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Investments and Investors—A Disability Perspective

Track: Health/Investment
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Panelists: LEE A. HERDLE†
JEFFREY RYAN SCHUMAN
Recorder: LOIS A. VANDE KOPPLE

Summary: An investment manager will discuss investment strategy for a disability insurer. A rating agency representative and a stock analyst will describe how disability insurers are evaluated for risk profile and other issues.

Mr. Richard S. Mattison: Our topic is individual disability income (IDI), from both an inside and outside perspective in terms of investment strategies for IDI and investors' strategies for investing in IDI companies.

I'll be leading off with an overview of IDI from an asset/liability modeling (ALM) perspective. I head up the ALM activities for the actuarial division at Paul Revere. My two primary customers are our IDI line of business and our annuity line of business. Each of these lines has about \$2 billion in assets. We also have a group line and a smaller life insurance line. I also coordinate our annual cash-flow testing project, and I work with our investment department on the design of investment strategies for the different lines of business as well as for our enterprise as a whole.

Our second speaker is Lee Herdle. Lee is a vice president at Paul Revere and heads up the marketable securities group. Besides overseeing all of our corporate bond activities, Lee also directly manages our successful convertible bond holdings and our fixed-income derivatives.

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†Mr. Herdle, not a member of the sponsoring organizations, is Vice President, Marketable Securities of Paul Revere Insurance Group in Worcester, MA.

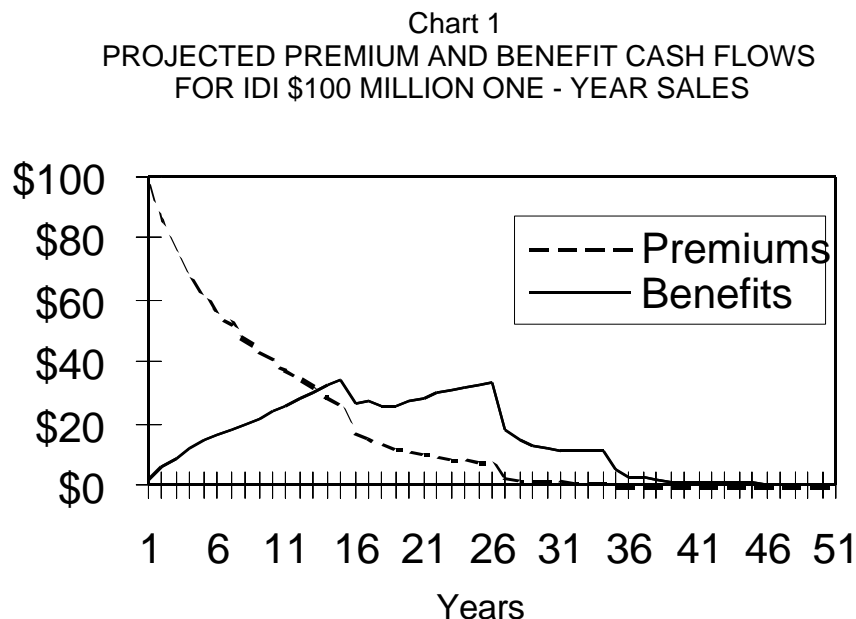
Our third speaker is Jeff Schuman. Jeff is assistant vice president at Conning and Company. He's an actuary by training, but is now working as a sell-side equity analyst, focusing on the life insurance industry.

Jeff will be covering analyst and investor perspectives on IDI, with some of the usual actuarial compare and contrast discussions, including some comments from his crystal ball on the future of IDI and perhaps on the future of the companies that sell IDI. The future holds much change for Paul Revere, given the recent merger announcement with Provident.

Our recorder is Lois Vande Kopple. Lois is a reinsurance actuary at Paul Revere. She is responsible for disability income field compensation management, which also extends to compensation for marketing alliance partners.

In terms of an ALM overview of IDI, one of the surprising aspects of IDI versus other insurance liabilities is that it is an incredibly long duration product, especially for a nonparticipating product where there is no interest rate risk-sharing mechanism from policyholder dividends. Also, it does not have any cash surrender value, so there is no interest rate risk sharing on cash surrender values.

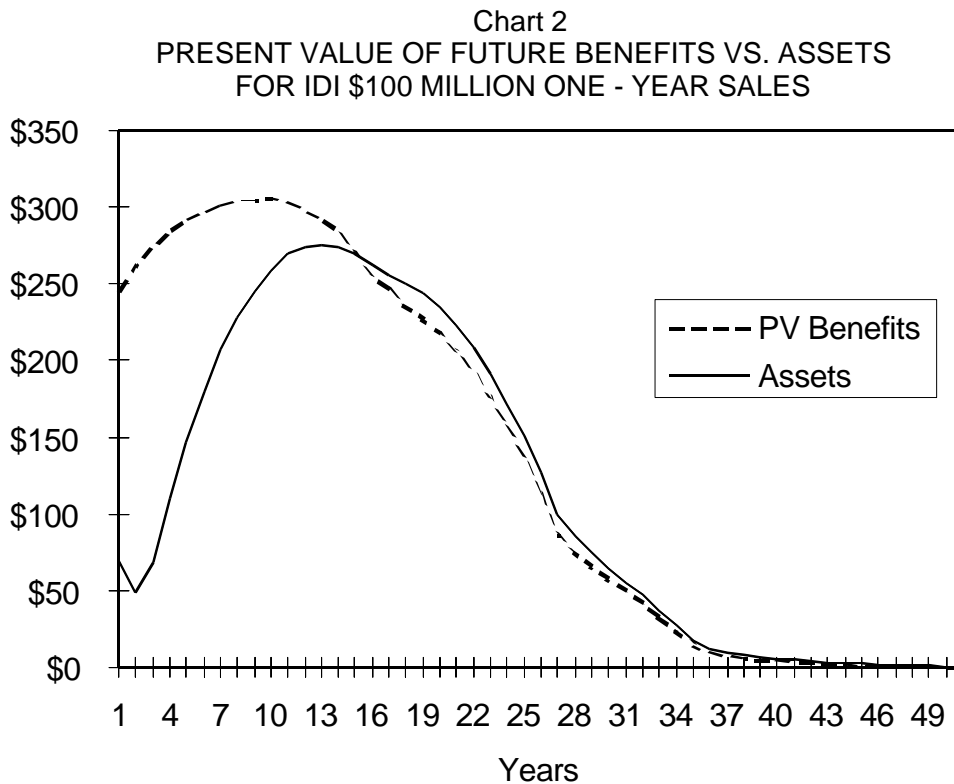
Chart 1 shows projected premium and benefit cash flows for a sample block of \$100 million in sales. The peaks reflect the three issue ages used in this projection.



A key feature to note from this chart is that we will have 10–15 years of net cash flow to invest for this one year's block of sales. That's 10–15 years worth of interest rate risk for this block of sales. There's no dividend, no cash surrender value, and

no interest rate risk-sharing mechanism on this. We're on the hook for that interest rate risk. We need to have asset strategies up front that recognize, plan for, and immunize that risk in some fashion.

Chart 2 gives a slightly different look. The problem is that we're locking in about \$250 million in present value of future benefits on this \$100 million block of sales at issue. However, we only have about \$50–\$70 million of assets on hand, mostly from capital funding of the business in the first year. So we're locking in \$250 million of interest rate risk in terms of present value of future benefits, and we have very little cash on hand or assets on hand to immunize that risk.



In general, this means that we have to leverage up our asset duration to try to protect the dollar duration of the liabilities. Ignoring other cash flows, Chart 2 would indicate about a five times leverage factor for the duration of assets. Reflecting other cash flow items—expenses, commissions, federal income tax—the leverage drops to about 2–2.5 times at issue.

Table 1 shows present values, durations and convexities for premiums, benefits, and hypothetical assets at issue, after five years, and after ten years. Although the

present value of premiums is declining, the duration and convexities of future premiums are fairly stable.

