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Fixed and Variable Annuity Persistency Experience

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Summary: This session will focus on the results of the recently completed Life Insurance Marketing and Research Association (LIMRA)/SOA 1992–94 Annuity Persistency Study. Comparisons will be made between the 1984–89 and 1992–94 studies. Emerging trends will be highlighted. Audience input regarding data collection and analysis for future studies will be solicited.

Mr. Peter B. Deakins: Eric Sondergeld from LIMRA will be the panelist. I'm here because I was the chairman of the Society's Project Oversight Group that monitored and gave guidance to Eric as he did the persistency analysis for the study. Eric is here on behalf of LIMRA. He really did all the work and knows the ins and outs of the study and everything about it.

Before I turn the session over to Eric, I want to tell you about the history of this study. The study has its roots in efforts the Society made about six or seven years ago. We'll try to better understand how lapses and surrenders are affected by changes in interest rates. That has been the genesis of the work by the Project Oversight Group. This is the third study that the Society has jointly sponsored with LIMRA, which is related to this topic.

Unfortunately for us, but fortunately for the industry, we've been in a period of extremely stable interest rates, so we've actually been able to draw very few conclusions about what happens to lapses when interest rates change. While setting the groundwork for perhaps doing some studies of that, if we ever do have a

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highly unstable interest environment, we obtained lots of valuable information about lapses, surrenders, and the like.

From this study, we were able to draw a little bit more information about what happens when interest rates change because during 1993 and 1994, interest rates were on a roller coaster. The high point was still relatively low if compared to where we were in the late 1970s and early 1980s. We did reach a 20-year low point in interest rates.

Eric is going to do a presentation and then, at the end, we'll have time for lots of questions. We're looking for questions on the stuff that's in the study as well as any comments, thoughts, or questions about how to do future studies. It's quite likely that the Society and LIMRA will continue to do these studies in the future. We're very interested in people's input about that process, particularly about anything we can do to make the studies more valuable or to make your lives, as the people who provide the data for the studies, easier.

The overwhelming factor in every study we've done on surrenders has been surrender charges. Because of that, we've always segregated data completely with and without surrender charges. Eric will be going into that, but one of the things that you have to do when you're looking at any surrender study is be very careful to appropriately adjust or appropriately interpret where more than one factor is at work. As I said, we've particularly tried to do that with respect to surrender charges that are such a dominant factor. If you don't segregate by surrender charges, you'll draw very weird conclusions about other factors.

But in everything you do, you need to look very carefully, and we've tried as best we can, to make sure that what we're studying is in fact, on any particular page, what's driving the surrender. So one of the things we, as the Project Oversight Group, did a lot of when reviewing things and talking to Eric was make sure we thought of all the secondary factors that might be driving results. Wherever possible, we wanted to segregate them out.

Mr. Eric T. Sondergeld: My remarks are going to be split into two different phases. First, I'm going to spend a few minutes discussing the results of the current study relative to the prior study that was published in 1992, also with the SOA.

Then I'm going to spend the rest of the time talking about some of the results in the current study that you all have. So why don't we start with the original study that was a study of single premium deferred annuities only.

I'm calling them the 1992 study and the 1997 study because of when they were actually published. The first study was a study done where the observation period was the late 1980s. It was a calendar-year study. So we collected information on a calendar-year basis. To do durational analysis, they used the exposure formulas to convert the data to a policy-year basis.

With the new study we moved to a contract year (or anniversary year) study. We collected two separate samples. One sample was from 1992, which included contracts in force on their 1992 anniversaries. We followed them for one year. We took a separate sample of policies in force on their 1993 anniversaries, and we followed them for one year. So we're saying 1992–94 because the two samples span anniversaries from 1992 to 1994.

There were two major differences between the two studies in the way that we interpreted whether or not a contract had a surrender charge in effect. The first is we interpreted any contract or product that has nominal or very small surrender charges, perhaps \$25, \$50 or a \$100 per full surrender. The prior study excluded those smaller charges and said that is not a surrender charge, it's just a fee. We decided to include those, but they did not make up the vast majority. We decided to include them in this study because we did some analysis taking the ratio of that fee and dividing it by the account value. In many cases, it was a high percentage for smaller accounts. We included those as charges.

The second place where there was a difference in terms of how we interpreted whether there was a surrender charge was products that had a window provision. These are single premium deferred annuities (SPDAs) that usually have a multiyear interest guarantee. When the interest guarantee period expires, there's a window of 30 or 45 days where the customer can take their money out, free of surrender charge, even though the contract might still be in the surrender charge period. The prior study assumed that when the interest guarantee period ended that year, there were no charges or sometime during that year there weren't. We assumed there was a charge, but when the surrender charge schedule expired, we said there's no charge.

Now one thing we did do differently is analyze separately those products with window provisions, so you can make that determination yourself. We decided to do that for products that have multiple choices of multiyear interest guarantee periods.

Let's say we're looking at a contract that currently has a five-year interest guarantee. That might not have been their first guarantee period. They could have had a two-year and then a five-year interest guarantee. If you're in the fifth or sixth year it may

not be the year that the interest guarantee expires. So we looked at those separately and we'll show some of those results a little later on.

There was one other change that was not a major thing. But the smallest cell, the smallest number of units exposed, or contracts in a given calculation for the prior report was 200. I wasn't comfortable with using such a low number for statistical significance purposes, so we upped that to about 1,000. There are a few calculations where we dipped below that, but we tried not to.

And in the appendix tables (appendix A in the report) we went down to 400, so we can show you as much detail as possible. Just keep that in mind when you're using the results. Take a look at the sample size because, in some places, it's fairly small and may not be representative of the industry.

Another important differentiation between the two studies is that the first study covered fixed single premium deferred annuities and the current study is all deferred annuities whether they're fixed, variable, single or flexible.

There is one quick definition that I need to make upfront regarding flexible premium and single premium annuities. We defined a single premium deferred annuity as a product where the primary expectation for deposits into that product is a single payment. That would also include products that were filed with the various states as a flexible product, but you're really using it as a single premium product. So the flexible products in the study are those that were filed as flexible but you would expect periodic premiums coming into it.

It would be real nice if we could get down to the contract level to each actual sale and say: for this one the intention was a single premium, and that one was repetitive premium, but companies just don't have that kind of detail.

Looking at the results, we can compare the two studies between interest guarantee periods less than or equal to one year and greater than one year. Here are the shorter guarantees. In the prior reports, they did analysis for the short guarantee periods and they did almost the same analysis for the longer interest guarantee periods.

There was one thing that really surprised me when we started doing this study and we finally had all the data in and we did all the data edits and we wrote our first lapse rate calculation program. The lapse rates came out really high compared to the other study, which concerned me. What did we do wrong?

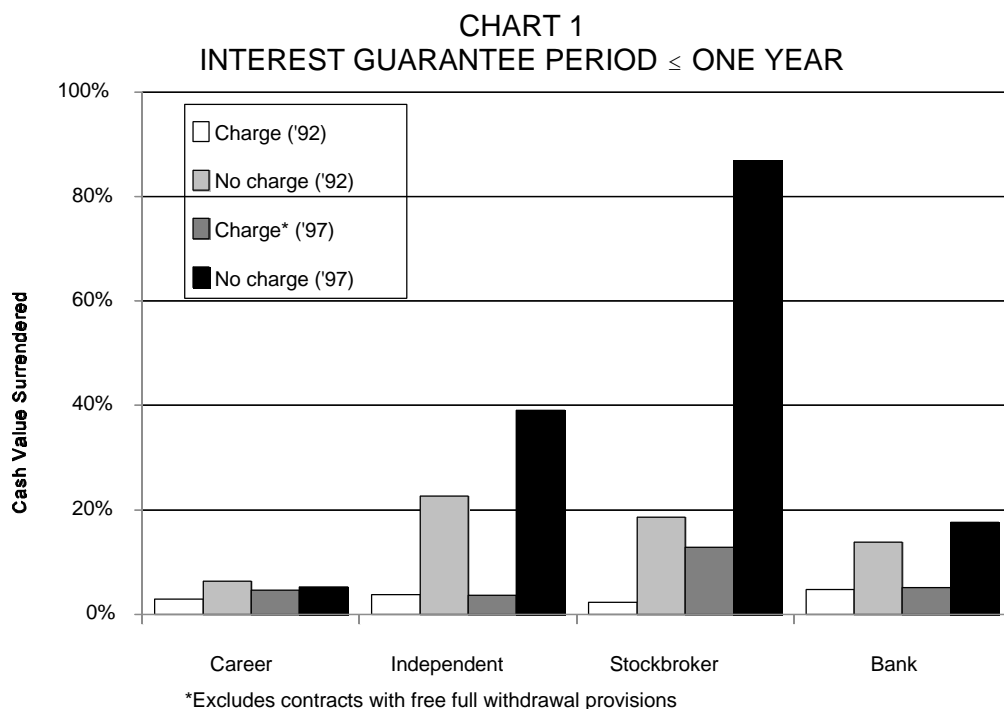
It turns out that the closer we looked at it the more I believed that, in fact, there were higher (double) lapse rates in the current study (although not in every case, but overall).

