yield)

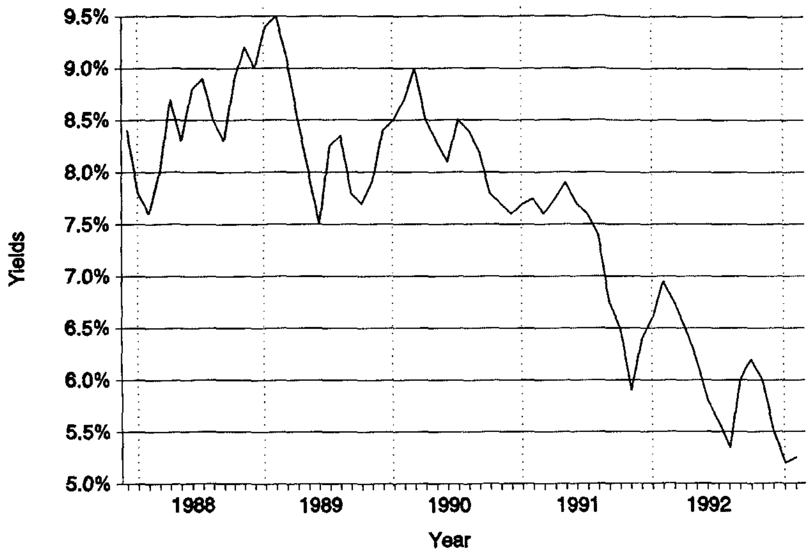



CHART 14
Rising Claims Costs

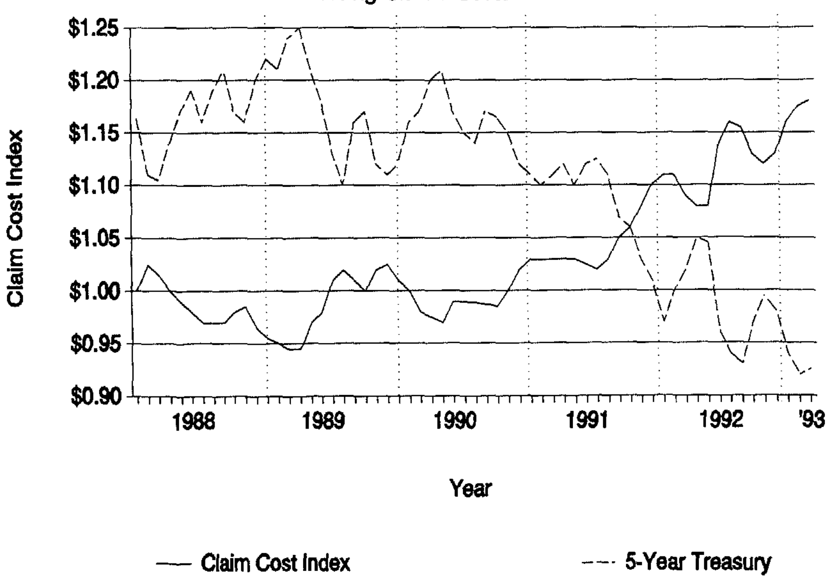


TABLE 2
Incidence and Recovery Trends

| Rates | Median Level | % Respondents | |
|---|---|---|---|
| | | Worse | Better |
| Incidence Rate | 3.6/1000 | 32% | 24% |
| Recovery Rate | | 28% | 24%* |

Mental and nervous claims have increased for 35% of respondents, while 15% reported better experience (Table 3).

TABLE 3
Mix of New Claims

| Claims | Median Level | % Respondents | |
|---|---|---|---|
| | | Increase | Decrease |
| Mental and Nervous Claims | 6–10% | 35% | 15% |
| AIDS | 0– 5% | 42% | 15% |
| Muscle/Skeleton | 20–30% | 19% | 27% |

AIDS claims have increased for 42% of respondents, while 15% reported fewer claims. AIDS claims account for less than 5% of the new claims for virtually all responding companies. Bad backs, which account for 20-30% of new claims, have decreased for 27% of respondents.

A few words about Social Security:

- The average processing time for Social Security disability claims, including all appeals, is 465 days, and is steadily becoming longer.
- In general, 20% of the Social Security disability income applicants get approved on initial application. Fifty-five percent of applicants who pursue their claim through to the appeal level get approved. So you can see how important it is to keep on top of this process.

Sixty percent of our survey respondents claim they have achieved a Social Security approval rate in excess of 80% for claims disabled longer than two years. Our survey asks respondents to rate a large number of different groups in various industries, including plan options.

The respondents account for 72% of annual U.S. insured LTD sales. Overall, average manual rates have declined since 1990. Chart 15 measures the range between high and low respondents and the survey average by year:

- Law firms: the average rate level has remained constant, but the range of rates (which is a measure of competitive noise) tightened in 1992 (Chart 16).
- Physician groups: the average rate has risen; two respondents exited that market segment altogether (Chart 17).