TABLE 1
IDI \$100 MILLION ONE - YEAR SALES

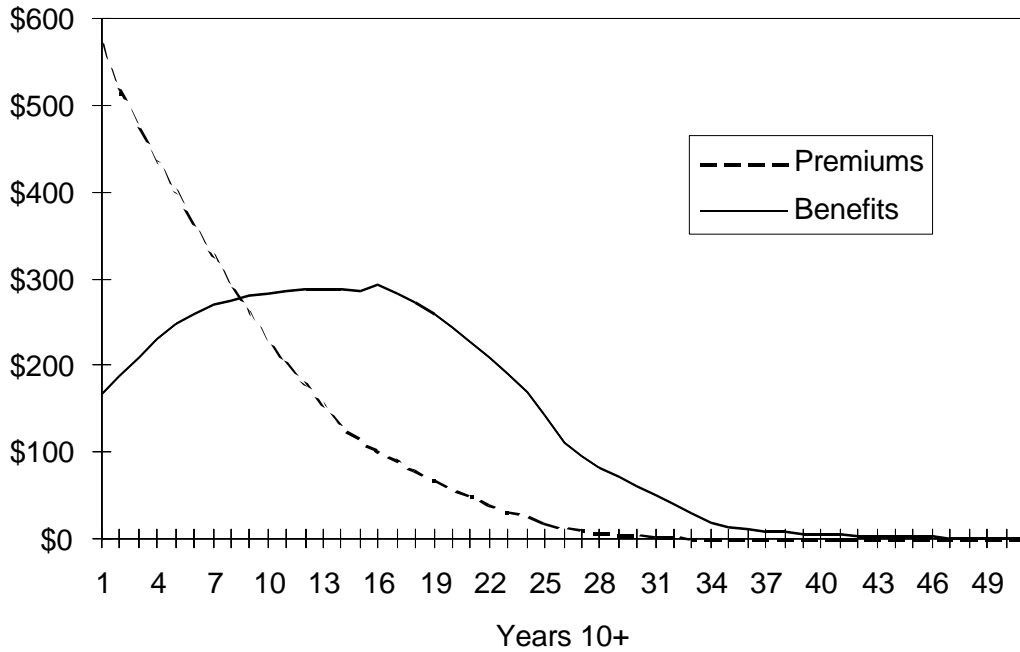
	T=0	T=5	T=10
PV of Premium	\$564	\$340	\$197
Duration	6	5	5
Convexity	0.31	0.26	0.21
PV of Benefits	\$245	\$297	\$304
Duration	13	10	8
Convexity	1.18	0.75	0.51
Assets	\$70	\$180	\$269
Duration	30	15	9
Convexity	3.46	1.23	0.61

There is more change for benefits. The benefits start with a relatively high duration of about 13 and also a relatively high convexity of about 1.2. To balance this out with assets of about \$70 million at issue, we need to leverage up our duration to about 30 and our convexity to about 3.5. That is difficult to achieve with traditional investments. Thirty-year bonds do not provide this sort of duration and convexity. You need to do other things.

After ten years, you have basically completed building your asset portfolio for this one-year block of issues. The assets/liabilities now have very similar dollars, durations and convexities. So the problem is smoothed over time, but it takes a while to get there. You need to make sure that you have the right strategy up front, or you will be exposed to substantial interest rate risks.

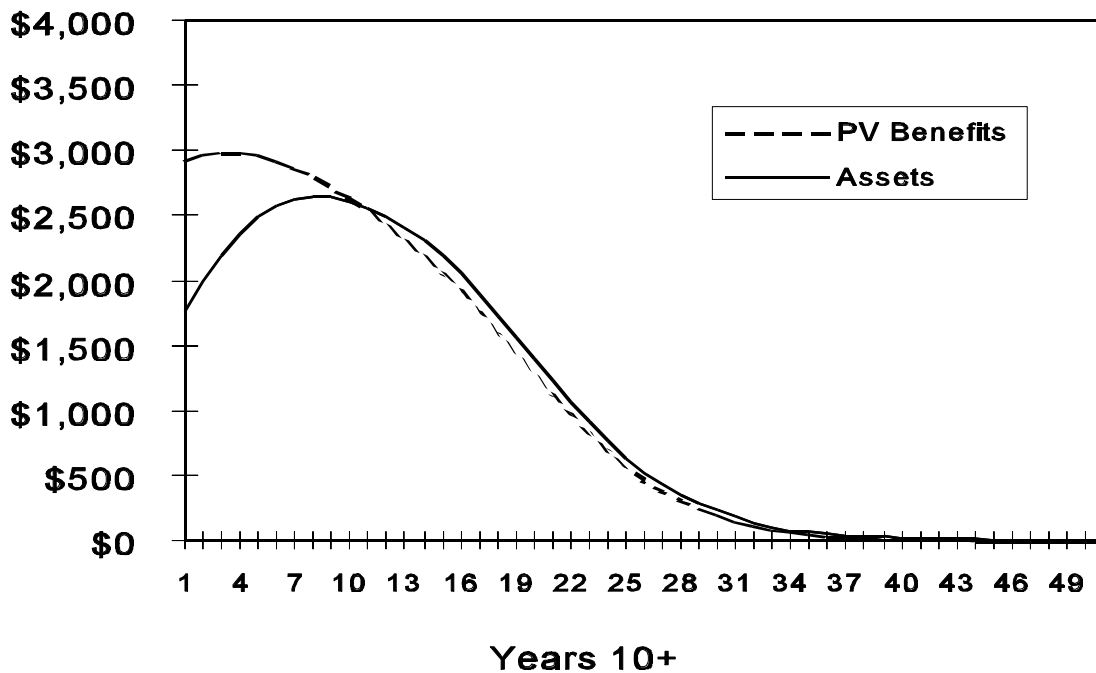
If we now project ten years' worth of level sales at \$100 million per year, Chart 1 would change to look like Chart 3. We still have substantial future cash flow to invest over the next 5–10 years. It hasn't really changed the look of the chart other than the mountain peaks are gone on the benefit side. We still have substantial interest rate risk over the next 5–10 years, unless our strategy has taken that into account up front.

CHART 3
PROJECTED PREMIUM AND BENEFIT CASH FLOWS
FOR IDI \$100 MILLION TEN -YEARS OF LEVEL SALES



In present value terms, we have Chart 4. Again we have substantially less in assets than in the present value of benefits, so we still need durational leverage in our asset holdings to balance out the risk.

CHART 4
PRESENT VALUE OF FUTURE BENEFITS VS. ASSETS
FOR IDI \$100 MILLION TEN-YEARS OF LEVEL SALES



According to the numbers in Table 2, the duration of future premiums is about five, the duration of the present value benefits is about ten, and the duration of assets that are needed to balance out the interest rate risk is still relatively high at about 14.

TABLE 2
IDI \$100 MILLION TEN-YEARS OF LEVEL SALES

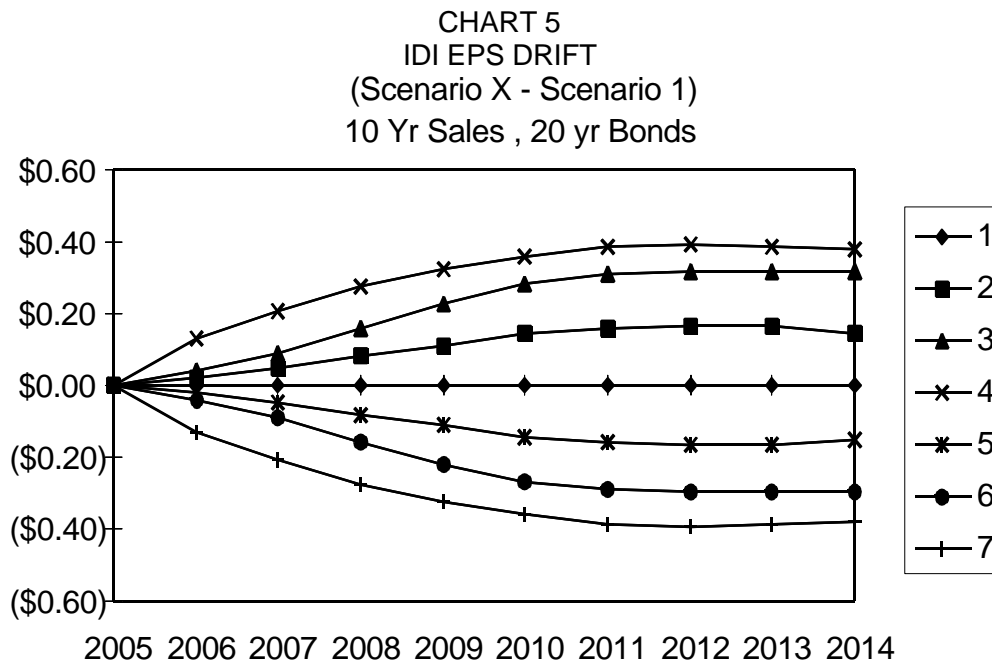
	T=10+0	T=10 +5	T=10+10
PV of Premium	\$3346	\$1910	\$974
Duration	5	5	4
Convexity	0.27	0.22	0.18
PV of Benefits	\$2,926	\$2,922	\$2,533
Duration	10	8	7
Convexity	0.74	0.51	0.35
Assets	\$1,760	\$2,565	\$2,564
Duration	14	9	7
Convexity	1.22	0.62	0.38

So even with a block of ten years' worth of sales, which might be representative for a company's in-force holdings, you still have a targeted asset duration and convexity higher than those of a brand new 30-year bond. Traditional types of assets will not solve your interest rate risk. You need to do something different.