There's a big difference whether there's a surrender charge in effect or not. Those definitions we used for a surrender charge didn't really impact the short guarantees. It was more the longer guarantees that were impacted.

For the longer guarantees, the current study didn't show quite the bump up in surrender rates for contracts without surrender charges, where in the prior study there was. I think that's a combination of the distribution of the contracts within the prior study. There might have been more contracts with windows and they assumed that if they had a window and it was the year the interest guarantee period expired, they coded those as without charge.

Another significant effect from the results is distribution system, and you often need to look at this in conjunction with the surrender penalty. Actually, as Pete mentioned earlier, you need to look at almost everything in conjunction with the surrender penalty.

Chart 1 is a comparison of the results from the two studies based on distribution system. One caveat on the third bar. Those are the contracts with surrender charges, but we excluded contracts with free full or full free withdrawal provisions or surrender provisions.



Those are your window provisions and your bailouts, as I mentioned a moment ago. For those who aren't familiar with bailouts, that's a provision where if interest rates dip below a certain level, whether it's a specific rate or a specific number of basis points below the initial rate, then the customer can fully surrender without paying a penalty fee.

We excluded those contracts because they sort of threw off all the results. So we ended up treating those provisions separately from the other contracts and many of the tables and charts in the study.

One interesting difference between the two studies here is the distribution channel with the highest surrender rates in the prior study was independent agents. In the current study it's stockbrokers. And there's a very large difference between those two results. We'll get into more of that with the current study.

From the Floor: Are these comparisons in your report?

Mr. Sondergeld: No they're not. For your information, the SPDA report from 1992 is in the 1992, 1993 *TSA Reports*. The full text of the report is in that publication. If you keep those books when the SOA sends them to you, it will be the thickest one on your desk. It's about three-and-a-half inches thick.

From the Floor: Do these termination rates, where there's no surrender charge, include policies that are just one year out of surrender charge and policies that are maybe several years out of surrender charge?

Mr. Sondergeld: Yes, and we'll get into that distinction as we go along.

Chart 1 is the only chart I'll use that compares the two studies. The rest of my remarks focus on the current study. I really labored over how to present the results without just reading them because everyone has a copy of the report in front of them. I don't want to simply walk you through the report.

What I decided to do instead is discuss eight different stories or points I want to get across. I'll discuss each, and then I'll use some of the tables and figures from the report to back up what I'm trying to get across. I'll present results from throughout the report as I do that.

Each table that I'm going to be showing has data from the study. The footnotes to the tables show what page, table number, and/or figure number the results are from.

Now as Pete said, the big leading factor in the prior study and the current study is surrender charge. It's the number one factor driving persistency. Let me just show you some of the different results from the study just to make that point a little better.

Most of my remaining slides will have surrender rates. The numbers on the screen will be surrender rates, and in most cases, I'll tell if it's a contract surrender, and what percentage of contracts had a full surrender or how much cash value was fully surrendered.

Table 1 is a distribution of the contracts. This is the only table or chart that shows that. I wanted to make the point that if you take the zero through -3 rows, add up those numbers and the percentage of contracts or percentage of cash values, it's not a real big percentage. There's not a very high percentage of the contracts that are out of penalty. The numbers are similar to the prior report. Whatever percentage had no surrender charge seems to continue. One of the reasons is because of some of the high surrender rates we're seeing. This is a nice way of normalizing contracts based on different surrender charge schedules and the different age of the various contracts in the study. So look at how many years until the surrender charge expires.

**TABLE 1
NO FREE FULL SURRENDER PROVISION**

Years Remaining	Percent of Contracts	Percent of Cash Values	Contract Surrender Rate	Cash Value Surrender Rate
3 or more	81.6 %	81.6%	4.1%	4.3%
2	5.6	5.2	7.9	9.9
1	4.1	3.9	19.0	23.9
0	4.1	5.4	55.3	69.1
-1	2.2	1.9	20.3	24.9
-2	1.1	0.9	8.0	8.3
-3 or more	1.4	1.1	9.1	7.5
Total	100.0%	100.0%	7.5%	9.3%

Table 3 p. 7

A zero is contracts whose surrender charge just expired, and it's really the year following expiration. As you can see, the numbers for surrender rates on both a contract and a cash-value basis, are increasing as they approach that year. They decrease after that, but they tend to stay high even after the surrender charge expires. These are SPDAs without the full free surrender provision.

Let's look at SPDAs when an interest guarantee period is less than or equal to one year (Table 2). Here's another way of splitting results based on whether the surrender charge just expired, which the last table just showed. Here is another way of looking at it. For the SPDAs with short interest guarantees, there is enough data to split out the contracts without surrender charges based on when the charges expired. There wasn't enough data for the longer guarantees, and it didn't really make a big difference for the variable and flexible products.

TABLE 2
INTEREST GUARANTEE PERIOD \leq ONE YEAR

Surrender Rates		
Type of Contract	Contract	Cash Value
With a surrender charge	5.3%	5.6%
Year surrender charges expired	43.3	59.2
One year or more after surrender charges expired	10.4	11.5
All contracts	7.3	9.0

Table 15 p. 20

But here you can see when there is a surrender charge, you're down in the low-to-mid single digits. In the year it expires, it pops way up to 40, and on a cash-value basis, it's much, much higher. And then, even in the following years, it's still much higher than it was before.

For the longer interest guarantee periods, as we showed earlier when comparing the two studies, we didn't see the big pop up with the longer guarantee periods (Table 3).

TABLE 3
INTEREST GUARANTEE PERIOD $>$ ONE YEAR

Surrender Rates		
Type of Contract	Contract	Cash Value
With a surrender charge	5.9%	6.3%
Without a surrender charge	8.0	8.5
All contracts	6.0	6.4

Table 19 p. 26

Just for your information, as we go forward, you're going to see some of the same numbers over and over again. The reason I'm doing that is I'm flying through some of these to make one point. Here we're talking about surrender charges. Later, I

might show the same thing and talk about contract size or something else. Just keep that in mind.

Table 4 shows single premium variable annuities (SPVAs). These are products where the primary expectation is single premium. It was the smallest part of the whole study in terms of the number of contracts. It was also the youngest in terms of how many years old these contracts were since they were issued.

TABLE 4

Surrender Rates		
Type of Contract	Contract	Cash Value
With a surrender charge	2.3%	1.8%
Without a surrender charge	6.6%	9.4%
All Contracts	2.6%	2.4%

Appendix pp. 57-58

There was a sizeable increase when there were no surrender charges compared to the real low surrender rates when there was a surrender charge. There was even an impact on flexible premium policies or contracts. With charges, it's low and it bumps up. It almost doubles. Actually, for the variable, it more than doubles when there are no charges.

One thing to keep in mind with the flexible premium deferred annuities (FPDAs) is 78.5% of the contracts in the studies had surrender charges based on how many years since the contract was issued. It's very similar to an SPDA.

Table 5 shows those contracts whose surrender charges had that basis. If it was based on year since premium deposit we really couldn't tell if they were penalty free or not. With variable, on the other hand, only 26% of the contracts had surrender charges based on years since issue. So this is really only about a quarter of the variable flexible contracts in the study.

The next big factor driving persistency is distribution. This is really one of the two biggest factors you want to look at in using some of the results.

TABLE 5

Surrender Rates		
Type of Contract	Contract	Cash Value
Fixed, with charges	4.3%	3.9%
Fixed, without charges	6.7	6.3
Variable, with charges	3.3	3.0
Variable, without charges	8.4	8.1

Appendix pp. 59-62

I guess I'm making a plea to you to really know your distribution system and encourage good persistency. Someone had asked about the effect of trailed or asset based or levelized commissions on annuity persistency at a session on current issues in fixed annuities. There isn't enough of that around yet. There were a few products in the study that did have trailed commissions but they were implemented after the study period. It's still a relatively new phenomenon. It's my hope that with some of the distribution channels, trailed commissions will work.

Table 6 shows surrender rates by distribution for all the different product types. This sort of helps make the point that you really shouldn't just look at one factor at a time. We're looking at one factor here, just distribution channel by product. We haven't introduced surrender penalties yet, so things look pretty good. There are relatively low surrender rates. The stockbroker numbers tend to be the highest row. It appears as though for single premium variable annuities, that career agents have the highest surrender rates. We'll show in a minute that that isn't necessarily true.

TABLE 6
SURRENDER RATES BY DISTRIBUTION

Distribution System	Single Premium		Flexible Premium		Total
	Fixed	Variable	Fixed	Variable	
Career agent	4.9%	3.8%	6.1%	4.1%	4.8%
Independent agent	4	+	5.6	5	4.6
Stockbroker	12.8	1.9	8.2	5.4	6.9
Bank	6.5	2.8	5.9	4.5	5.9
Direct response	1.8	+	4	2.1	3.5
Other	13.7	+	0.9	2.6	8
Total	7.1%	2.6%	5.3%	4.2%	5.2%

Table 2 P. 2

Table 6 shows the 12.8% stockbroker number for fixed SPDAs; 12.8% in total of the SPDAs sold by stockbrokers had a full surrender during the study period. If you look at stockbrokers in Table 7, in the year charges expire, it jumps to 44.7%. What percentage of cash value did that represent on a cash-value basis? It was over half the cash value left that year for all SPDAs. Comparing the other distribution channels, you can see that it seems as though the only distribution system immune to surrender charge expiration is career agents. The other ones all seem to have pretty high surrender rates, especially at that surrender charge expiration.