GROUP LTD

CHART 15
Market Rate Trends -- Overall Survey Results

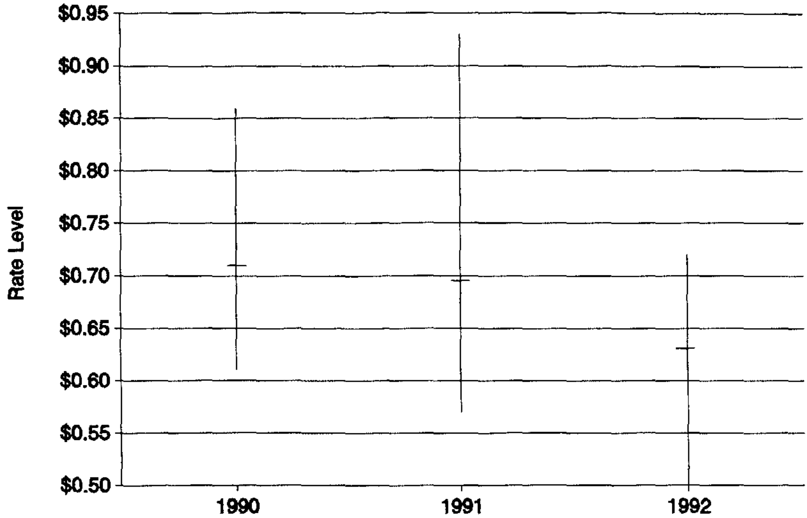



CHART 16
Market Rate Trends -- Law Firm

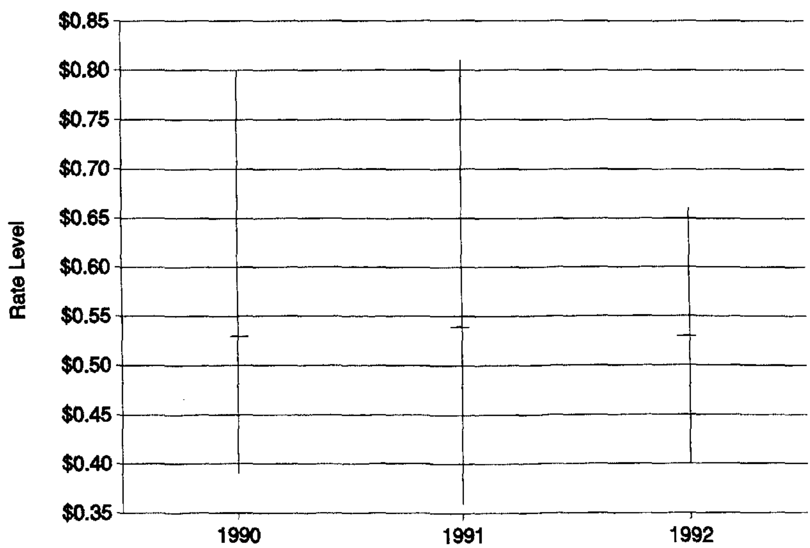
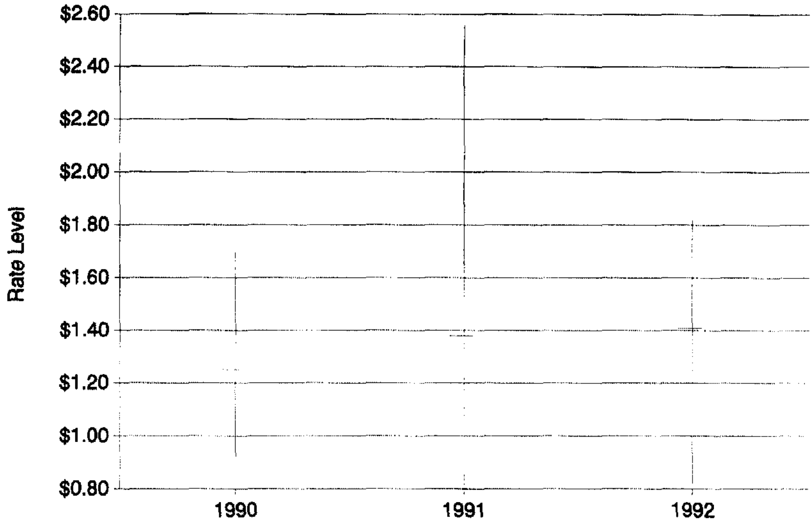


CHART 17
Market Rate Trends
Physician Group




I need to make two key points about these data. First, these are manual rates. Fifty-four percent of survey respondents allow their representatives to quote rates within bounds around manual. Half of those allow a range of ±10%; another quarter allow a range of ±20%. Second, many insurers are tightening their underwriting limits and increasing loads on certain options rather than increasing their rates overall (Table 4).

TABLE 4
Underwriting Rule Changes

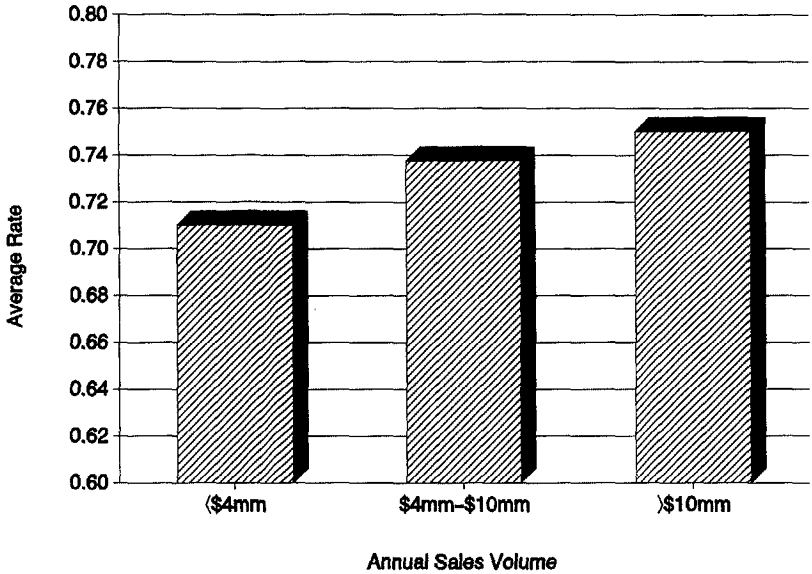
| Respondents | % Respondents | |
|---|---|---|
| | Tightened | Liberalized |
| Legal | 25% | -- |
| Physicians/Clinics | 75 | -- |
| Bank/S&Ls | 50 | -- |

- Twenty-five percent of respondents have tightened underwriting on law firms;
- Seventy-five percent of respondents have tightened underwriting on physician groups;
- Fifty percent of respondents have tightened underwriting on banks.