If this isn't enough to convince management that you need long duration assets in IDI, you can show it the effects of a mismatch on your projected earnings per share.

Chart 5 shows earnings per share volatility for the same block of ten years worth of sales. It assumes that the first ten years were stable with no interest rate movement during that time. I then start shocking this block of business with the New York seven interest rate scenarios.

Scenario one's results are baseline. Everything else is measured against that. For Chart 5 I assumed that the company bought 20-year bonds with any available cash flow. EPS volatility here is about plus or minus 40 cents per share. This is quite high if you have projected earnings per share in the \$1.50–2.00 range for a block like this. This volatility may or may not be acceptable to management. You can test its desire for duration match or mismatch with EPS volatility graphs.

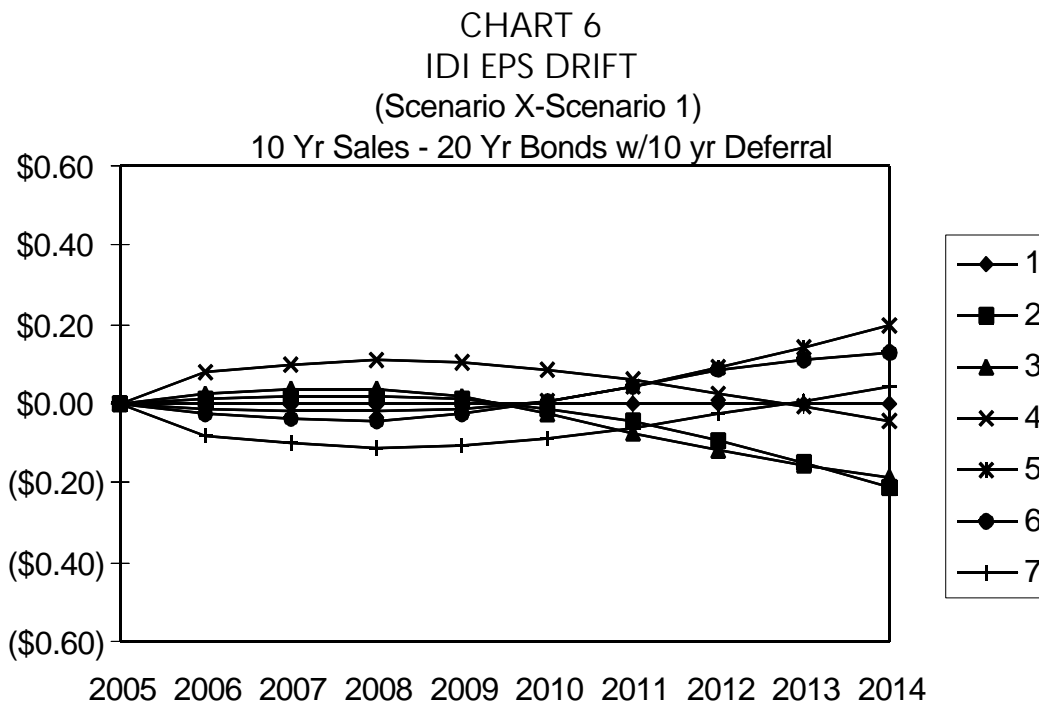


We know from the prior charts that IDI doesn't need the first ten years worth of asset cash flow, so you don't need that portion of the cash flow from the 20-year bonds. What would happen if we strip out the first ten years worth of cash flow? Either we sell it in the marketplace or to another line of business, but take it out of the IDI holdings.

The original 20-year bonds that we bought were about duration ten. When we strip out the first ten years of cash flow, (Chart 6), we are able to provide IDI with an asset of duration 16. We're buying 20-year bonds, we're stripping off the first ten years worth of cash flow, and we're giving that residual to the IDI portfolio.

Modeling it against the same seven interest rate scenarios, EPS volatility is dramatically reduced by increasing the duration and removing the early duration cash flow that you don't need. There is still much EPS volatility, but we've dramatically reduced the EPS shock that management could face due to interest rate risk.

From an ALM perspective this is clearly an indication that the line is a long-duration liability. This also provides an inkling of some of the strategies you might employ to manage the interest rate risk. Lee will now go into more detail on potential disability income (DI) asset strategies.



Mr. Lee A. Herdle: Dick's just done a good job of showing you the characteristics of the IDI line of business. And he's shown, through many charts and graphs and numbers, that there's a large amount of interest rate risk in the line. We describe it in the investment area as a big beast.

My role is to describe some strategies to hedge this interest rate risk, and to give you a little insight into the investment world and the tools we'll use to slay the interest rate risk dragon.

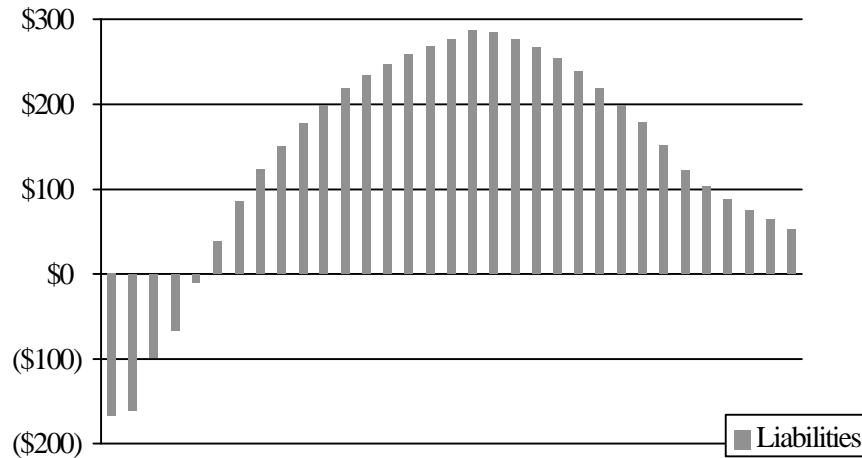
As Dick mentioned earlier, we juggle many balls. ALM is one of the most important. I think Jeff will agree with me that worrying about this quarter's investment income and earnings per share and this year's earnings per share is also very important. That's what we call the operating plan. It's one of our key focuses all the time.

Combining the first year with the rest of the future, which is economic value, is also a main focus. We take a look at GAAP, and statutory and tax accounting. We look at the relationships of the assets backing DI with other product lines. We want a capital efficient portfolio. We want the appropriate level of quality and diversification. Of course, regulators and rating agencies always require significant attention.

Some of the balls we must juggle include asset/liability, other product lines, capital, quality, diversification, regulators, rating agencies, operating plan, economic value,

GAPP, statutory and tax. There are quite a few more. But let's take a look at the asset/liability ball right now in Chart 7.

CHART 7
DI'S LIABILITIES
(NET CASH FLOW)
(000,000'S)



Eff Duration = 14.5
Convexity = 1.2

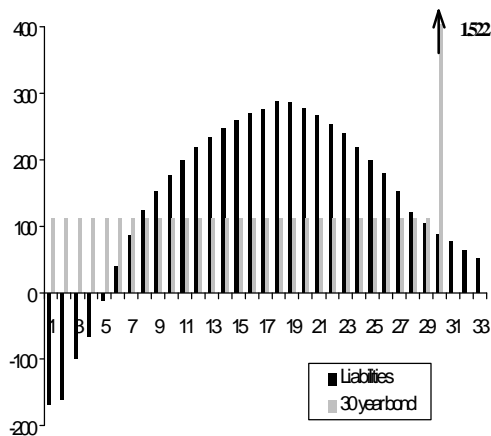
These cash flows for an IDI block are consistent with Dick's numbers. They represent nine years of sales and one year of new sales. For the first five, there are negative liabilities, which mean cash flow is coming in from the line of business. It has an effective duration of about 14.5 and convexity of 1.2. What are the possible ways to hedge this cash flow?

Here are two straight cash strategies in Chart 8. The liabilities are the same as the prior graph. On the left is a 30-year bond. You see a maturity of \$1.5 billion in 30 years. If plotted to scale, that would be up on the ceiling somewhere. There's about \$100 million a year in cash flow from the coupon of the bond. Not only is the duration of the bond about 12, which is 2.5 points lower than the liabilities, but it's really a terrible match. If you try hard, you can find a couple of years where the cash flows match, but other than that, it's horrendous.