TABLE 7
SPDAS—YEAR SURRENDER CHARGES EXPIRED

Distribution System	Contract Basis	Cash-Value Basis
Career Agent	5.6%	6.1%
Independent Agent	34.3	46.7
Stockbroker	44.7	52.4
Bank	27.6	36.5

Figure 1 p.8

Now let's look at the short interest guarantee periods. That 12.8% stockbroker number went to 44.7%, and in Table 8 it has gone up to 90%. These are cash value surrender rates. I didn't put that on the table. You're up where almost all the money has gone for short interest guarantee periods and sold by stockbrokers in the year that surrender charges expire. That's real scary if you're in that channel.

TABLE 8
SPDAS—INTEREST GUARANTEE PERIOD ≤ ONE YEAR

Distribution System	Charge	No Charge (Just Expired)	No Charge (Previously Expired)
Career Agent	4.6%	5.7%	5.0%
Independent Agent	3.6	50.9	17.6
Stockbroker	12.9	90.0	62.6
Bank	5.1	37.2	10.6

Figure 6 p.25

From the Floor: Does the shock lapse happen within the first three months? Or is it equally distributed throughout the year?

Mr. Sondergeld: I don't know the answer to that. In retrospect, after we wrote the code, I realized I probably should have done some of that to see what the timing

was. Maybe we still will, since we have the data to do that. There wasn't enough data to look at the longer guarantees with or without surrender charge by distribution channel.

Let's look at single premium variable annuities in Table 9. Remember the career agents had the highest overall surrender rates, which is partly due to the fact that a larger percentage of their contracts were without charges than with. It can throw off your overall results, which is why you need to look at these things by surrender charge.

TABLE 9
SPVA CASH VALUE SURRENDER RATE

Distribution System	Charge	No Charge
Career Agent	2.7%	8.0%
Stockbroker	1.3	11.9
Bank	2.4	5.1

Appendix pp.57-58

The stockbroker numbers still aren't very high, but I would caution people to be careful about using some of these numbers because we really haven't had a bear market or a prolonged bear market yet since a lot of these contracts have been sold.

So the stockbrokers have been happy to leave the money alone in this instance. I'll show you some of the comparisons between the different products and what's happening in the financial markets and why some of these lapse rates are high versus other ones.

Now the flexible side (Table 10). I didn't break this out by whether the penalties were in effect or not. You can see that there is some relatively significant differences between distribution systems.

One thing you have to be careful about looking at is the flexible product results. As you read the report, it starts out with the SPDAs that have the really huge surrender rates. By the time you finish the report, you're in the flexible premium deferred annuities where the lapse rates are relatively low. You can still get a fair amount of movement within some of those areas but they're still relatively low. In most cases, a stockbroker tends to be highest, except for the variable where it looks like they're all relatively low.

Contract size has an impact, which is another factor. Many of these things are very related. First of all, for the single premium contracts, the larger contracts tend to

surrender more than the smaller contracts. I have two theories behind that. One is those people with larger dollar amounts in their annuities are probably more savvy investors and are keeping a closer eye on their investments. The other reason is that there are probably some commission-hungry reps out there.

TABLE 10

	Cash Value Surrendered	
	Fixed	Variable
Career agent	5.2%	3.4%
Independent agent	5.8	4
Stockbroker	8.2	3.6
Bank	4.9	4.2
Direct response	3.7	1.8
Other	0.3	3.9
Total	4.8%	3.5%

Table 34 p.43

Let's look at these by the various products. Table 11 shows SPDAs with short interest guarantees. We've seen these numbers two or three times already. I want to make the point that you can compare the percentage of contracts that surrendered, especially in the year charges expire, to the cash value that expires. So it represents 43% of the contracts, which is almost three-fifths of the cash value.

TABLE 11
INTEREST GUARANTEE PERIOD ≤ ONE YEAR

	Surrender Rate	
	Contract	Cash Value
With charge	5.3%	5.6%
Year expired	43.3	59.2
Later years	10.4	11.5
Total	7.3%	9.0%

Table 15 p.20

There is another way to look at these results. In the appendix pages, we have the surrender rates by contract size. For the single premium, the rates get bigger as the contract size grows. So there's a couple ways of looking at this.

For the longer guarantees, there is a similar effect (Table 12). It's not quite as marked, and the difference is actually fairly small, but there is a difference.

TABLE 12
INTEREST GUARANTEE PERIOD > ONE YEAR

	Surrender Rate	
	Contract	Cash Value
With charge	5.9%	6.3%
Without charge	8	8.5
Total	6.0%	6.4%

Table 19 p.26

There's also a difference in single premium variable annuities, but it doesn't really have an impact when the surrender charges are in effect. Once those charges go away, you can see that the cash value surrendered is 50% higher than the percentage of contracts being surrendered (Table 13).

TABLE 13

	Surrender Rate	
	Contract	Cash Value
With charge	2.3%	1.8%
Without charge	6.6	9.4
Total	2.6%	2.4%

Table 23 p.31

On the flexible side, there really wasn't an impact. Actually, the cash value surrender rates were lower, so it didn't really have an impact on flexible premium deferred annuities (Table 14).

TABLE 14

	Surrender Rate	
	Contract	Cash Value
Fixed	5.3%	4.8%
Variable	4.2	3.5
Total	4.7	4.0

Table 30 p.37

The one area where we were able to find some things, but we still haven't had the right environment, is interest rates. We're looking at this both from a relative level of interest rates, relative to other things and those could be other interest rates or other markets, and we're also looking at the absolute level of interest rates. Let's start with the relative.

From the Floor: Eric, were the cash values limited to a half million in Table 14?

Mr. Sondergeld: There weren't that many.

From the Floor: Could it be enough?

Mr. Sondergeld: Yes. You had called and asked about surrender rates for very large contract, and there aren't many in the study, especially when you get way up there in size.

From the Floor: So you think that result would still be OK?

Mr. Sondergeld: Right. We could also rerun that for you without it. You are not going to get cash values that are as big on true FPDAs, or at least products that you expect to be flexible or periodic.

From the Floor: What's the logic for limiting it if you're trying to get an indication of what your net cash outlay might be?

Mr. Sondergeld: The logic is to prevent a couple of really huge contracts from throwing off your surrender rate. We can remove that limitation for someone who calls and says what would this be if you didn't have that limitation?

There really weren't that many contracts with the real large cash values.

From the Floor: You wouldn't know what the rate is if you didn't put the cap on, would you?

Mr. Sondergeld: No, not off hand.

From the Floor: You also threw out the tiny contracts.

Mr. Sondergeld: We throw out the very small contracts that were less than \$100. I couldn't find it in the report but I'm assuming it's there.

Chart 2 is a pretty wild graph. The new money line goes from 1986 to 1996 and means that there are new money interest rates on fixed annuities. These are single and flexible. In LIMRA's quarterly annuity sales survey, we collect the new money interest on up to five plans that a company might have. So it's sort of an amalgamation of interest rates by quarter.

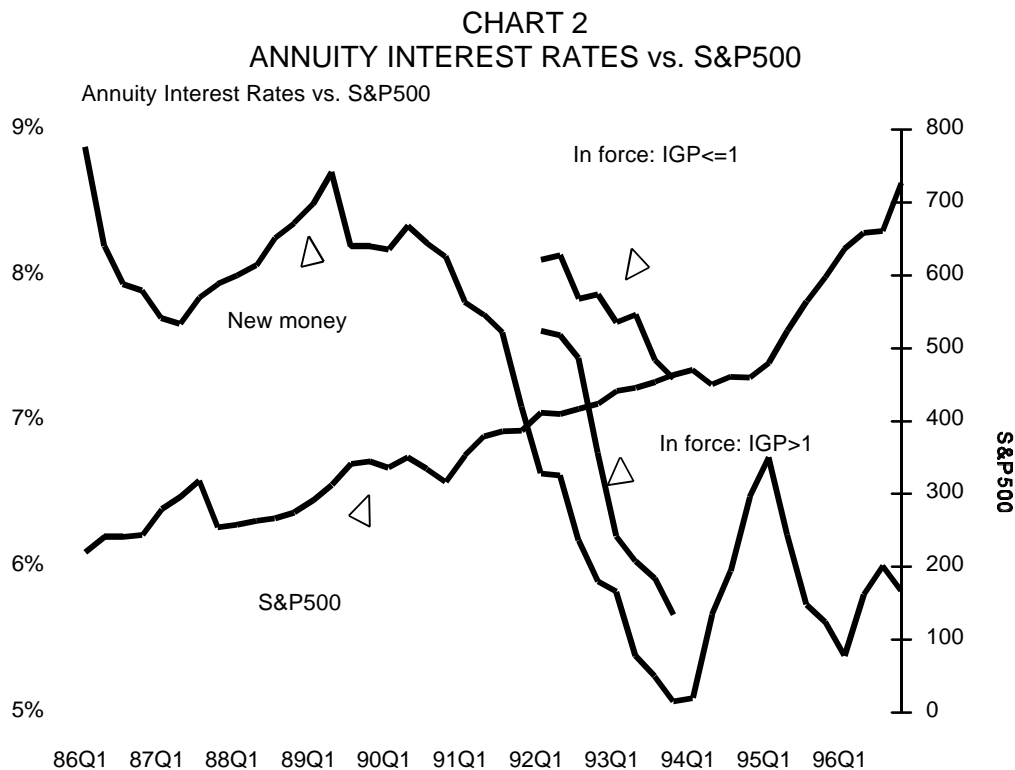


Figure 2, p. 15

But it's a fairly good proxy, and it follows very closely, almost in parallel with other market rates, like the T-bond or some of the T-note rates. So that's sort of what interest rates have done over the period. Generally there is a decreasing interest rate environment. There was a pop up in 1994, and rates went back down. They've been sort of fumbling in that same level since then.