Also, 25% of respondents have increased their loads for long-term own occupation benefits. Twenty percent have increased their load to remove mental and nervous limitation. In the opposite direction, 25% of respondents have reduced their load for zero-day residual coverage.

Here's another interesting observation: The companies that wrote more than $10 million annually command a higher average rate level – by about 5% – than do the companies who write less than $4 million (Chart 18). This probably is a reflection of the focus that these companies have on LTD, and their attention to marketing their product on the basis of product features in the face of growing price competition.

CHART 18
Average Rate Levels
by Sales Share

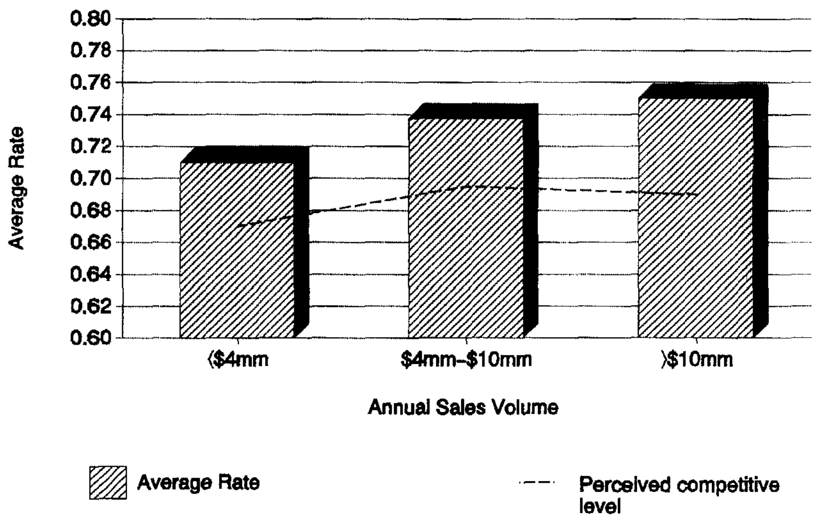



It's funny though. Regardless of what their sales volume or average premium level (Chart 19), these companies' representatives tell them the same thing: "We're 5-10% above the competition!" I think we're headed for a very difficult time in the LTD market for marketing managers who are trying to maintain the attractive level of profitability (vis-à-vis medical) that this line has enjoyed historically. We have three dynamics headed on a collision course.

- First, we have a maturing market, which will drive increasing pressure in pricing power, market-share consolidation, and an increasingly intense struggle among "all other" players. While expansion of the "traditional" market criteria for LTD will forestall some of this market maturation, these new markets are much more difficult and expensive to access, at a time when employers are increasingly trying to keep costs down.
- Second, despite the fact that this new market is in a maturing phase, we have the potential for a whole new surge of new entrants, driven by their need to replace their medical business in a nationally managed health-care system. This will include big medical writers as well as workers' compensation writers, both of whom have substantial market franchises to build from.

- Third, costs to insurers of writing LTD business have increased dramatically due to lower interest rates. If we are, in fact headed for a sustained period of low inflation and low interest rates, then costs of doing business have increased at the same time that market players feel at least able to increase premium rates.

CHART 19
Average Rate Levels
by Sales Share




All of this will be exacerbated by the differences in accounting measurements and financial objectives of all the players in the marketplace. Some insurers will use gains flowing from conservative reserves to insulate their statutory bottom line from the effect of rising claim costs. This will create a pricing advantage for them over insurers who seek rate increases to cover higher claim costs.

One development that will potentially reign in this source of competitive "noise," however, will be the concept of risk-based capital. The introduction of risk-based capital standards will force insurers to consider the capital-intensive nature of this LTD line.

Capital-rich companies will have a growth advantage, either in terms of direct sales growth or through reinsurance. This will accelerate the trend toward consoli- dation of LTD business among committed players. Also, pricing and financial measurement approaches, which explicitly address return-on-capital, will serve to reduce the big differences in financial objectives that drive competitive turmoil.

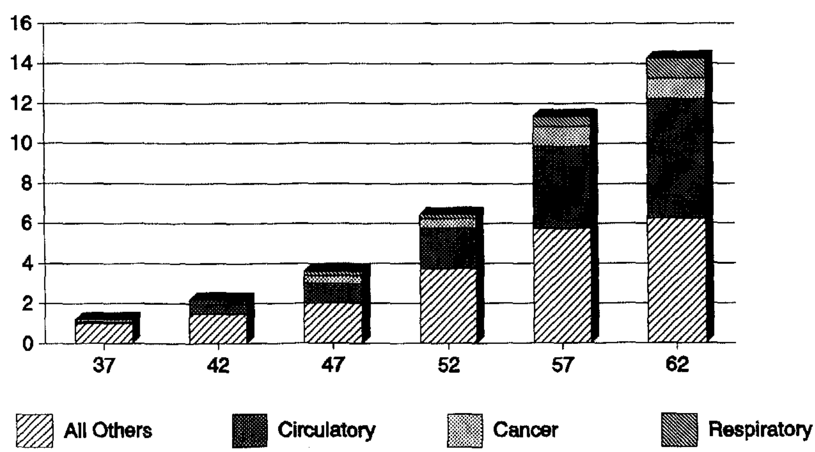
And as I mentioned earlier, I think that there remains a substantial market for disability, albeit requiring new product designs and marketing techniques to access and grow.

