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Session 58 OF
Credit Spreads, Asset Return Assumptions and the Fair Value of Liabilities

Track: Investment

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Panelists: Sam Gutterman
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Summary: This session presents both theoretical and practical perspectives of the role of assumed asset returns and credit spreads in determining the fair value of policyholder liabilities. It covers financial economics, how other financial service companies value liabilities, what factors go into determining an appropriate discount rate for insurance liabilities, and issues currently being debated by the International Accounting Standards Board.

MR. LARRY H. RUBIN: Last year, the actuarial profession came under criticism for its valuation methods. The critics blamed the actuaries for causing a crisis in pension funding. The criticism was that the actuarial cost methods for determining liabilities counted expected payments at a rate that reflected the expected return on the asset portfolio. The critics maintained that this created a bias toward risk in portfolios. Under financial economics, the liability for an amount owed should be independent of the resources set aside or planned to be set aside to satisfy these obligations. While this issue has not yet been resolved for pensions, a similar issue exists under current GAAP accounting and some of the proposals for fair value accounting. Our objective in this session is to debate this issue and hopefully begin a process whereby as a profession we can better defend the approach ultimately taken to fair value.

With this in mind, I'd like to introduce our panel. My name is Larry Rubin, and I'm an actuary with PricewaterhouseCoopers. Joining me is Hubert Mueller, a consultant with Tillinghast in Hartford, Conn. Hubert's expertise is in developing and implementing a framework for economic capital, actuarial evaluation, economic value added and asset liability management, and enterprise risk management. Sam Gutterman is with PricewaterhouseCoopers in Chicago. He is formerly the president of the Society of Actuaries and is currently the chairperson of the Committee on Insurance Accounting of the International Actuarial Association. Burt Jay recently retired after serving 40 years as senior vice president for Mutual of Omaha. Even though Burt retired, he continues to serve the profession as the vice president chair of the Academy's Risk Management and Financial Reporting Council and as the Academy's representative on the International Academy of Actuaries Actuarial Standards of Practice Subcommittee. In 2002, Burt received the Academy's Jarvis Farley Award for lifetime service to the actuarial profession. Hubert will begin by giving some context to the discussion.

MR. HUBERT B. MUELLER: I'd like to set the stage for the debate between Sam and Burt by giving you an overview of what's been happening in the market on credit risk, what we're seeing companies do, and why this is an issue that you should worry about as a company. I have a case study that looks at if you sold a single premium fixed deferred annuity how you can look at credit risk in a market-consistent framework, and what that would mean from a company's perspective in terms of its profitability. Those conclusions will set the stage for the debate.

You'd have to look at what other options and guarantees that we're offering as life insurers in the U.S. or North American marketplace. If you split it into different categories, there are a significant amount of living benefits out in the market right now: guaranteed minimum income benefits (GMIB), guaranteed minimum accumulation benefits (GMAB), and guaranteed minimum withdrawal benefits (GMWB) on variable annuities, or call options on equity-indexed annuities (EIAs) for people who are there to receive those benefits based on the index performance. We have mortality guarantees on term and universal life (UL). I think everybody knows about XXX and AXXX; they certainly have made the news beyond the actuarial world. We have guaranteed minimum death benefits (GMDB) risks on variable annuities. We also have significant interest rate guarantees on the UL/whole life products and variable products, as well as on the fixed annuities. Even though we're now lowering guarantees, for example, for fixed annuities down to 1.5 and 2 percent, remember that's only current new business. That doesn't apply to your existing in force, which goes all the way up to 4 to 4.5 percent guarantees for a lot of the typical in force that's on the books today.

But I'm focusing on credit risk on interest-sensitive products. That includes UL as well, but the bigger issue is really on the single premium side. That's something where all your assets come on right away, whereas with UL and flexible premium annuities you have some mechanism of adjusting over time because you get

regular premiums. Making a mistake there in the first year is not as bad as making a mistake if you have a single premium product.

I would contend that accepting credit risk is just like going to a casino—it's a gamble. If you're lucky, things work out well for you. You might purchase that junk bond at 3 or 4 percent above Treasury, and it pays a higher interest rate and you've done really well. In hindsight, you can say it was the right thing to do. But we certainly got hurt in 2001 and 2002 doing just that. If you look at the exposure for the industry over those two years, which were considered bad years, you can see that, as a percent of assets, the typical defaults for the larger companies playing in that market were anywhere in the range between 1 and 2.5 percent. AFLAC was up all the way to 2.4, and that was not including their recent Parmalat exposure. Hancock was at 1.4. The market average for the companies quoting data publicly was 1.25. I would contend that the typical company in that marketplace pricing for that sort of risk was probably only allowing something like 30 to 35 basis points as an allowance for defaults. You could say that if you've had seven good years and two bad years, it averages out. Maybe that's one way to look at it. But if you looked at the company's capital during those two years, it got significantly depleted, and there were quite a few companies, maybe the industry at large, that were downgraded as a result of not managing that risk properly. There's something that we can do better about it.