The steadily increasing line is the Standard & Poor's (S&P) 500 price index. The two short lines are the in-force credited rates on SPDA contracts in this study. That's why the line is very short. It only covers the credit rates between 1992 and 1993 because that's when we took the beginning-of-year credited rate.

What's interesting is we're looking at the results from the study and the fixed SPDA had the high surrender rates. The variable had the low surrender rates, if we generalize. I think of this from perhaps a distribution perspective, a customer perspective, and probably even a company perspective.

You're in a decreasing interest rate environment. You hold a fixed annuity, or the customer holds a fixed annuity. The renewal rates, with the crediting, are actually higher than what they could get on a new money fixed annuity.

If you look, these two lines are higher than what you can get on a new annuity. So it really wouldn't make sense to say, "I have this other fixed annuity, do you want to buy it?" They'd say, "I'm making 8%, and that one pays 6%. It doesn't make sense." It doesn't make sense to go from a variable to a variable necessarily and that's why the variable rates might be relatively low.

Notice it makes sense to go from a fixed to a variable because fixed interest have been falling. And I'm saying this makes sense from how people think, not how I believe you should buy or sell annuities.

So it wouldn't make sense to go from variable to variable or from variable to fixed. But it might make sense, based on the way people think, to go from a fixed annuity to a variable annuity. The reason is interest rates are falling and fixed annuities are starting to lose their shine. The stock market is just doing wonderfully. So the representative says, "I've got this great variable annuity." Look what the stock market is doing.

I kind of think of this as the up and down escalator. Anybody here ever jump off a down escalator and get on to the up escalator? Maybe when you were a kid? I think some of these representatives are taking their fixed annuity customers off the down escalator and putting them on the up escalator of the variable annuity business. You can almost see it in the chart. I'm not an advocate of buying things or investing in something that was really hot last month. That tends to be what sells, unfortunately. It's not the best way to make your long-term investments.

From the Floor: Do your new money rates include bonuses, sweeteners, etc.?

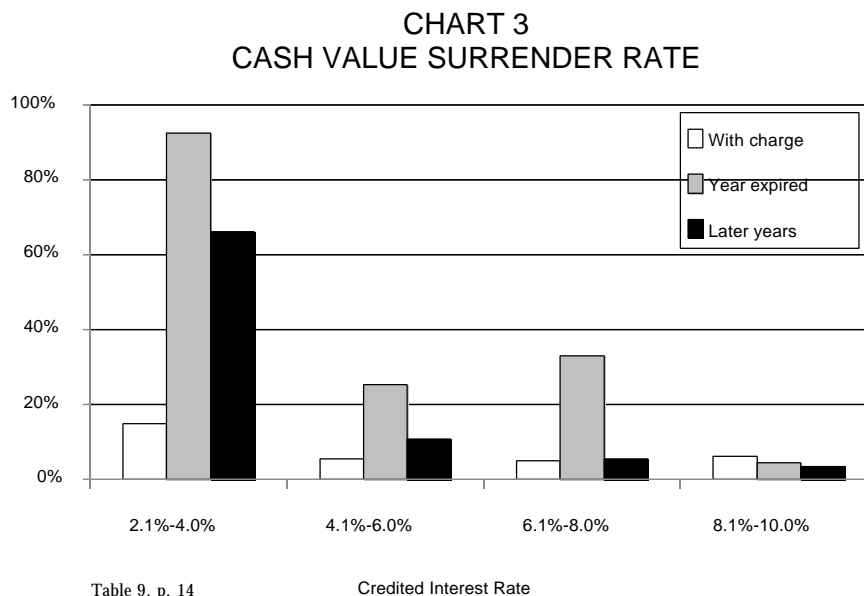
Mr. Sondergeld: Everything.

From the Floor: On the variable side, did you make a distinction between variable annuities that don't have a fixed account and those that do?

Mr. Sondergeld: No we didn't. But in the study, I believe there was 98.2% of the single premium variable. and something like 98.4%, it may even be higher, it's in the report, of flexible premium variable were combination contracts, i.e. contracts with a fixed as well as variable accounts.

So virtually all of the contracts in the study had a fixed account in them. And in the report, we show one table of the rates based on the percentage of the assets invested in the fixed account. The higher the percentage, the higher lapse rate. So it sort of has some correlation to fixed annuity surrender rates.

Chart 2 showed the interest rates relative to other things. Chart 3 shows them on the absolute interest rate that's being credited. If you have a very low interest rate credited on your account, you're going to be more likely to surrender that for something else. That's even another fixed annuity in that case. And if you're being credited at a fairly high rate, very low surrenders result.



But there really wasn't any shock lapse rate when the surrender charges went away because the customer was happy or the salesperson really couldn't convince somebody with a high interest rate to move that money when the charges expired.

We found a similar effect with the flexible premium fixed annuities. The low interest rates had the higher surrender rates, and the higher interest rate had the lower surrender rates, as you would expect.

There's talk about the free full withdrawal or free full surrender provision. I get tongue tied here. I'm not sure if it's full free or free full or if it's withdrawal or surrender. But the question is, what's the effect of having one of these provisions in the contract?

An interesting point is that the overall surrender rates, and this is lumping all the contracts together, that have these provisions, had lower surrender rates than those

contracts that didn't have them, overall. But if you take a closer look, see if you find some movement of the contracts.

Let's start by looking at the five-year interest guarantees with a window provision (Chart 4). In the sixth year, there are very high surrender rates, and over half the cash value surrenders. We don't know for sure that this was their first interest guarantee period for these contracts. We know it was for many of the contracts. But there were a few products in there that had anywhere from 1–10-year interest guarantees. They theoretically could have had three one years and then a five, and this would be their third year of the five years. So we couldn't necessarily tell that because we didn't collect the histories for each contract.

CHART 4
5-YEAR INTEREST GUARANTEE AND WINDOW PROVISION

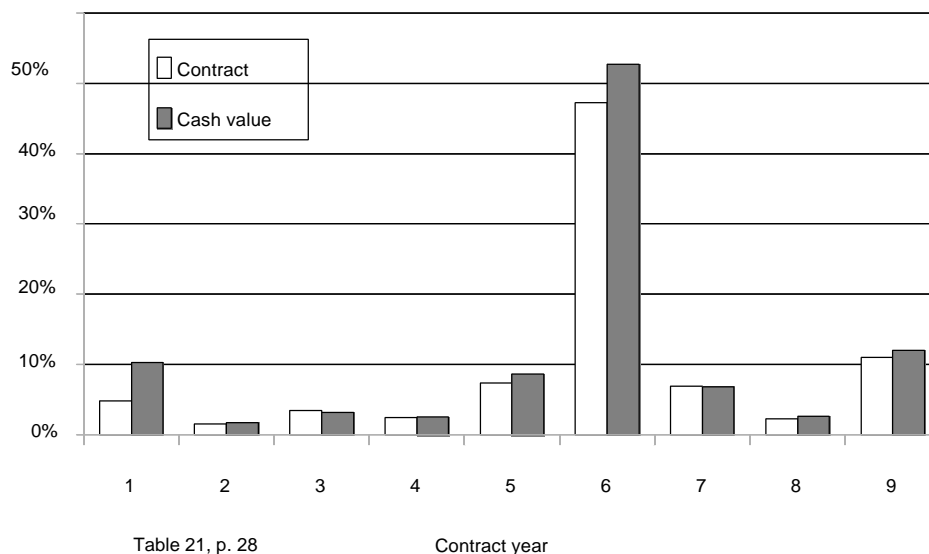


Table 21, p. 28

Contract year

The vast majority of the contracts were probably in the first interest guarantee period. And there's definitely a bump up in the sixth year. In year nine, what you're probably starting to see is perhaps some of the surrender charges coming off. None of the policies had five-year or six-year charges for the most part. They tended to be fairly long.