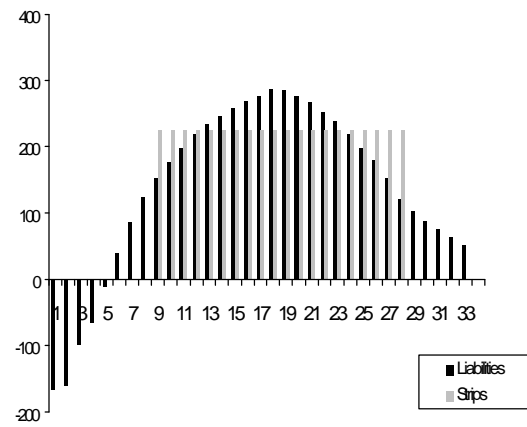
Indeed, in the first year you have \$100 million of asset cash flow that is augmenting the \$200 million from the liabilities. So you have \$300 million of cash coming in, and if that cash gets invested at low interest rates, you're going to have lower investment income and lower earnings per share than you planned. That's not acceptable.

CHART 8

TWO ASSET STRATEGIES
(000,000'S)



30 Yr Bond
Duration = 12
Convexity = 1.2
Yield = 7.5



9-28 Yr Strips
Duration = 15
Convexity = 1.3
Yield = 7.0

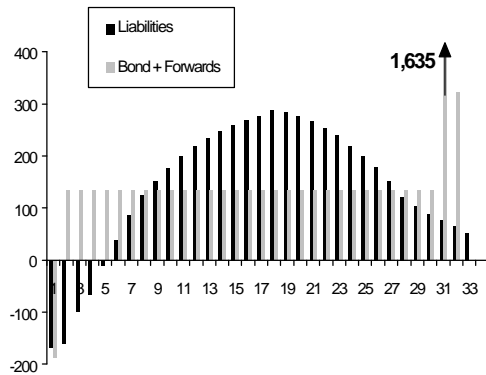
Another way to look at a cash strategy is on the right with zero-coupon bond (strips). This is 20 years of level maturity bonds starting in year nine and extending to year 28. There is a good duration match of 15. However, you're still not hedging those early years of cash flows from the liabilities. At least you're not augmenting the problem as you are in the 30-year bond. We need to reduce the reinvestment risk on the cash. How do we go about doing that?

We need other tools. Here are two examples in Chart 9. One is the same 30-year bond strategy, but now we've entered into a contract to buy \$300 million of additional 30-year bonds in one year at a predetermined price set today. This is just a forward purchase of a bond. The cash from the coupon of the bonds, the \$100 million plus the \$200 million of liabilities, will get invested at a rate that is set today. You've hedged out that first-year liability flow. If you continue to do that in years two, three, four, and five, you've locked in the interest rate at which you're going to invest that cash flow for both the coupons and the liabilities.

It adds enough duration so you can start getting rid of that spike in year 30 and you can shorten up the maturities in order to help match out in the intermediate years 15-25.

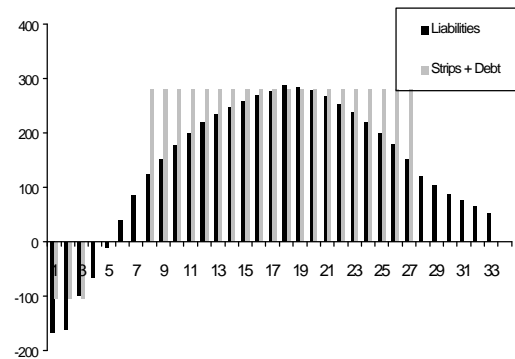
CHART 9
ASSETS PLUS
(000,000's)

30 Yr Bond + Forwards



Duration = 14
Convexity = 1.4

Strips + Debt



8-27 Yr Strips
Duration = 15
Convexity = 1.2

On the right we've used a different strategy using debt. We borrowed \$100 million a year for the first three years and purchased more strips. When you combine debt and additional strips, you've lengthened the duration of the portfolio, so we've had to shorten the terms of the strip. Instead of 9–28 years on the prior chart, we went to 8–27. That maintains the duration. You get a much better hedge of the cash flows in the early years, and you can start locking in the interest rates for the liability cash flows.

Both strategies in a normal upward sloping yield curve will enhance yield. Forwards will have a higher rate than today's 30-year bond. And debt, because it's short with a lower coupon, has a lower interest cost than the strip you're buying.

Here are some potential asset classes to consider in Table 3. We've already talked about investment grade bonds and strips. Investment grade bonds are a poor match for the IDI line. Strips have more flexibility and strong quality, but their yield is low and they still don't hedge that early-year cash flow from the liabilities. Commercial real estate has an excellent yield, but it has low duration and is illiquid. It's not a good match.

Convertible bonds and common stocks are equity-oriented strategies. They have the highest yield expectations of any of the asset classes, but their duration is questionable. I've seen duration estimates on common stocks from 5 to 30, and it changes with different environments. It really is a tough question. I will not even attempt to talk about convexity for these.

TABLE 3
ASSET CHARACTERISTICS

	Duration	Convexity	Advantages	Disadvantages
Investment-Grade Bonds (30 years)	12	1	Liquid	Poor Match
Strips	0-30	0-3.0	Quality, Good Match	Low Yield
Commercial Real Estate	7	0.3	High Yield	Illiquid, Tough to Match
Convertible Bonds	5-10?	?	Highest Return	Tough to Match
Common Stocks	10?	?	Good Match, Flexibility	Tough to Match, Capital Intensive
Forwards	12	1.0	Good Match, Flexibility	Management Intensive
Swaps	9	0.7	Good Match, Flexibility	Management Intensive
Debt	-2	0	Best Match	Credit Impacts

Another aspect of the equity-oriented strategies is that a significant amount of their estimated return comes in the form of capital gains. A dollar of capital gains does not get the same price-to-earnings multiple as a dollar of investment income, because it's less predictable and more volatile.

We have already illustrated the interest rate forwards. This was a forward to buy a 30-year bond. Forwards are very flexible. They help you lock in the interest rates for the cash flow coming in from the liabilities in the early years. Derivatives, however, tend to be management intensive. Because they are highly leveraged, regulators, rating agencies, and management tend to focus on them more. You're always documenting them; you're always justifying that they continue to do the hedging job that they're supposed to be doing.

Interest rate swaps are used the same way as forwards. This is a 20-year swap that has a duration of nine years. They're very flexible. An interest rate swap is just a contract to receive a fixed coupon and pay a variable coupon on a notional or reference dollar amount. If interest rates fall, you will pay a lower rate on the swap yet still receive the originally set fixed rate. The swap benefits, but the liability cash flow gets invested at a lower rate. It tends to hedge things out.

The debt shown is three years with a minus two duration. Debt is very flexible. It's a good way to hedge out IDI cash flows. Unfortunately, there are usually credit restrictions on how much you can use.

So how do we put all this together? At Paul Revere about 60% of the portfolio is in investment-grade bonds. Another 20% is in strips. About 10–15% is in equity-oriented investments, which includes convertible bonds, equity-linked notes, private placements with equity kickers, and real estate with equity kickers. We have about 5% in commercial mortgages. In addition we have debt. Most of this debt is between product lines. IDI borrows from the shorter lines of annuities and group and pays the shorter lines back when the cash flow comes in from the liabilities. From an outside viewpoint, you don't see the debt, but it's there and it helps IDI lock in the interest rates they need to ensure the profitability of the business.

We're going more and more towards derivatives. They both enhance our match and reduce our risk as well as enhance our return. We will reduce the strip portfolio as we build derivatives which will also increase yields.

Once you get your assets and liabilities perfectly matched, there are other things to consider. What do you do with the surplus? Now that you've insulated the interest rate risk, do you want to invest for high yield, or do you want to invest for stability and flexibility?

What is your liquidity strategy? Illiquidity demands a premium; you get a higher yield for illiquid assets. What is the optimal balance between flexibility and return? Third, and most important, what are the noninterest rate risks? All of this analysis assumed that morbidity is a constant. Dick would say morbidity is a constant or constantly getting worse. At any rate, it's assumed to be a constant, yet morbidity has a huge impact on the timing of these liability cash flows and, therefore, on the asset/liability analysis.

Another example: inflation helps morbidity, but it hurts the asset portfolio. So you might want to be a little longer on the asset side, because if inflation increases and hurts the asset side, it helps the liability side.

In summary, what we're trying to do is balance our return and our risk in all economic environments. We want the maximum return possible for an appropriate level of risk for whatever the roller coaster of interest rates brings to us over time.