MS. PHILIPS: Our next speaker is Wayne Roberts. Wayne is vice president and group actuary for Standard Insurance in Portland, Oregon. He's responsible for pricing, product development, and financial statements for all of Standard's group products. He has been with Standard for over 30 years.

MR. WAYNE V. ROBERTS: After talking to some of the other panel members, I realized that nobody was talking about legislative changes or some of the new product development. I'll talk about those things. We'll start off first on legislative changes. I'm going to talk about a couple of things there. The first one has to do with the reducing benefit duration schedule that most companies offer. The Equal Employment Opportunity Commission (EEOC) requested some comments concerning whether this schedule could be cost justified, and so an ad hoc group of LTD carriers met early in summer 1992 to talk about a way you could do it. Our concerns were, first, we wanted this particular schedule to be considered a safe harbor, and second, we had some concerns that a lot of insurance companies were indicating that they weren't able to cost justify the schedule, and they were telling their clients that it wasn't cost justified, and they were making up different schedules. So we started to have a lot of different schedules. A letter was written the end of July 1992 from the Health Insurance Association of America (HIAA) and the ACLI. It basically recommended that the reducing benefit schedule, also called the preamble plan, be a safe harbor for the EEOC, age discrimination.

Basically there's a couple of tricks to cost justification. Number one, you have the need to show that the incident rate increases, or doubles, every five years. To demonstrate that, you can look at different diagnoses, because as you get older the diagnosis switches (Chart 20).

CHART 20
Society of Actuaries
Incidence Rate by Major Diagnois




Source: *1984 TSA Reports*

And so you get circulatory, cancer, and respiratory increasing with age. The source of these data is from the 1984 *Reports*. If you look at circulatory, you can see that it rapidly increases as you get older. And some of the others go down. Now, age 62 looks like it's out of line a little bit, and the argument in that area is that early retirement affects the incidence rates at that particular age. If you take that out, you continue to get the increase in incidence rates.

California has a disability benefit that you get to deduct for the first year. And it's a fairly major benefit. California has changed this rule in the last three or four months at least three or four different times. From my understanding of the final change, basically, it goes something like this. The old benefit was 55% to $336 per week. The new one will be 47% to $266 per week. Now, it doesn't take an actuary to figure out that, if you have a 60% plan, under the old schedule, for lower-paid people, you were paying a 5% benefit. Now you'll be paying a 13% benefit; that's a considerable increase. For those companies who haven't changed their rate yet, you may find yourself very competitive in California fairly quickly.

I'm going to switch now and talk about some new products like HIV rider, employee assistance plan, voluntary LTD. I think most of you people have been involved with developing new products. The HIV rider is a hot topic recently. It has to be a provision or a rider that actuaries love. It limits benefits, and you get to charge extra for it. It's been developed because some health-care professionals who are concerned that they would come down with HIV positive, or hepatitis B (those are both included in the product), were concerned they would have the virus, not be disabled, and yet lose all their patients, be unable to work, and lose income. They were concerned that insurance companies wouldn't pay for the benefits. I think you would agree that the contract says, the person's not disabled, so you wouldn't have to pay. However, I have the feeling most legal departments of insurance companies would say, you're going to have a hard time denying a claim. So that's a real tricky thing. I don't think we want to go to court on it, so a great solution is to offer a rider, and charge for it. They know they're protected; we get extra money; it's beautiful.

There are three things to talk about: limitation, the definition of disability, and eligibility. I talked about a limited benefit. You have to test positive after the effective date of the rider. You get a shorter benefit period, normally five years, and a lower maximum, like, $5,000 or $10,000, instead of the normal $25,000 or $30,000. So that's quite an improvement. The definition of disability is either losing your license or having some restriction on your license, or you must have a loss due to disclosure of the fact that you have HIV positive or hepatitis B. So, one of those things must happen. Eligibility requires you must have contracted the disease first. You have to have 20% earnings loss, and you must not refuse vaccination. I'm not sure how you're going to prove someone has refused that. Anyway, a lot of companies are starting to offer those in the health-care field. I think the biggest cost might come in the fact that groups will select against companies that have this benefit. And so, if there's some known potential claims, they may seek out insurance companies that are offering this rider. So I think that's the biggest area of potential cost.

Another product, and this has been around for a little over a year, is the employee assistance program. A lot of companies are now marketing with the LTD. Why it's combined with LTD, I'm not sure I understand. It seems like it would be more likely to go with medical insurance, because most of the savings, I think, would come over in the medical or sick leave or productivity on the job, that type of thing. But one insurance company started offering that, and once one company does something, it seems like everybody else just follows along. The cost of this particular benefit varies. Some companies include it in the cost of the LTD. I'm not sure why they do that, maybe they have a lot of margin in their rates. A lot of times we're talking about telephone consultation, as opposed to any office visits. I think that's a little cheaper program. So you need to look at what kind of benefits are being offered. Some companies are charging for it. Basically, you're able to get a better deal from an employee assistance provider if you can bring the provider a block of business. So, for a small employer, it would be a lot cheaper to buy through an arrangement like this with an insurance company, than for the employer to write the insurance on its own. I think you'll find most large companies will negotiate their own deal with an employee assistance plan, and they won't bother buying it through an LTD carrier. The question is to see whether anybody has any cost savings that they can document. As far as I know, nobody's able to do that at this point.