The prior study had a lot of contracts with five- and seven-year surrender charge schedules. In this study, they tended to be in the eight-year, nine-year or longer range. That is another difference between the two studies. So there are five-year guarantees with a window provision.

Let's look at five-year guarantees with a bailout provision in Chart 5. This is a provision where the interest rate has to fall below a certain threshold. Oftentimes

it's 100 basis points below the initial credit rate, which could have happened. We were in a decreasing interest rate environment.

CHART 5
5-YEAR INTEREST GUARANTEE AND BAILOUT PROVISION

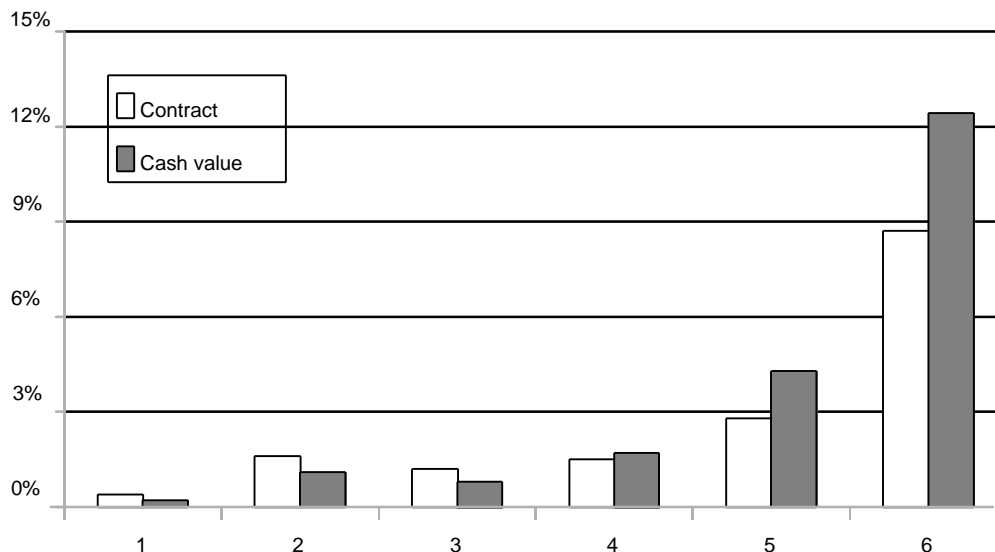
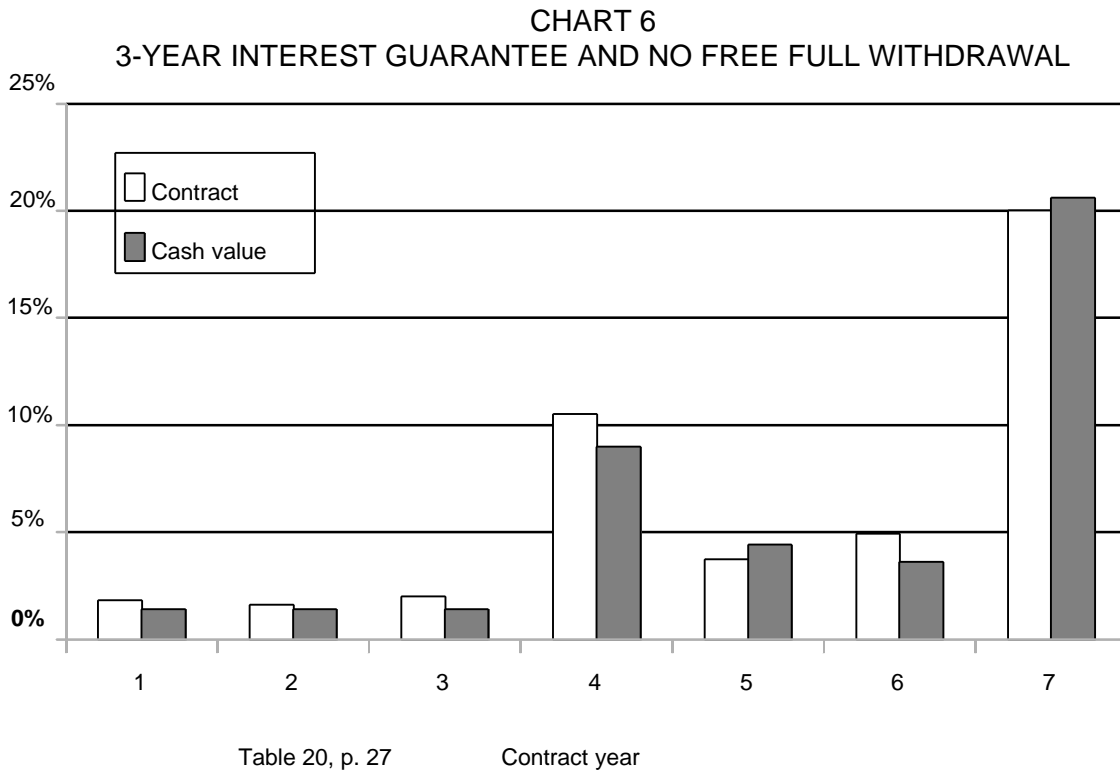


Table 21, p. 28 Contract year

There is a pop up, but it's not 50%. It's 9% or 12%, so it's not real high. There is somewhat of a tendency for a pop-up. My guess as to what's really going on here is the fact that the interest guarantee expired; that's more the case than the fact that the bailout provision was pierced. I doubt many of these bailout provisions are pierced. When talking to many companies with bailout provisions, bailout actually serves as a good thing because it encourages the company to keep their renewal rates high. It's good for the company because it keeps the rates high, which hopefully keeps the customers interested in keeping their contracts with them.

Another way to get that point across is to look at three-year interest guarantee periods with no free full surrender provision (Chart 6).

So there's no free out but in the fourth year, there's a pop-up in surrender rates. It's not real high. But I think what happens is some of these customers have had these fixed annuities for a couple of years. They pretty much have forgotten about them. All of a sudden they get a letter in the mail saying your interest rate has expired and here's your new one.



And oftentimes that might make someone think, well should I do something different then? At least it reminds them that maybe they should do something.

From the Floor: Plus during this period interest rates had fallen precipitously so their renewal notice said your renewal rate is lower.

Mr. Sondergeld: Right. There could have been a lower rate, although oftentimes one of the benefits of the longer interest guarantees is that the renewal rates tend to be the same level as new money rates that they're offering at the same time. One-year products, however, tend to have a differential between new money and renewal. I think some companies are going to start to question those assumptions as some of these blocks mature.

From the Floor: I always had a theory that there is a sticker effect when you have a much bigger drop than one year at a time sort of dropping down. That has some kind of effect.

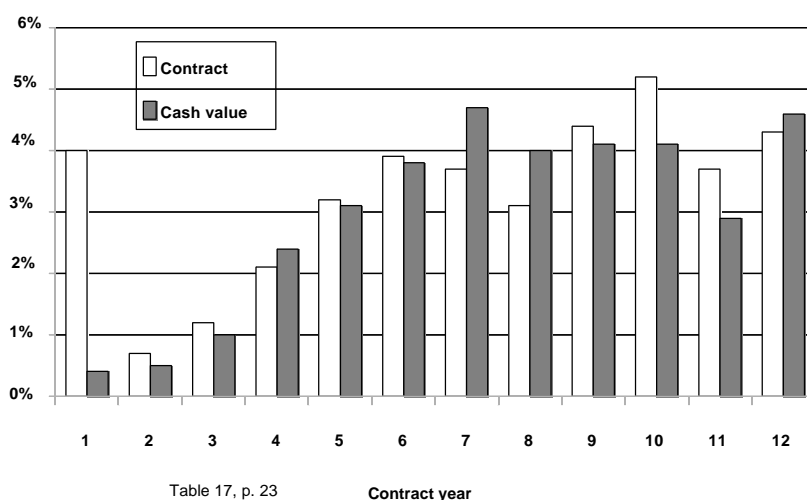
Mr. Sondergeld: Yes. We weren't able to analyze that. I believe the next time we do the study, we're going to ask companies what the initial crediting rate is so we could see what the difference might have been. There is sort of a sticker shock kind of thing. If it's 100 basis points, they may not really care. If it's 3% or 4%, they may want to know what's going on here. I was making 10% and now it's 6%?

From the Floor: And that's what could have happened here.

Mr. Sondergeld: Yes possibly.

Now let's look at one-year interest guarantee periods with a bailout provision. Look at the scale on Chart 7. Six percent is the high, and it barely gets over 5%. So even though rates have been falling, you really don't have much of an effect going on here. I think the higher rates towards the end are really the surrender charges coming off and they indicate some people are starting to surrender.

CHART 7
1-YEARS INTEREST GUARANTEE AND BAILOUT PROVISION



But even still, you have very low surrender rates. You don't see the real high rates we saw with the SPDAs without these provisions. Those were all market-value adjusted (MVA) annuities with a one-year interest guarantee. Perhaps some of those in the downward interest rate environment decided to take advantage of a positive MVA.