Mr. Jeffrey Ryan Schuman: We should probably apologize a bit for throwing you a curve. My presentation does not tie very closely to the preceding ones, but hopefully all of these subjects are of common interest to many of you.

I thought it might be helpful to explain what a sell-side equity analyst does. Those of you who are full-time investment or corporate finance professionals are probably very familiar with sell-side equity analysts, but some of you may not be. Basically, sell-side equity analysts work for brokerage firms. They generally focus on a particular industry and provide investors information and analysis on that industry and on the publicly held stocks that can be bought and sold in that industry.

One important point is that when we execute this function, we're compensated by the investors rather than by the companies that we follow. We try to work closely with the companies so that we're knowledgeable, but we are working for the investors.

My remarks will cover three general areas. I'll lead off by talking about some investment considerations for the life and health sector as a whole, because that does provide the context that people use to look at disability stocks. Then I will talk more specifically about considerations for the disability business, and wrap up with some brief comments about the future outlook.

I'd like to begin my discussion about investment considerations for the life and health insurance sector by looking at the size of the public equity market for life and health insurance stocks. There are approximately 40 publicly held life and health insurance companies, with a total market capitalization of about \$80 billion, which comprises about 1% of the stock market. By way of comparison, the property/casualty sector is somewhat bigger, with approximately 60 companies and market capitalization of about \$140 billion, or roughly 2% of the stock market.

These statistics result in a couple of implications. First, the small size of the sector means that many investors, including some institutional investors, can devote only limited time to the sector and can afford only to develop a certain level of expertise. That makes them more cautious in some cases. The second implication is that some investors try to approach the life business by relating it to the property/casualty business. This happens because investors are often more familiar with the property/casualty side, because that sector is larger and includes some of the very largest publicly held insurance companies.

When investors think about the life insurance business, there are some concerns about growth. It's perceived as a mature, slow growth industry, and indeed, there are some valid reasons for that perception. For the industry as a whole, premium

growth has been in the mid-single-digit range for several years, which trails that of some other industries. If you look at some specific lines of business, individual life insurance sales for the industry, as a whole, have been slow for a number of years. And on the health side, we've seen HMOs take a significant market share from indemnity insurers.

Investors are well aware that this is a highly regulated business. We have regulations that affect solvency, policy forms, rates, market conduct, etc. Investors can live with that, but they tend to discount regulated industries relative to other industries, just because of concern about the flexibility that companies will have to do what they need to do to maximize earnings and value.

One issue that provides some frustration for many investors is the complexity of insurance accounting. Right off the bat, they're forced to deal with two systems of accounting. They're used to dealing with GAAP, and statutory accounting is very unfamiliar to many investors.

And even on the GAAP side, insurance GAAP can be very confusing. Things like deferred acquisition cost (DAC) and value of business acquired assets are new and different to investors. Recently, the impact of *Financial Accounting Standard (FAS) 115* has provided a good deal of confusion to many investors.

Capital issues are very important to investors. The figures in Table 4 come from something called the Conning Life Industry Model. This is a statutory model encompassing the entire industry, including both stocks and mutuals. We do several things in this model including generating balance sheets by line of business and measuring capital flows at the line of business and industry levels. We calculate target surplus ratios with a formula similar to the NAIC risk-based capital formula, but we use only public data.

TABLE 4
CAPITALIZATION OF LIFE INDUSTRY
(AMOUNTS IN \$ MILLION)

	1990	1991	1992	1993	1994
Adjusted Capital	\$84,699	\$98,306	\$107,143	\$118,447	\$124,111
Target Surplus	\$24,513	\$26,030	\$26,619	\$26,195	\$26,160
Actual/Target	345%	378%	403%	452%	474%
Capital Outflow	\$2,734	(\$503)	\$18	(\$87)	\$881

The industry-level results summarized in Table 4 are interesting for several reasons. Note first that the dollar amount of target surplus has been very flat since 1991.

Target surplus growth has been held in check by the modest level of business growth and by significant improvements in asset quality.

The last line indicates what we call capital outflow. This basically measures the amount of capital extracted from the industry (primarily through shareholder dividends), net of capital that has been contributed to the industry. We have positive numbers in three of the five years, and a total of about \$3 billion of capital has flowed out of the industry in recent years. Despite the outflow of capital, statutory earnings have been sufficient to create a dramatic improvement in the target surplus ratio. The ratio of actual surplus to target surplus has gone from 345% to 474%; that's about a 40% improvement.

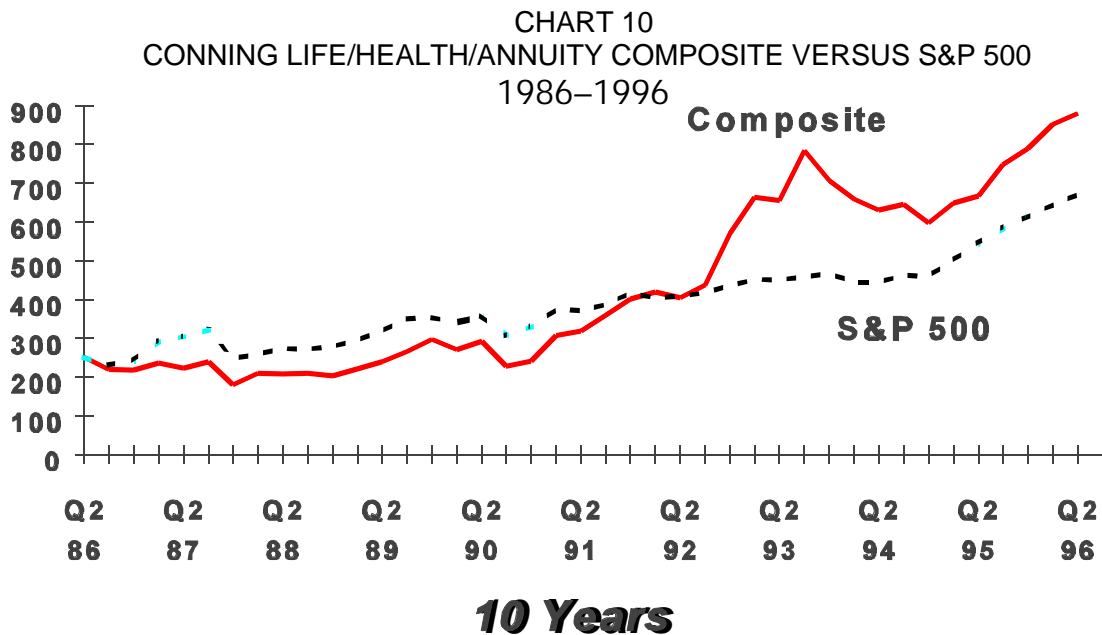
What are the macro implications for investors? We don't attempt to put an absolute interpretation on that target surplus number, but certainly the trend would suggest that capitalization has improved considerably in the industry. There may be plenty of capacity, which could intensify competition.

Capital issues cause concern at the micro level—it's kind of a lose/lose situation. When investors look at specific companies that have found attractive growth niches, those companies are often constrained in their growth because of capital limitations.

The industry suffers from not being perceived as extremely innovative. There haven't been any product revolutions that have really captivated the interest of consumers or investors since the advent of universal life and interest-sensitive life products. That's not necessarily an indictment of the industry. It's just a fact of life that this is not an industry that's going to generate a dramatic product innovation every other day like the high-tech sector.

It's difficult in this industry to maintain significant competitive advantages. We still have thousands of insurance companies. Within the industry there are few barriers of entry to new products or product lines. It's not possible to patent or copyright products in this industry, so products can be easily duplicated, making it difficult to sustain competitive advantages.

How has this sector performed in recent years? How has it treated investors? Chart 10 is a ten-year chart that compares the life insurance composite that we've developed with the Standard & Poor's 500 (S&P 500). The composite has been normalized to the initial value of the S&P 500. From approximately 1986 to 1989, the sector underperformed. For the last six years, however, the sector has performed fairly well in both absolute and relative terms, with the exception of 1994.



Let's change the focus to the last two years. In Chart 11, you can see that the industry underperformed in 1994, but since that time has had strong absolute performance and has tracked roughly with the S&P 500.

One subject that's of great interest to investors is the relationship between performance and interest rate movements (see Chart 12). There is a widely held belief that stocks in this industry will perform inversely with the direction of interest rates. (The sector will perform better when rates are falling and worse when they are rising.) If you're looking at the first half of this ten-year period, it's probably difficult to reach that conclusion, but if you look at the second half, you'll see there's clearly an inverse relationship between the direction of interest rates and the relative performance.