Another product that we've seen a lot in the last year or two is voluntary LTD. Benefits offered are some limited benefit percentages and elimination periods. The requirements normally are 25% enrollment, with a preexisting-condition exclusion for some protection. It's interesting that for LTD most of the contracts have this 25% minimum required and a preexisting-condition limitation that protects the contracts, unlike the voluntary life, where there's no minimum enrollment, and no protection. I don't understand why competition is doing that, but that's sort of what's out there. Rates vary by age and occupation and elimination period. One of the things you need to be careful of in rating is that, voluntary being paid for by the employee, means that its benefits are tax-free. We talked about the percentage of earnings loss. Obviously, if you provide a 60% benefit tax-free, employees have to compare that with take-home pay. For a highly paid individual, those numbers get closer and closer together. I always thought it interesting that we offer a 70% plan to partners in the law firms, and doctor's clinics. Also 70% for a partnership, when premiums get taxed as contributory, that means that the benefits are tax-free for partners. So, if you look at a partner in a law firm receiving a 70% tax-free benefit, and you compare that with his or her take-home salary, it may be no wonder why we saw some statistics earlier that indicate that people are raising rates for doctors and lawyers. It may very well have something to do with the benefit level.

Some of the benefits have been around for awhile. Extended care basically pays for nursing-home benefits, on a limited basis, for people who have been disabled. I think UNUM came out with that a few years ago. I don't see too much of that around. The child-care benefit, which would pay if someone goes back to work, pays some of the child-care costs on a limited basis. Key man insurance, or overhead insurance, would pay the company for the loss of some key individual, and is generally a limited benefit, also. In regard to the Social Security Normal Retirement Age (SNRA), we're talking about extending the benefit on to the Social Security normal retirement age, rather than stopping at age 65. That seems to be popular in some areas, although we haven't had much request for it. I'm not sure why a company would provide a longer disability benefit if someone's disabled than they would for people who have normally retired, because they retire, generally, before age 65.

A benefit being offered recently is where the insurance companies are offering to pay the Social Security contribution of the employer and the employee for people who are disabled, before the person's approved for Social Security disability. It's kind of a hassle to figure out what that is and deduct it and pay it. So, some insurance companies are starting to do that, and making the payment, and including it in the rates. It's a fairly substantial cost, having to do that. Plus it's kind of an administrative hassle.

With the number of claims we have for backs, I always thought it would be a great idea to have a two-year limit on back conditions, just like you have a two-year limit on mental and nervous. But no one's done it yet. Our sales force says, no, we're not going to be a leader, nobody will buy it. And so I want somebody out there to start offering it so we can do it. You can figure out the cost impact, and it's a good savings. One of the problems you may have is getting your legal department to be able to write up a definition it feels comfortable with, and also getting the states to approve it. The last one is a two-year limit on chronic fatigue. Now, I think we need to consider this. If we get more and more claims on chronic fatigue, we need to consider using a two-year limit on that. We would have similar problems getting that one approved, also. And of course, Tim was talking about the two-family income, and I think he suggests a new disability product here, too. It's called the family disability income, where you combine the income of the family and offer a benefit that would pay on the combined income, so the family wouldn't receive that 75-85% of current income as they do now.

MS. PHILIPS: Our final speaker is Steve Mitchell. Steve is a second vice president and associate employee benefits disability division (EBDD) actuary at UNUM Life Insurance Company. Steve is responsible for financial planning and valuation for group disability products.

MR. STEPHEN J. MITCHELL: I wanted to speak a little bit about cash-flow testing, some generalities and some specifics as it might apply to LTD. A lot of you have probably had some of your first experiences with cash-flow testing, having finished out the year-end with the new valuation requirements under the standard valuation law. With that backdrop, I thought that sharing some perceptions about the uses, the needs, and the methods of analysis might be valuable.

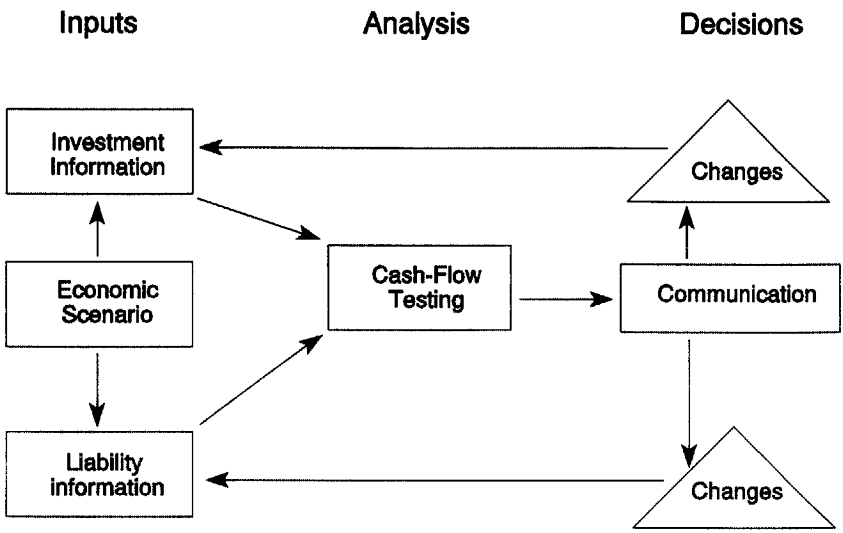
While our first experiences are probably driven by the regulatory requirement, it's important to realize that cash-flow testing has a wide range of applications, in both LTD and also in a great many product lines. Applications exist in product development and design and in pricing, primarily in identifying the product risks and trying to assess what values they have. Applications exist in reserve adequacy, and in helping define appropriate investment strategies for products, including LTD. Applications exist in valuations of lapse of business, whether you're a buyer or a seller in the market. Cash-flow testing allows you to provide some insights into whether you're really going to get what you paid for. Even internally, if you're doing planning or preparing model offices, of any blocks, it can be a useful tool.