Let's look at partial withdrawal rates (Chart 8). The purpose of this study was mainly to look at full surrender activity. We could actually take the data in the study and do a complete partial withdrawal analysis and report if we wanted to. Somebody actually suggested that a month or two ago.

CHART 8
PARTIAL WITHDRAWAL RATES

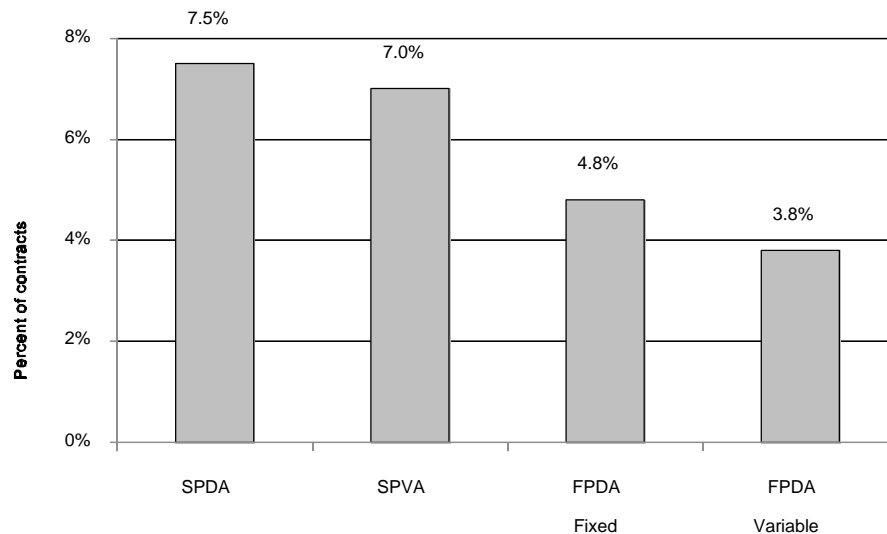


Table 1, p. 2

There are no surprises here; the results are what you'd expect. You would expect that single premium products would have more partial activity. You'd expect older age annuitants to withdraw more frequently. And you would expect the higher account values to have more or partial activity because the older people are taking those partial withdrawals.

In the bank channel, which is another place you look at the single premium business, the partial withdrawal rates tend to be the highest. That's one channel where the average age of an annuity buyer is probably the highest of the various channels, especially for fixed annuities.

Many of these people are really buying these annuities for current income, just as they would with a certificate of deposit (CD). You should compare these two but people will use the annuity just like a CD to receive current income because the rates compare favorably, at least in the first year, between annuities and CDs. Many of these people want to pass the principal on to their heirs when they pass away.

This is another thing that's no surprise. I would expect that single premium contracts would have more partial withdrawal activity, just because it doesn't make sense, if you're putting money into a contract, to take it out at the same time? It just doesn't make sense to me. Although, some people think it does, especially in some

of the qualified plans on the flex side. I thought that was just more intuitive than anything else.

The 403(b) business is one area of the flexible business areas that I wanted to highlight, because I found some interesting results with it. It's not a huge market. It's between 15% and 20% of annuity sales each year.

It might be worth the wait and the trouble. What I mean by trouble is that it's a nightmare to administer 403(b) business, in terms of loan administration and all the tax reporting. It's not an easy thing. Another downside is there is a great deal of competition coming from the mutual fund companies, in terms of capturing assets from companies as well as starting new plans and taking ongoing contributions. They're getting very active in that.

Another negative aspect of the 403(b) business is if high first-year premiums are important to you, you'll find 403(b)s actually have the lowest first-year contributions. You can find that in Table 37 of the study. It's the last table before the appendix.

But there are some advantages. One is the participation rates in 403(b) plans are very low. I don't know what the exact numbers are but I hear people talking that they're around 25%. So in a given plan or school system or hospital, about 25% of the eligible participants are in a 403(b) plan. That's pretty low.

You can compare that to 401(k), which I believe is in the 60–80% range (I don't know exactly what it is). The 401(k) has a much higher percentage. There's a lot of room for growth there. I also believe that are lots and lots of small employers that qualify for 403(b) that don't have an employee-sponsored plan for their employees. There are some opportunities for companies that want to get into this market.

There are two other bonuses that I found when looking at the results. One is the lapse rates are fairly low. They're not the lowest, but they're fairly low and consistently low in the 403(b) business for fixed, variable, and all (Chart 9). Actually the nonqualified is a little bit of a surprise; it has lower rates—actually the lowest among all in the flexible side. The individual retirement accounts (IRAs) come pretty close; lower on fixed, a little higher on variable. The rates are fairly low compared to some of the other qualified plans. So that's a good thing.

CHART 9
LOW SURRENDER RATES

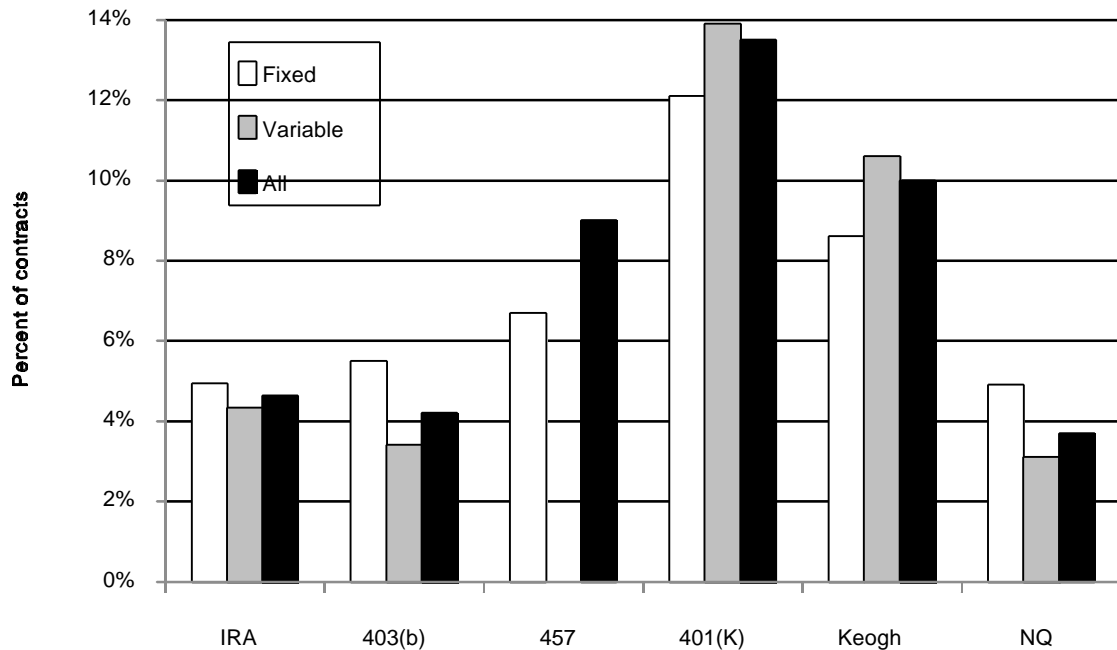


Table 33, p. 42

From the Floor: Did you look at the commissions? Were they front-ended commissions or not?

Mr. Sondergeld: For the flexible?

From the Floor: Yes.

Mr. Sondergeld: We didn't do the analysis of that. We do have some of that information but we didn't do much with commissions. We didn't really find a lot of affect either in some of the analysis. We might have looked at that and then discarded it but I really can't remember.

Another benefit is on the flexible side. Now here we're talking about products where the primary expectation is for periodic payments. You might hope or even expect, in the markets that you're writing in, that people are going to continue making payments into the annuity. So it's important to know how many of those customers are going to do just that.

What percentage of contracts had premiums in the current contract year and the prior contract year. In every contract year, 403(b) is far above the rest of the pack, which is a good thing.

In addition, you need to know how much they are putting in from year to year. So I looked at those with successive payments in both years. You really have to multiply these two to find out what the expected payments are each year.

The 403(b) has the highest ratio of current premiums to prior year premiums in general. That doesn't happen in every single duration because it jumps around a little bit. Year two actually is lower than nonqualified, but after that, it's the highest. These numbers seem relatively similar. If you flipped them over and looked at them in terms of premium lapses, how much premium do you get each year? You'd have some bigger numbers in those other programs. So that's fairly significant.

Now another bonus I'd say with doing some of these studies is that there are other things we can do with these data in addition to looking at persistency.

If there's one thing you should be worried about, it's annuitization. The title of my slide is: Annuitization—who needs it? That seems to be the feeling in the industry. Hopefully, that feeling is changing. It's very disappointing to see how low the annuitization rates are. What's even sadder is they're getting lower.

Table 15 shows the prior study compared to the current study. When I first saw these numbers I was scratching my head and saying, "How could this be?" How could the numbers be going down so much? Look at the SPDAs with this short interest guarantee period. In the prior study, 1.4% of the contracts, which is nothing great, annuitized in that year. In the current study, it's down to 0.4%. What is happening?