The "Relative P/E" performance line in this chart compares the price/earnings multiple for the life/health industry to that of the S&P 500. This industry always trades at a discount to the S&P 500, but that discount expands and contracts over time and it tends to contract the most when interest rates are falling.

Many of the investment considerations that I've mentioned have negative implications. It is fair to say that many investors don't view this as their favorite sector. Nonetheless, there is a lot of money invested in this industry, and as you've seen, there has been some good performance in recent years. Investors are looking for certain things going forward that they find attractive.

CHART 11
 CONNING LIFE/HEALTH/ANNUITY COMPOSITE VERSUS S&P 500
 1994-1996

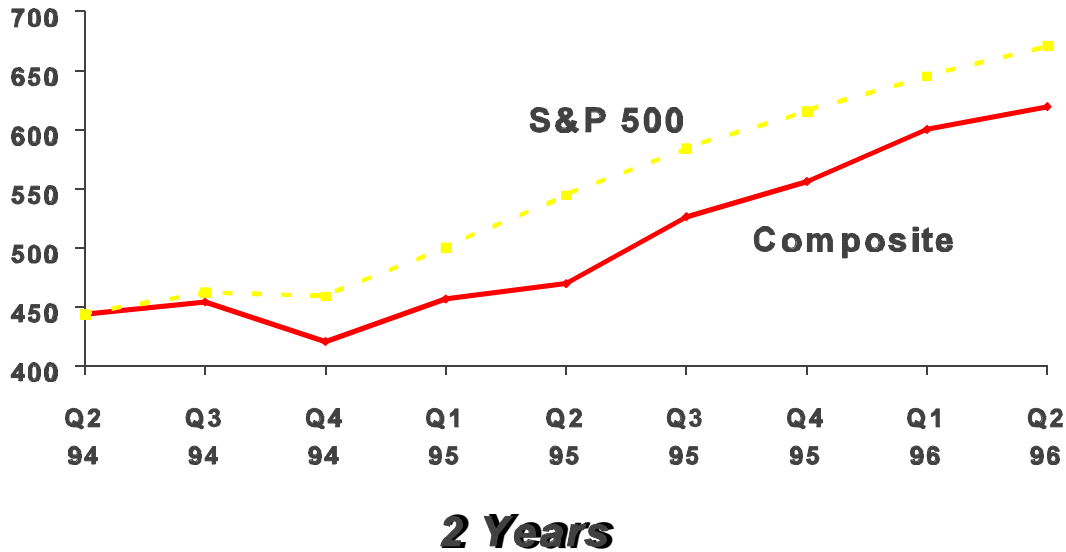
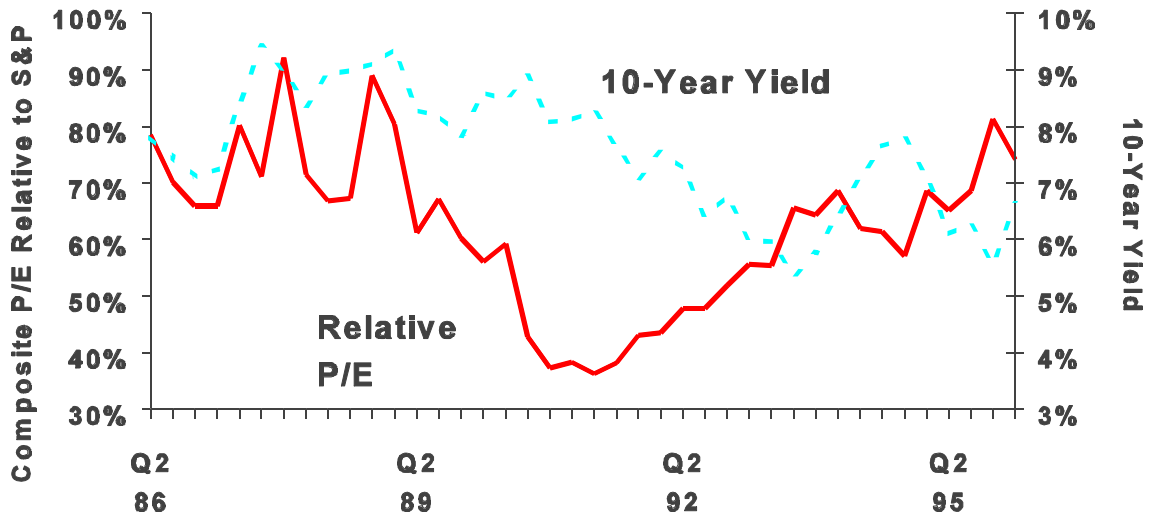


CHART 12
 COMPOSITE RELATIVE P/E VERSUS TEN-YEAR TREASURY YIELD



First of all, they are looking for growth. While industry growth in aggregate may not be that attractive, historical records show that the stock companies, and particularly the public stock companies, have outperformed the industry in terms of growth. That's due to several reasons, not the least of which is that many of the public stock companies are concentrated in higher growth areas, such as retirement savings and annuities or niche specialty health products, such as cancer insurance or long-term-care insurance.

Also, investors are looking for consolidation opportunities. Some of the stocks in the sector that have done well in recent years have been aggressive consolidators. Many investors have done very well in the banking industry, where they've benefited from consolidation activity, and they are looking to capitalize on similar trends in insurance.

Some investors specialize in rebuilding and restructuring opportunities. If you look back at our industry, there are some companies that were down and out in the early 1990s and were written off. Some stocks were heavily discounted, but a number of those stocks have come back and done very well. Some investors would like to repeat that.

Let's move on and talk about some of the same considerations, more specifically with regard to the disability business.

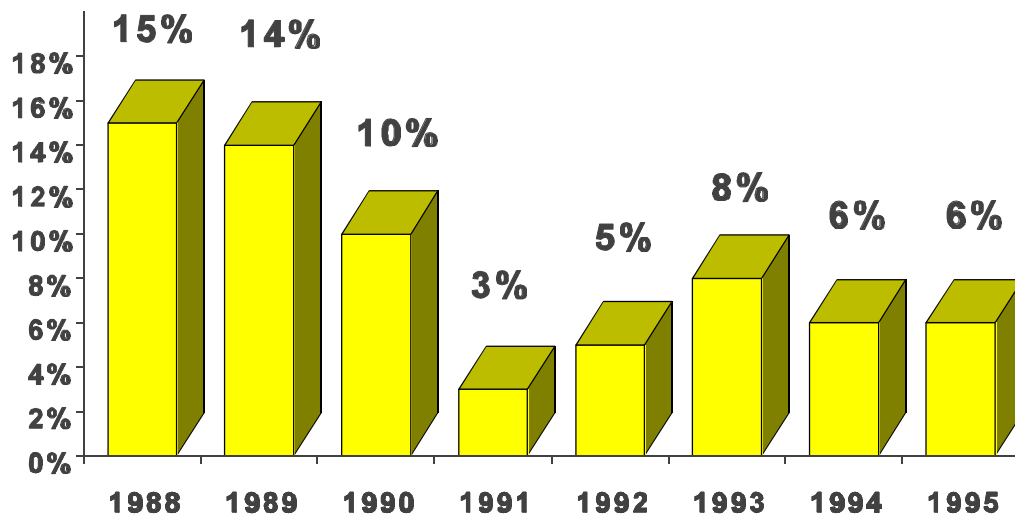
The size of the public market is fairly small. There are just three public companies that could be characterized as disability companies at this point. In fact, one of them really has much more of a group orientation, so there are two public individual disability companies. In the near future that number may be halved (because of a pending merger). The three companies comprise about 10% of the life/health sector, or 0.1% of the stock market.

The growth issue is a bit different for IDI. In the minds of the investors, this sector is characterized by much higher growth potential. Perhaps that potential has not been realized in recent years. Chart 13 shows the growth of noncancellable IDI premiums for the last few years. You can see that we've been in single digits for several years, and probably a couple points a year in recent years has been due to price increases on new business. Unit increases have been fairly modest in recent years.

It has been very difficult for the industry to grow rapidly at the same time it was tightening up and pulling back from some of its core markets. For example, a number of actions have been taken in core markets, such as for doctors and lawyers and in California and Florida. It has been difficult to contract and expand at the same time.

Regulatory constraints apply to IDI, usually in the form of rate requirements. There has been a lot of debate in the industry of noncancellable versus guaranteed renewable. Maybe having only those two choices is too limiting, and the industry and regulators should develop new alternatives, but today we have to live with that constraint.