I also want to review as background, the drivers of cash-flow testing. We hear the word a lot; it's very popular today. I think there's been a lot of factors that have combined to make it a popular new tool. There have been some global factors, such as the interest rate environment since the 1970s and its volatility. Product features in LTD and a lot of other products continue to expand into new areas, continue to assume greater risks, and allow the policyholders more freedom. As a profession, and in kind of a global sense, we pay a lot more attention to the asset side of the balance sheet. New investment vehicles and derivative securities have blossomed. Asset/liability matching has become part of our training and our heritage. All those factors have combined. On the regulatory side, there is a lot of action. New York Regulation 126 has been in effect for a few years, requiring cash-flow testing. A lot of what's generated our interest recently is the appointed actuary concept as it's been integrated into the standard valuation law. This law essentially requires the actuary to render an opinion on asset adequacy for the assets behind reserves. There has also been some NAIC activity, in terms of model regulations, related to cash-flow testing. Professionally, I think this is important, for those of you who aren't aware, that the Actuarial Standards Board has promulgated a couple of actuarial standards of practice (ASP) regarding cash-flow testing: ASP 7 and ASP 14. ASP 7 deals a lot with how you do cash-flow testing and what considerations are important. ASP 14 is the more recent one, which talks a lot about when you do cash-flow testing, what kind of things drive a need for products or circumstances that would require you to do cash-flow testing as a matter of rendering good standards of practice.

First, I want to give you my perceptions as to why there's such a need for cash-flow testing on the group LTD product. You're looking at a product that develops significant reserve balances, and therefore significant assets. You're looking at a product that has a long tail for claims, to age 65, that give a real long time horizon. You're looking at a product that has heavy dependence of rating and reserving on the discounting functions used. Fred was talking earlier about how the claim cost is so leveraged with that discount assumption. Also, the economy impacts on LTD, which speaks to the very things Tim was talking about earlier, about the incidence and recoveries, how inflation affects cost of living adjustment (COLA) clauses, all these things. If you take these all together, you then have big dollar assets and liabilities that have real sensitivities to the external environment and the interest rate environment. And that drives a big need to do cash flow testing on LTD. I also think it's important to note, for people like myself who come from a group product background, that these factors make LTD significantly different than a lot of other group products. For example, a lot of these things don't apply to group short-term disability or group dental. This makes group LTD a little bit unique in the group arena, and it makes it unique in terms of the need for cash-flow testing.

What I've tried to render here is a pictorial of how the cash-flow-testing cycle occurs (Chart 21). I believe it occurs in three phases: input, analysis, and decisions. The input is the data-gathering phase, where you must pull together your investment information and your liability information that you're going to use for your testing. The analysis phase is where the actual methodology and tools come to apply. That's kind of the black box where you suck in all the data you pulled in on the input phase. Then there's the decision phase, which I also think is an important phase for actuaries and for management, and for all the people in the company involved. That's where you take these analysis results, you communicate them effectively, and you arrive at some decisions. These changes then feed back and either change your investment or liability flows.

CHART 21
Cash-Flow-Testing Cycle




I want to make some comments on the input side, in particular, and discuss some considerations that you should take into account when you're doing your data gathering. First, you notice that tying together the investment and liability information, I've got a box called Economic Scenario. This is really at the heart of some of the cash-flow testing. You want to develop a holistic economic picture, not only for interest rates, although that's probably a critical element, but also for all the other factors that affect LTD. I mean, in your economic scenario, you should be thinking about, what's inflation and how is it impacting your product? What's the unemployment rate, what's the job growth, and maybe, in particular, the markets that you're focused in? With those scenarios, then, you have to determine what your investment and liability flows are going to look like.

For your investment flows, you're going to have to start by identifying the assets that belong to your product line. For companies that have good segmentation from their investment departments, that's not a problem. For some companies, in which that's not well-defined, then you have to start there. After you have those assets, then you have to get into modeling those investment flows. And that can get complicated somewhat fast, because you have to consider calls and puts. If anybody owns mortgage-backed securities, or collateralized mortgage obligations, then you're going to have to develop models of how those payments and flows are going to move, given the interest rate envi- ronments and the other factors that you build into your economic scenarios.

In your liability information, you're going to want to consider the claim costs and how they may move. And you may model out claim cost under different morbidity assumptions, different levels of terminations, to get an idea of their sensitivities.

You're going to have to look at how your product features react. You're going to have to consider cost-of-living adjustments and offsets, which are two items that have powerful impacts on the liability stream that you are modeling. And you're also, depending on the nature and the purpose of cash-flow testing, going to have to consider how you're going to handle incurred but not reported (IBNR) claims, how you're going to handle expenses, how you're going to handle claim-expense reserves, and so on.

Once you get into the middle box, kind of the tool box, and do the analysis, there's a lot of options that are available to you to help you do that. Three tools I've listed here are duration analysis, option-pricing techniques, and scenario testing, which is primarily, I think, what comes to mind when we talk about cash-flow testing. Macaulay duration and its derivatives have the advantage of bringing things into one statistic. It's a good summary statistic; it's easy to interpret. It does have some disadvantages. It doesn't give you a complete education about some of the things you'll want to look at. Also, it's not very good with interest-sensitive cash flows. So it's probably not sufficient alone to look at the statistics and draw all your conclusions.

Option-pricing techniques are fairly recent, and they continue to grow. They come from financial analysis of derivative securities, and they are very powerful tools. Unfortunately, they're very difficult to understand and very difficult to apply and code. And for most of the LTD situations, I think the sensitivities and the flexibilities they have are a little overkill. This leaves us with scenario testing, which is what most of us think of when we think of cash-flow testing. In scenario testing, you select a number of scenarios, a fixed number, and then you define the flows associated with those scenarios. This has several advantages in terms of being relatively easy to implement, in comparison to some of the other methods. Scenario testing has enough flexibility to handle a great many situations. Also, it gives you an effective way to analyze and summarize your results, because you have a fixed number of points that you're trying to deal with.