TABLE 15
PERCENT OF CONTRACTS ANNUITIZING

Product Type	Prior Study	Current Study
SPDA, IGP \leq 1	1.4%	0.4%
SPDA, IGP $>$ 1	1	0.2
SPVA		0.1
FPDA Fixed		0.3
FPDA Variable		0.3

I think one factor that's influencing this is the fact that many people who annuitize don't annuitize with the contract that they're in. They may annuitize with another company. Either they shop the rate or the representative shops for rates so they can get a commission if they're a New York operating company.

The SPVA rates are low, at least lower than the others, and that is somewhat to be expected because variable annuity buyers tend to be younger than fixed annuity buyers. In general, the numbers are very, very low and this is really something the industry needs to work on if they want to maintain the tax deferral of annuity products, which really wouldn't be good if we lost it.

Ms. Regina Lisa Lefkowitz: To what do you attribute differences between the two studies? I'm sure there are many factors involved.

Mr. Sondergeld: I think with the SPDAs, part of it probably is the fact that interest rates dropped as steeply as they did. Now in the prior study interest rates were also dropping but they were much more stable. The drop was more gradual than it is in the current study. That's one thing. Another can be found if you look at some of the distribution systems. The stockbrokers probably learned a little more about those products as time went on.

The independent agent numbers didn't really change too much. They're still fairly high. I think distribution effects have something to do with it. There's also the distribution of products of the contracts in the study. You might have a slightly different mix because the products did change over time.

The other study had a lot of contracts. They had separate tables for the five-year surrender charge and the seven-year surrender charge and they showed all that. We didn't really have a lot of those groupings, especially for the SPDAs.

From the Floor: You also had a lot of new entrants in the market in the second study. You had more players in the market.

Mr. Sondergeld: Right. So you have increased competition which can increase your surrender rates. Have you heard of the term 1035 exchange?

From the Floor: I studied the persistency of a company for several years, and I'd just like to add some factual information to some of your comments.

I'll try to keep the anecdotal stuff out of this. First, the company had some MVA contracts and the MVA contracts tended to surrender at the 50–60% rate as soon as they came out of surrender periods. So if any of you have those on the books, you might expect that. Of course, interest rates had dropped in those six years about 300 basis points.

Mr. Sondergeld: The steepness of the yield curve became less steep. Those products didn't do as well on a flatter yield curve environment.

From the Floor: That's right. To answer your question, about 75% of the contract surrenders are in the first three months after the expiration of surrender charges. That was consistent across SPDA and flexible premium deferred annuities (FPDA) product lines.

Mr. Sondergeld: What channel were they using?

From the Floor: The SPDA was stockbrokers and the FPDA was a bank. As far as bailout products are concerned, this company did break the floors. They did go through the bailout level. There was one product that had a bailout provision and one with no bailout provision and the renewal rates were generally the same on both products. But they broke the floor on the floor products. The surrender rates were phenomenally higher when the bailout was broken. If you're going to put a bailout in a product, make sure you've priced it so you do not have to break that floor, because if you do, the customers will certainly respond. The stockbrokers, or whomever sold that product, will jump on that.

So bailouts are to be avoided in falling interest rates environments. And in rising interest rate environments it sort of renders them useless because you're not going to break a floor as interest goes up. So I would be careful about putting bailouts in there.

The stockbroker channel did have some high surrender rates. The guess was that they perhaps had better technology or better tickler files than some of the other channels.

Mr. Sondergeld: Long calendars.

From the Floor: Yes. The other thing is, this company had some policies that have been on the books for 16 years and the surrender experience was similar to what you showed during the surrender charge period and immediately after.

Then, out into the 12–16 year, the surrender rates did go back down but they never got as low as they were during the surrender charge period. So they'll go up and come back down but not quite as low as they would with surrender charges.

Mr. Sondergeld: So it's very similar to what the report showed.

Mr. David M. Ruiz: First of all, how did you handle fixed annuities that have more than one interest rate guarantee option as well as fixed annuities where you can put your money into multiple different interest rate guarantee options? I'm wondering if you did anything with those. Second, you made an allusion to looking into cash-

flow testing assumptions and essentially setting the dynamic interest rate lapse mechanism. Could you comment on that?

Mr. Sondergeld: They used the weighted average interest rates and did the blending and rounded. There weren't too many that had that though. I think one company called and said, what should we do with those?

In the prior study, I believe they included those as separate contracts, and they split them. Could you repeat the cash-flow testing question?

Mr. Ruiz: I'm just wondering if you could speak to setting the dynamic lapse assumptions. In other words, during cash-flow testing most people will set a base level of lapses, and then, adjust those rates based on the relationship of credited interest rates and market rates.

Mr. Sondergeld: Many of those formulas are based on the difference between the market rate and the credited rate with a couple of factors in there. We actually tried to do some analysis to actually come up with some of those formulas. As Pete said in his opening remarks, we really didn't have the interest rate environment to be able to see what happens.

You need some instability or major pop-up in rates for that spread to turn negative or whichever way for the market rate to be higher than the credited rate to see what happens there. There are some charts and some tables in the report that show some of that. But we really weren't able to come up with a good formula that fit.

Mr. Deakins: The evidence to date, both anecdotal and in the studies, is it's clear there's a relationship, particularly as spreads between market rates and credited rates get very wide. It's clear also that at small spreads, the relationship is fairly minimal.

Nobody really knows how it works because it has been almost 15 years or about 15 years since we had any really high interest rate environments.

From the Floor: But with the 1993 300-point rise, most of these formulas would have indicated that something should have happened.

Mr. Deakins: And we did see in the study a little bit of a spike from the rise in rates. But you weren't getting to the types of differentials that most of the formulas say will give you big numbers. Most of the formulas tend to have exponential factors on the interest rates. I think that's appropriate because I believe that if we ever get to big differentials, you will see big lapses just based on some situations that have been

analogous to interest rate rises (such as what happened at Executive Life and what happened during some very limited amount of experience there was in the late 1970s and early 1980s).

From the Floor: I don't quite understand why there is such a difference between the FPDAs and the SPDAs considering there's not much renewal premium coming on the FPDAs. Do you have any explanation for that?

Mr. Sondergeld: There is a fair amount. It depends on the product type. I think it also relates in the FPDAs, at least for those that are putting in successive payments. I suppose we could split the results by those that did and those that didn't to see how the results varied. I'm sure we'd find some differences.

Flexible premium lapse rates have been low in the past. We have done flexible premium annuity studies in the past on a group data basis and the rates were always fairly low. I'm not sure why there's such a big difference. I think it has to do with the fact that the products that are being sold on the flexible side have that primary expectation that they're going to be getting renewal premiums.

The other ones have the expectations of single, whether they were filed as single or flexible. That's the expectation, and those are being sold. There's a different mix of the distribution channels and those are the ones the stockbrokers tend to sell. They don't sell nearly as much of the flexible repetitive stuff because they're looking for the big money they can roll over from the brokerage accounts or from another annuity. I think that has something to do with it.

Mr. Deakins: One of the things that's very clear from all of this stuff is that the factors that influence lapses are very, very complex. There are multiple factors. You always have to be very careful about the way you interpret things because the same rules may not apply the next time around as one of the factors change.

I think many of the differences between the flexible and the single premium products have to do with who tends to sell them, the nature of the sale, the size of the contracts, and the nature of the people who are buying them. So there are many complex factors. I think it mainly has to do with how they are sold and the purpose for which they are sold and who is buying them and things like that.

From the Floor: So do you think it's because many of the flexible products that you've looked at in your survey would be 401(k) type products or 403(b) products as opposed to flexible products that are sold through banks just like single premium products. I'm a reinsurer. We have three or four blocks that we're reinsuring, and

the renewal rates that we see are between 1% and 2%. The lapse rates we're seeing are slightly higher than what you're showing on your flexible premium analysis.

Mr. Sondergeld: Yes. I think that's true. On the flexible side, you have a much larger percentage of the sales contracts in the qualified programs (especially the non-IRA qualified programs) versus the single premium side where many are nonqualified and IRAs. There's not a lot of other qualified business. You might have a little bit of rollover business from the 403(b) or the other plans. Most of your qualified plans are on the flexible side. The defined-contribution type plans, like 403(b) plans, are on the flexible side. So I think that has something to do with it.

Mr. Michael H. Crawford: I was wondering how you accounted for free partial withdrawals—free of surrender charge. Is the 5% lapse rate during this surrender charge period 95% of people doing nothing and 5% of the people doing 100%? Or is everybody taking out the 5% free?

Mr. Sondergeld: Almost all of the products had the standard 10% free withdrawal provision. One thing you can do (and we didn't really do a lot of in-depth study of this), is actually divide the two columns in the report. If you divide the percentage of cash value that was partially withdrawn by the percentage of contracts that had a partial withdrawal, you can get an average partial withdrawal rate.

The way we coded these is you could have a contract that had partial withdrawals and later surrendered, died, annuitized, or whatever. So you could have more than one thing going on there. If they had more than one thing going on, we didn't count those as a partial. The partials in the study are those that only had a partial withdrawal.