CHART 13
INDUSTRY GROWTH—NONCANCELLABLE DI EARNED PREMIUMS



Accounting issues are important. The key issues are reserve adequacy and DAC recoverability. Investors have seen many companies take special reserve increases and DAC charge-offs. They raise legitimate questions about the credibility of the balance sheets they see today. From a public investing perspective (with limited data), it's very, very difficult to get a handle on those items.

With regard to capital issues, let's look at some data from the Conning Life Model (Table 5). The profile here is different from the industry aggregate. Let's look first at the growth and target surplus. Unlike the industry as a whole where target surplus requirements have not been increasing, they have been increasing for IDI for a couple of reasons. One reason has been growth. Also, the formula has a reserve factor, so as reserves have increased, the target surplus requirement has increased.

TABLE 5
CAPITALIZATION OF DI INDUSTRY (AMOUNTS IN \$ MILLION)

	1990	1991	1992	1993	1994
Adjusted Capital	\$1,133	\$1,296	\$1,527	\$1,840	\$1,955
Target Surplus	\$302	\$339	\$381	\$427	\$485
Actual/Target	375%	382%	401%	431%	403%
Capital Outflow (Inflow)	(\$191)	(\$268)	(\$455)	(\$477)	(\$557)

The flow of capital has been very, very different than the industry aggregate. You see negative capital outflows (i.e., positive inflows) of about \$2 billion in recent years. Bear in mind that DI is a small portion of the industry, yet we're looking at

an inflow of \$2 billion. And even with that inflow, we see that the target surplus ratio has improved less dramatically than for the industry as a whole. Not surprisingly, that's due to simply the disappointing level of statutory disability earnings.

Going forward, some companies will face a challenge—they need more capital in order to improve their diminished claims-paying ratings and support growth, but it may be more difficult to source that capital than in the past. Much of the \$2 billion of capital that's come into the IDI sector has been sourced internally from other lines of business.

Many of the IDI companies were major group health writers and major group pension writers, or had large blocks of individual life insurance. All of those lines of business had strong statutory earnings for much of this period.

The group health sector generally had good margins and slow growth. That created a great deal of capital. Some of these companies have withdrawn from group pensions, so that freed up a lot of required capital. On the individual life side, they generally had profitable but slow-growing books of business with good statutory earnings. It's not clear that the IDI sector could rely on all of those internal sources in the future.

Regarding lack of innovation, investors have had some frustration with the IDI sector. There's a belief that the industry was focused too long on a certain few occupational categories and limited segments of the upper-income market. Investors have seen a herd mentality, with a lot of duplication in what companies have done.

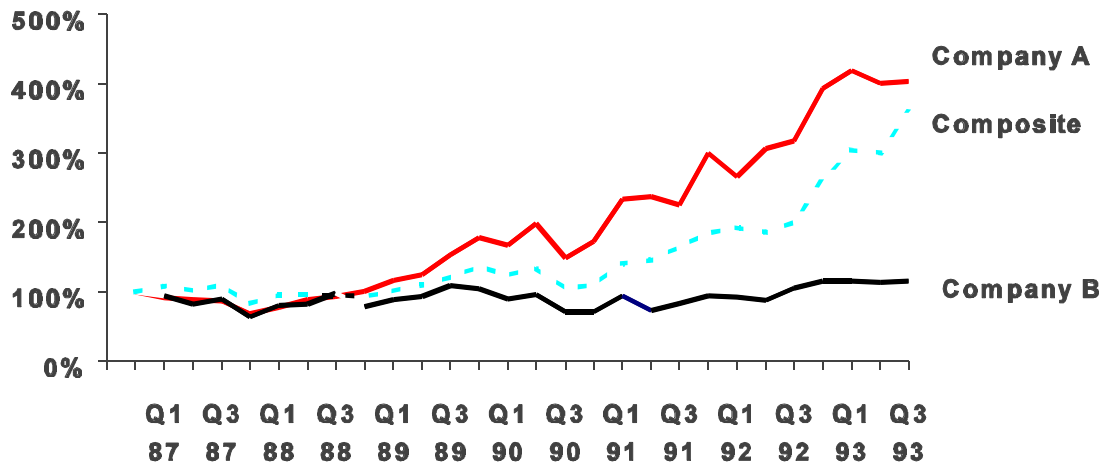
There is more optimism in the area of competitive advantages. The IDI business has been under consolidation for quite some time. We made a laundry list the other day of companies that have withdrawn or pulled back their activities, and we were in the 15–20 company range. In fact, if you look at market share at this point, the top five companies have roughly two-thirds of the market. That's a much higher degree of concentration than you see in the rest of the life insurance industry.

The IDI business is much less vulnerable to outside competition than some other segments of the life industry. Banks and other institutions can offer products to compete with annuities, but disability insurance is a pure insurance product that cannot be underwritten by noninsurers.

Let's take a look at stock performance. Chart 14 looks at the period of fourth quarter 1986 through third quarter 1993. We selected this period because this was

a period where we had exactly two public disability companies. As you can see from the chart, the performance of the two stocks diverged widely during the period.

CHART 14
STOCK PERFORMANCE (1986–1993)
CONNING COMPOSITE VERSUS TWO DISABILITY COMPANIES



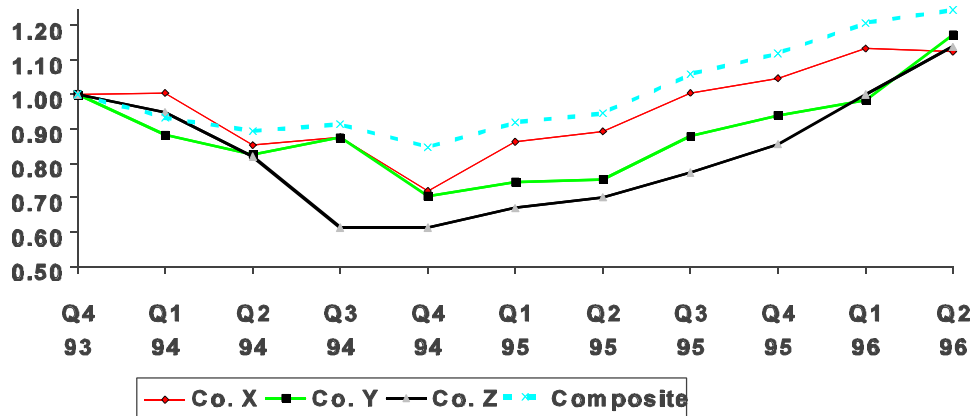
Starting with the fourth quarter 1993 we now have the three disability companies (Chart 15). During this period, all three underperformed the life/health industry as a whole.

Despite some of the difficulties in the IDI sector, investors do see some opportunities here. With respect to growth, they're very encouraged by the low level of penetration of the overall population and the potential for market expansion.

Once again, there is the favorable factor of no outside competition. Also, disability insurance products benefit from much more positive consumer perceptions. It's easy to find consumer advocates talking about the need for people to buy these products, pointing out that younger people are several times more likely to become disabled than die.

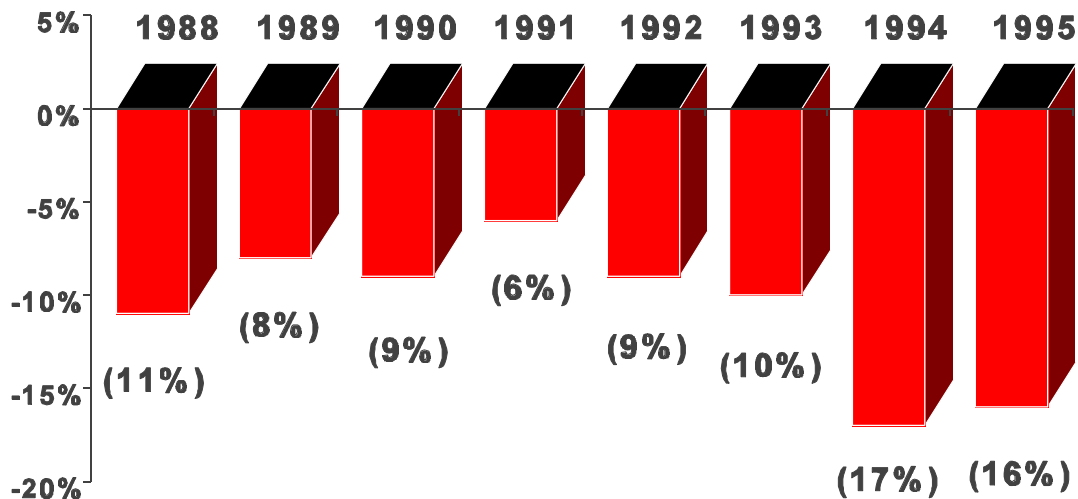
In addition, investors are aware of the consolidation opportunities, which they view as attractive for a couple of reasons. First of all, there's the possibility of expense savings. And second, there is the possibility of a less brutal competition.