To elaborate a little bit more on what happens in that black box, and if you undertake cash-flow testing, there are really three major steps that go on in that scenario-testing procedure. You have definition of initial cash flows, where you make sure that you've considered all factors that are going to materially affect the flows. You also want to be sure you've considered dependencies among the factors. This is where you get into some of the stuff that Tim was talking about. You have an economic scenario: interest rates are one piece, unemployment and inflation are an other. You pull together your investment liability flows and consider what you think the pressures might be on your incidence or your recovery rates according to that scenario. You want to capture these interdependencies. After that, you have to make some decisions. You have your initial cash flows that are going to generate positive or negative income that you must either dispose of or borrow. It's going to define your investment/disinvestment strategies. This gets into selecting the types of assets you're going to use for investments. This gets into duration spreads, default risks, investment expenses -- all because you have to figure out what you're going to do with that money when it comes in. On the flip side, if you're going to borrow, you have to determine whether you're going to just mirror the strategy you're using for investment, or whether you're just going to borrow at a short-term rate for a year and keep rolling that money over.

For the investment strategy, you also have to make a decision whether it's going to be static or dynamic. By static I mean, for example, you're always going to invest in seven-year agency securities. An example of dynamic would be changing the investment strategy as you move through the scenario to keep some balance of assets split between Treasuries and agencies, or some other split. That gets a little more complicated to code, but it may be in line with how you feel the investment for your line is actually occurring, and therefore appropriate to include in the test. After that, you need some methodology where you calculate cash flows that execute your strategy. On top of the initial cash flows, you layer the impact of what you decide your investment/disinvestment strategy is going to be. There's a real good discussion in the *Valuation Actuary Handbook* about how to look at accumulating and discounting some of these cash flows over time.

What kinds of things do you want to look at when you're doing this analysis? Some of the things that you clearly want to be sure of are the following: (1) the size and frequency of your deficits and surpluses, perhaps expressed as a percentage relative to the size of your outstanding liabilities or current assets; (2) duration statistics, although you probably don't want to use them alone, possibly providing some insight if used to look at the duration characteristics of your asset-liability stream; and (3) the terminal, or ending point, surplus or deficit. Usually you'll pick some fairly lengthy time horizon over which to do your test, maybe 20-40 years. At the end of that, you'll have a deficit or surplus built up from your initial flows and the strategy you pursued. If you're looking at terminal amounts, what you often get is very large positive or very large negative numbers, and you shake your head, saying, "I don't know what it means, I have nothing to value it against." That's where this last statistic comes in (the name is from the *Valuation Actuary Handbook*), cash-flow-based surplus. It says, today, as I start the test, what is the amount that I either have to add in, or the amount that I can take out of my current assets, and have a zero surplus or zero deficit balance at the end of my test? So, it brings things back to current dollars, and that's all that means. And that's a very valuable statistic, because it's a lot easier for us to think about current dollars as they impact what we're holding for reserves and assets, than it is to say, "Well, I think we'll be okay if we end up with $400 million in 40 years."

After you've done the analysis, which isn't easy because there are a lot of factors involved, then you want to consider the communication and get to the point where you're making the decisions. What kinds of things are you going to try to impact or affect with the decision that you make? Typically, it's going to be some investment decisions that you make, maybe regarding your current block of assets. You may decide that the current makeup is unacceptable, in which case you'll trade. You might affect the new investments, the parts of investment vehicles that incoming cash goes into, in order to make changes in the investment line. Clearly this allows you to do some testing and some thinking around your discount assumptions. As you model out your liability stream, you'll probably learn a lot about the sensitivity of your streams to other assumptions you're making as well. Then there's product revisions. You may decide that some of the characteristics of your liability stream are due to product revisions or product options you're taking. Say, if you're a company that's actively involved in some settlement activity, you may decide that the level that has to be controlled because of some of the results that you see in the cash-flow testing.

I hope this has given people at least some new thoughts on cash-flow testing that they didn't come in with. I think it's going to continue to be an important tool in the actuarial tool box, and I think it's going to grow in importance to LTD.

MR. W. DUANE KIDWELL: I'm a retired actuary from Paul Revere Life. I spent a lot of my 45 years in the disability income business. I've done a lot of analysis on disability income, and I've done a lot of analysis on LTD. I would like to know from the panel members who have observed what has been happening in the disability income area; that is, over the last 15 years there has been a steady decline, do you have your own opinions as to why that came about? Now I fear, from listening to you, that maybe the same thing is developing in the LTD area. And, indeed, I see that when I see some of the reports that come out on the profit trends. I wonder if you'd give us the benefit of your thoughts as to what LTD is going to do in the 1990s in order to control those claim costs, or in particular, to control the profit trends in order to avoid the same mistakes that we have embarrassingly experienced in the disability income line.

MR. ROBERTS: Well, I think it's already been mentioned that some of the companies are starting to cut back some of their underwriting limitations and rules. I think you've seen, over the last number of years, the benefit provisions have been extended, own-occupation to 65, specialty wording, higher maximums, on and on, and this trend is being driven by competition. I think you'll find, as your profits erode, that companies will start cutting back in benefits, and at some point, the rates will have to be reflected. I was a little surprised that Fred started showing that actually rates have gone down here recently, when the trends of interest and incidence rates have indicated they should have gone the other way. I don't think that can continue.