I believe in total it was something like 8% or 8.5% of policies had a partial withdrawal. They might have had something else. Then there was a 2% or 3% differential that had both.

So we could look at that carefully. We probably should do a separate partial analysis. That could be one of the focuses of the next report because we look at all the same aspects. There might be some special area we could focus on and perhaps we could take the results from all four years because we're going to get two more years of data later this year. Perhaps we could look at partials a little more carefully or closely.

Mr. William C. Huff: I found the results really interesting. Our results on flexible premium business, on which we have quite a bit of TSA business, are very similar to what you're showing there.

The premium persistency in year two, where it's low, is like 49%. People are rolling over many of them from another contract and then continuing. So if you look at actual ongoing contributions I think that second year rate would actually be quite a bit higher than that.

Mr. Sondergeld: We actually look at the second year and then we look at three years later. It's another break out we give to avoid that single premium anomaly.

Mr. Huff: You have \$7,500 or something in year one and then it drops down. We find that in year one the continuing portion of it rather than the rollover portion is in the \$2,000–2,500 range.

One area where we're quite a bit different than the results is in our single premium business. Our partial withdrawal rates are substantially higher than what you have and we don't have much of a spike when surrender charges go away.

I know that most of the rest of the industry is 1–2% on partials. We're more like four to five and we just don't have the spike rates. I guess there's gains and losses to that. The reason is that we push systematic withdrawal as a method of people taking their money out and we find if they're taking their money out they don't tend to worry about the surrender charges so much.

Mr. Sondergeld: That could be a combination of the age of the people you're selling to and the channel they're buying it from.

Mr. Huff: That too.

From the Floor: Have you thought about tax qualified and whether we receive substantial partial withdrawal as minimum distribution mandated by the IRS at certain attained ages? That's what I'd like to see. Is there some kind of partial study by attained age and by tax qualification?

Mr. Sondergeld: There isn't but we have the data to do it.

From the Floor: It's also not just R and D. You also have a lot of people that are under the 10% tax penalty for withdrawal prior to age 59½, and that may actually be more stable than the other stuff because once they're locked into that, there's a real penalty if they fully surrender at that point.

Mr. Sondergeld: I believe we asked how much of the partial was part of a systematic withdrawal provision. Our hope was to actually look at those separately.

Mr. Crawford: How important was age as a factor for lapses?

Mr. Sondergeld: It actually wasn't a real important factor. There are a few statistical analyses in the report. In the SPDA section, there's some regression factors and age is not real high on the list. We did the same thing for SPDAs and FPDAs. Age doesn't really have a huge impact.

For certain product types you have higher lapse rates at the lower ages and the higher ages and something in between. So you can't really come up with a good fit—if you're doing some kind of linear function.

One easy way to look at this is pick a page in Appendix A for the contracts that mean something to you and look, by age, at the withdrawal rates. There is somewhat of a spike up but it tends to be, at least from what I remember, more prevalent with the partial withdrawal type activity than the full surrender activity.

From the Floor: I don't mean to beat the parametric evaluation to death, but when you went through, you said you didn't have much success fitting such a model. Maybe the differences were too homogeneous or too low.

Were you making the case though that you were seeing variability there that was not suggested by the parameters?

Mr. Sondergeld: There actually was variability.

From the Floor: Could it be that those people are not looking at other SPDAs so they will not roll into a new SPDA with a better new money rate. Rather, are they just getting out of SPDAs altogether. And where you saw our S and P curve going up in that graph you show us in fact that those are the people doing your escalator plan.

It seems to me that, especially in the nonqualified area, you need to be very careful that the differential you're measuring it against is other investment options, and not exclusively SPDAs.

Mr. Sondergeld: It makes for a very difficult analysis to try to figure out what it is they're looking at through options. One thing we did do that is a variation within an SPDA is we came up with something we called the net spread which is a difference between the market rate, and the credited rate net of surrender charge.

Virtually all the contracts had a negative spread. It's only when it turns positive in that definition that it "makes sense" to surrender. There's a financial incentive to surrender and get another fixed annuity somewhere else based on market rates.

The project oversight group said, well maybe you shouldn't totally write off the entire surrender charge at that point because perhaps the person is looking at these other alternatives, just as somebody who would be trying to refinance their home mortgage would have to pay 2% in points. They're not going to subtract the 2% points from the differential between the two rates in the first year.

They're going to want to know how many years it is going to take to write off the points. So what we decided to do is amortize the surrender charge over a three-year period. What we started out with was one year. It's a three-year period so the surrender charge effect wouldn't be so big. We tried a third thing, which is, if they're in a five-year interest guarantee right now, perhaps they're looking at other five-year guarantees. So we used five based on the interest guarantee period. All that did was take all those contracts with the negative net spread where there's no financial incentive and just shift them around. The spreads were still negative. It just changed the distribution. The longer the period in which you amortize, the closer towards positive they get, but they were still negative. It just moved the hump. And if we did it by interest guarantee period we actually got a bimodal distribution.

Virtually all the contracts with a positive net spread had no charge to begin with so it didn't really matter. So at least in this interest rate environment, the interest rates hadn't changed enough to impact the spread. It was because the surrender charge wasn't there. They might have had a positive net spread. That's why we need to have some different interest rate environments to be able to see what that impact will be.

Mr. Deakins: If we want to see the impact, we need to have a different interest environment.

Mr. Sondergeld: That's from a researcher's perspective, of course.

Mr. Deakins: One of the things you were saying is very important. It has always been hard to analyze this every time we've tried. When you're looking at small differentials, between what people can get in the market and what they're being credited, the noise in measuring that in the data is bigger than the effect you're measuring, so you can't get any reliable measurements.

There is no one right answer. A big question is, what do you compare it to when you're trying to do that type of a fitting or testing? What's appropriate is likely going to vary by marketplace and by distribution channel and a whole bunch of other things.

Mr. Sondergeld: First of all, what I was just talking about is on page 18 of the report. You wouldn't necessarily think that someone who owns a fixed annuity is going to think that's all he owns. Let's just say that the person is a conservative investor. Let's say he is 55 years old, and has had this fixed annuity for five years or seven years or whatever it is.

Your first thought is what are his investment alternatives? Let's assume again, and I know I'm making some assumptions here, that he is saving for retirement. You wouldn't expect that one of his first choices is going to be a variable annuity or mutual fund or some kind of stock-market-oriented, more risky type of investment because he has been in a relatively conservative investment for a long time. That's where it gets real difficult. Why are these people all of sudden going from fixed to variable? And how do you put that in your modeling? People are changing their risk profiles. Or is it that the risk profile is not changing but the salesperson is very good?

From the Floor: That's what I was going to say. I believe that in fact they are rather suggestible. And I think that the same thing happened in the mortgage market.

Even where there was no incentive for people to prepay or when the incentive was gone, they continued to prepay. Why? I suspect they got whipped into some sort of frenzy and they said, for a quarter point I'm gone. And they didn't really understand the analysis that would have led them to say, "It's going to take me a long time to make that up, and perhaps I won't even be in my house that long."

I think that they get to be suggestible. You had mentioned that you looked at something about the absolute level of rates, and I think many of these are 8–9% where you can get that locked in. That's relatively comfortable. If you go below that, people start to get antsy about wanting to lock up their money. And even somebody who is relatively risk adverse says 6%?

Mr. Sondergeld: Six percent was good 30 years ago.

From the Floor: Yes, but it depends on what their alternatives are. If they see the mutual funds have been posting double digit gains, gains in the 20s even, it's hard for them to feel good about the market.

Mr. Sondergeld: Right. And then people are getting more and more comfortable with some of those products because of the good return. Perhaps they are a little bit too comfortable.

From the Floor: And most of them aren't thinking about the downside.

Mr. Sondergeld: Many of these people haven't experienced a bear market either. So they are going to tell you they can pick funds and they know the market is going to keep going up because it always has and because they've been in the market for ten years, and it has never gone down. Regarding that mortgage analogy, many people also prepaid for nonfinancial reasons, like they moved or whatever.

From the Floor: During the period when it got to the point where they had never been before, the differentials have come to similar magnitudes since then. It hasn't been nearly that level. They didn't get to the same level. I guess anybody can make their guess, but I think part of it has to do with the fact that people might have refinanced three or four times during that period.

Mr. Sondergeld: We do plan on conducting this study again. We do have a fairly long list of minor changes and things people would like us to do. There are different types of data they want us to collect that we're going to try to incorporate.

We're hoping to send the next set of instructions out sometime in October, in order to collect two more years of data, which will bring us through the end of 1996. So we'll have a little more current picture than the prior study and the analysis should go much quicker this time.

We're also doing a life study and we're going to be sending instructions out soon.

Mr. Mehran S. Derderian: Do you plan on including two-tier annuities?

Mr. Sondergeld: That's I think one of the things in there. We didn't ask if the product was two-tiered or not. My guess is there aren't too many of those. They probably don't surrender as quickly because they can't.

There might be some in the study. We didn't ask specifically if the product was two-tiered or not. We're going to ask that in the next set of instructions.