CHART 15
STOCK PERFORMANCE
CONNING COMPOSITE VERSUS THREE DISABILITY COMPANIES
1993–1996



Profitability is an issue. Many factors contributed to the poor results that we have seen. Chart 16 presents statutory pretax margins. We have done an allocation of investment income to the IDI line.

CHART 16
STATUTORY PRETAX MARGINS, NONCANCELLABLE DI



Many of us were premature in calling the bottom. We published a study in 1993 that included some projections, and we were considered by many to be too pessimistic. But as I look back on that study, I now realize that we were optimistic about results in 1994–95. But let’s hope that things have finally bottomed out.

Looking at the outlook for the IDI business, I think analysts and investors are torn on their views of this business. They see greater upside potential than for much of the life and health business, but they also see greater downside risks based on some of the problems that we’ve experienced to date.

I'd like to focus on three issues: consolidation, growth, and profitability. Once again, the consolidation factor is very positive, for the reasons I've mentioned: the possibility of expense savings and less brutal competition. We think that there will continue to be further consolidations. Obviously, there are fewer companies left to consolidate, but we continue to think that those companies that have not really focused and specialized in the IDI business will tend to pull back and leave this market to some big specialist companies.

Regarding the potential for attractive growth, I believe there are some major changes that have to happen for that potential to be realized. None of these ideas is new. The companies have generally identified these needs and indicated that they're aware of them, but we have yet to see some of these needs firmly addressed.

I think the most important thing is broadening and redefining the target market. The industry can no longer afford to focus on a handful of occupations. The industry needs to get broader and expand into lower incomes, at least into the middle market. Unfortunately there are some challenges there, because the old products that work in certain segments may not work for the new markets. So we'll need to see some new products for these new markets. And we may need to see new distribution methods to access these markets.

One bright area is worksite marketing. This has the potential to be a very effective way to reach more middle income customers.

Overall, I would segregate the near-term IDI outlook from the long-term outlook. I think near-term improvement is very likely, given the new business rate increases and improvements in underwriting and claim management that we've seen. Hopefully, results have bottomed in 1994, and we'll continue to see improvement going forward. Investors need to understand that improvement will be a gradual process. Given the high persistency on the old business, and the capital constraints affecting the writing of new business, the dilution of the old business with more profitable new business will be gradual.

I think the long-term outlook is less certain. On the tactical side, it's important to maintain the various improvements that have been made in recent years, with regard to underwriting, pricing, claim management, etc.

On the strategic side, I think expanding the market is important for the sake of profitability, as well as for growth. To the extent that the industry can diversify and companies can focus on different market segments, there may be less brutal competition within those market segments and reduced pressure on pricing and margins.

Once again there is the controversial issue of contract form. My view is that this industry would be better off if it had some flexibility to reprice business. Guaranteed renewable might not be the right vehicle, but I'd like to see some flexibility to reprice business.

It would be helpful to improve capital efficiency, and that's where I'm optimistic. That may go hand-in-hand with developing new distribution systems and targeting new markets. When products are sold in the work place, you may have the opportunity to pay somewhat lower and more leveled commissions.

On the whole, I think investors want to be optimistic about this business. They see some good growth potential, but there are lingering concerns about profitability, and there is the belief that some major issues still need to be addressed.

Mr. Mattison: Regarding price/earnings (P/E) ratios, what's the perspective on the P/E for the IDI market, the P/E for life insurance companies, and the P/E for disability insurance companies?

Mr. Schuman: I focus very specifically on the insurance industry. I don't hold myself out as a macro market analyst or a macro economist. We have noted the contraction of the industry's discount relative to the S&P 500, but I'm fairly optimistic that the current relative valuation can be maintained or even improved for some fundamental reasons. Back in the 1980s when the life sector really suffered, products looked somewhat different than they do today, particularly in terms of interest-sensitive-type products. The industry has made a big transformation from selling front-loaded products to back-loaded products.

Due to changes in product design, better ALM, and improved asset quality, the industry is really much stronger and better positioned than it was in the past. So we're fairly optimistic about sector valuation.

Mr. Herdle: I'll comment from a buy-side perspective. These stocks have been hammered. They've gone through some very hard times. Pricing is improving. There's consolidation going on. Expenses are being cut. I think there's a good potential for a strong improvement in P/Es, especially if the industry starts getting on a profitable, growth-oriented track. There is a lot of potential for profitable growth in the industry. I'm convinced you'll see that.

Mr. Daniel D. Skwire: Sell-side analysts, in recent years, have seemed to really put the focus in their analysis on pretax operating income. I wonder if you could talk about that a little bit. It has some consequences on companies developing investment strategy, as Dick was talking about. Tax exemption benefits aren't

particularly attractive during lower rate recaps. It means the investments are like common stocks. They are not attractive and not showing up in pretax earnings.

Mr. Schuman: We do look at after-tax income, as most analysts do, so I don't think there's really an issue on the tax side. With regard to the treatment of capital gains, it is a long-standing practice in our industry to focus more on operating income. It's very difficult to forecast capital gains and losses. They tend to be very volatile, and we're really trying to strip down to understanding what the core earnings power is that's sustainable going forward. So operating income is going to continue to be our focus.

Mr. Jeffrey D. Neufeld: Is there anything being done that addresses benefits that are indexed to inflation?

Mr. Herdle: The short answer to that is "no." We are looking at risk from an overall corporate viewpoint, and that includes the inflation risk. We're just beginning to focus on that now, so we haven't done much to adjust it. But that's where we headed in the analysis. Inflation affects everything in the insurance company, so you can't just look at it from an investment point of view or from a liability point of view. You really have to have the modeling capability to look at the corporation as a whole. It's a focus for the future.

Mr. Mattison: Let me follow up on that. Inflation can be a wonderful environment for IDI. You have the opportunity to invest cash flow at higher interest rates, and you have perhaps less morbidity pressure as real incomes for claimants go down. So it's not necessarily a bad thing for the IDI industry.

I have one other follow-up question. We talked about the issue of capital and the way the market is going to evolve with the insurance industry. Do either of our other speakers have comments on when banks might control the insurance industry? Will banks come in and take IDI over and run it in a more efficient fashion (using a more efficient distribution channel with ability to fund the capital needs of the business better) than we can necessarily through our current statutory net income?

Mr. Herdle: I don't think anyone knows the answer to that. Banks are clearly interested in the insurance industry. Bank strengths are in the middle-market and lower-income classes. The traditional IDI market is not in that market, at least on the individual side.

Frankly, I agree with Jeff that we need to get into that marketplace. That will occur over time, so there's going to be a merging of markets, a gray area, and we'll be

competing with banks more and more. We'll probably be using banks as a distribution force more and more, so I view it as a risk and an opportunity. We'll see how it all comes out.

Mr. Schuman: I agree with all that. On the regulatory front, I don't know that banks are actually going to be given insurance underwriting powers. I don't know whether they're aggressively seeking that. Certainly, they like to sell things like annuities, and some of them might actually like to underwrite annuity-type products, but I think there are at least as many opportunities to work with banks as there are to compete with banks. As Lee mentioned, if you think about how the life insurance industry has evolved, you'll realize it has moved very much up scale and has gotten very good at oversaturating the high-income markets. It is probably underserving the middle markets where banks are strong.

Certainly some of the companies we follow are doing very well by using banks as a distribution channel. I think we'll see more and more of that. Many banks are anxious to get fee income by selling insurance company products through their distribution channels. We're even seeing a new trend now where some of the annuity companies will pay banks commissions on the front end to sell annuities, and then pay the banks ongoing subadvisory fees to manage the assets they generate. This arrangement can be very pleasing to both parties.

Mr. Timothy W. Knott: What are your thoughts on group versus individual?

Mr. Schuman: Generally, investors are more optimistic about the group business. They see good growth potential. They like the fact that business has more repricing flexibility. They generally have a positive outlook on the business and valuations on the group side have generally been better than on the individual side.

Mr. Mattison: Perhaps one last question. This should be directed not to the speakers up here, but to the folks planning meeting sessions. When is the first session scheduled for bank marketing of IDI?

Mr. Thomas R. Corcoran: There will be a session in October of this year in Orlando on alternative distribution methods. Banks, as a distribution method, will probably be included. IDI is more complex than other products that banks have been successful with.