MR. KIDWELL: Well, perhaps I should make a further comment that would lead you, or at least tickle your memory or your thoughts on that. The biggest problem that we have had in the disability income area is that the marketing people have been doing a splendid job. We developed some fine benefits. We have improved the standard of living in the public with better benefits and larger benefits. The problem we have is that the actuaries were not able to keep tabs on the cost, were not able to accurately predict, or if they did predict the costs, were not able to sell it to the marketing people. We got out of balance between the marketing force and the technical force. Now, there's a question of how you are going to hang on to the proper balance in the LTD area. Because what I am seeing is an encroachment of marketing influence over the technical side. And as sure as we're standing here, if that happens, you're going to run into the same problems as we have in individual disability income, and you're going to have the same long, painful method to come out.

MR. ROBERTS: Well, one difference you have with group, of course, over individual is that you can change the rates fairly quickly on a group contract. But you're right, you have to know what your results are. Sometimes it takes a while for companies to realize that their reserves aren't adequate, or they're actually losing money. But I think most companies now, with the focus on the bottom line, once they start losing money in a product area, will set aside marketing and the pricing will take over. So I think you will see some changes fairly rapidly.

MR. KIDWELL: You do have some recoverability. But it is at that point that marketing influence can do the most damage or the most good. The company can either peddle a cheap product, or it can sell a profitable one.

MR. ROBERT H. PLUMB: I'd like to talk about impact on LTD profits in the U.K. We had a major change in the late 1980s. We had economic growth under Margaret Thatcher. We had low inflation. We had moderate interest rates, and we had low unemployment. But we also had a rate war in the U.K., and we lost our way on benefit terms and conditions. And unlike yourselves, we did not have strong LTD profits. We had strong LTD losses, on a massive scale. We did have a certain amount of two-income families, but we had a lack of cost containment, a lack of claim control. And now, in the 1990s, we've been through a very strong economic recession with low inflation and medium interest rates throughout. We have high unemployment, especially among the white-collar workers in the south of England, which is unheard of. We're returning, really, to the one-income family. And we've seen modifications on types of disabilities. I should add, in the U.K., that we do not have HIV positive and AIDS as a problem for us because they're excluded under our contracts; we're allowed to do that. But because we have introduced disability counseling, and because we have used private investigators to control our problems, we are seeing a return to LTD profits in the group market. At the same time, we have seen a reduction in the number of companies operating in group LTD. I think these are important lessons, that we have a different economic cycle from you on the LTD, but nevertheless, what we have actually seen, to recover our profitability, is that the actuaries have taken control again. I think that's perhaps a lesson for you on how these things should be. We haven't operated with limitations on backs and chronic fatigue, but perhaps, to Wayne, might I suggest that a common way of dealing with this sort of problem in the U.K., rather than having a two-year limit on backs, is to reduce the benefit after two years on backs, shall we say, cut it in half.

MS. EUGENIA LAI: I have a few questions. In 1992, our sales had been basically good, but beginning this year, the sales have been going down for LTD business, and I wonder if that's generally true in other companies that you have seen so far. Our salespeople have been saying that it's due to the health reform, and a lot of people are waiting to see how it comes about, and holding onto their benefits. Is it true?

MR. ROBERTS: At Standard, our sales this year, I believe, are about the same as last year. Now, last year's were up quite a bit over the previous year. But I think they flattened out some, I haven't paid that much attention to sales. Tim, how about you in your area?

MR. KNOTT: Our sales are slightly up this year, primarily because we had some external things going on at the beginning of 1992, still, from the Mutual Benefit thing. I do think that there are more carriers trying to get into LTD, but I think it's been that way for two to four years now. The carriers haven't been waiting till the last minute, as far as the medical reform and so forth. There may be a few stragglers coming in, currently, but we haven't really seen much of an impact on sales in 1993.

MR. ROBERTS: You should get UNUM in here, it's the biggest carrier.

MR. MITCHELL: I think, for 1992 sales, we achieved the growth we wanted, but it certainly wasn't an easy year for sales, and I think it took a lot more focus and concentration than we had probably envisioned at the outset. So it's just been a tougher market, and I think some of the things Fred was discussing earlier about sales and the possibility of us moving toward more of a churning situation in some cases has probably come true. I think that, also, most carriers are going to have to step outside the bounds of some of their traditionally successful marketplaces in order to get the kind of sales that they'd like to have, if they're looking for a significant amount of growth in the lines.

MS. LAI: UNUM is the big player in the voluntary market. Are other companies into voluntary in a big way, right now?

MR. MITCHELL: I can't tell you, off the top of my head, who our competition would be in the voluntary market. We have some voluntary products that have done well, but I wouldn't say they were rocketing to the top of our charts.

MS. LAI: We use own-occupation to age 65 for white-collar groups, but we have seen more that are requesting it for blue-collar groups. Is it a trend? Have you seen that, in general?

MR. BROWN: You know, I guess, I'd want to tie that back with the comments that Wayne made earlier. I would encourage you to look at market trends over the last two to five years. Look at similar situations, whether it's in the U.K. or it's in similar industries, as they mature, and the kinds of issues that they deal with. I see a couple of things that you can be sure you're going to have to deal with. One is the need for, "I want, I want, I want," struggling for differentiation, where the ability to differentiate becomes more narrow, things like own-nonoccupation until age 65. The cost may certainly outweigh the benefit to the buyer, or your ability to charge the rate in the marketplace. The role of the actuary, and his balance relative to the role of the marketer, is going to have to shift as costs increase, as the marketplace matures, as the need to integrate concepts of investment strategy and claim-cost management and the financial measurement of a very sophisticated process all come together. It's going to be a real question of balance, and I think the actuary has an important role in terms of ensuring that balance, dealing with the kinds of questions that you're obviously dealing with right now.