I don't think anybody would say that fair value is the only way to go. But certainly fair value accounting and market-consistent valuations would not give credit to those risk premiums that you're getting through the higher spreads until those premiums are earned. It's just like saying if you had a Treasury bond and a high-yield bond, at the point of purchase they're both worth $1,000, but maybe in one you're getting more interest than on the other. Over time, you might earn more interest on one than on the other, but you might have some volatility such as defaults. You don't know up front whether what you're getting in defaults is going to be more or less than what you're getting paid for, especially if you did a deterministic model. That could be very misleading, because if in the deterministic model the junk bond pays 3 percent extra and you're only allowing for 30 basis points credit risk, you know what the answer is going to be. The model is going to tell you that investing in junk is the way to go. Even if you did it stochastically you'd find different answers.

Even though I'm focusing on credit risk, the same statement would also be true looking at other risk premiums, such as prepayment risk on mortgages and liquidity premiums on some of the other assets. In a traditional actuarial world, we tend to project the risk premium more or less as a constant, discount it back to today and assume that that's going to be income. It counts toward our target spread. As the credit spreads got larger over the last couple of years, though not recently, the traditional actuarial approaches generally tended to overstate the value for asset intensive products—single premium deferred annuities (SPDAs), single premium

intermediate annuities (SPIAs), guaranteed investment contracts (GICs)—that would significantly rely on high-risk assets for the expected profit margin.

Table 1 shows how the spreads evolved over time, based on Bloomberg data. The spreads were fairly low in the 1990s, but spiked up in 2002. Near the high point of the market, even BBB was paying 2.34 percent above Treasury. Even the AAA was paying over one percent more than Treasuries.

Table 1

	1991	1993	1995	10/28/02	12/31/03	03/07/04
AAA	0.52%	0.28%	0.76%	1.11%	0.43%	0.45%
AA	0.73	0.49	0.71	1.34	0.56	0.56
A	1.06	0.81	1.01	1.85	0.68	0.68
BBB	1.71	1.39	1.47	2.34	1.20	1.14

Recent data shows those spreads have significantly contracted by more than half on the higher quality end and roughly half on the lower quality end. If you look at it on a bond-by-bond or name-by-name basis, you would see that credit spreads have been a leading indicator for the ratings. In fact, if you look at some of the actuarial and other literature on this, clearly some of the credit spread really is a liquidity spread. There was a paper on fair value from the Academy that said that a risk-free rate is not equal to a Treasury rate, but there should be some kind of a liquidity spread above the Treasury rate. Maybe the swap rate is the way to do it. In Europe, they use the LIBOR rate as the swap equivalent risk-free rate, which tends to be 40 or 50 basis points higher than the local Treasury rate. So some of the spread really is a liquidity spread. If you look at the data on the slide for AAA, 45 basis points, you could contend that's pretty much that liquidity spread.

Looking at the industry at the peak of the market at year end 2002, on average roughly 8 percent of a company's fixed income portfolio was rated below BBB, which is the lowest investment grade, or essentially non-investment grade. If you relate that as a percent of GAAP equity, you get pretty significant proportions—400 percent and more for some companies, 200 percent for the market overall. Clearly, quite a few companies were underestimating the exposure that they had. As the bonds got downgraded, it was like a spiral. There were a significant number of companies that had to raise capital gains by selling off some of their assets, such as home office properties that they've had for decades or maybe even centuries, to make up for some of the capital losses incurred. That's obviously something you can't do every year. You can only sell those once.

Chart 1 shows the default exposure for the industry overall. This is based on data from Moody's. The exposure was fairly moderate during the 1990s, including the commercial real estate and credit and some of the mortgage exposure. But it really spiked up. The peak was 2002 when $164 billion of assets went into default. Even 2003, which was a better year obviously, matches the level of the peaks of the early 1990s, so you can say it's calmed down. But it has not calmed to a level where you shouldn't worry about it.

Chart 2 looks more historically at a spread for an A-rated bond, which is probably the average quality of the fixed income portfolio today. The spread has come down significantly from a peak of almost 1.8 percent toward the end of 2002, down to about the 60 or 70 basis point range today. That may be a good place to be. It is certainly better to have contracted, I think everybody would agree.

When you track what's happening in the marketplace in terms of crediting rates, you actually find an interesting phenomenon. Chart 3 is based on data that we have at Tillinghast. We compare the median SPDA credited rate on new business, which is a large sample of approximately 300 products, with the six-month average of the five-year Treasury rate, which historically used to be a good indicator. In the 1990s, it tracks very closely. It tends to not go up as much in peaks; it tends to not go down as much in troughs, but it pretty much follows. In the last two to three years when defaults hit, the median crediting rate was higher than the six-month average of five-year Treasury by a significant margin. The insurance industry was giving away crediting rates beyond what it had been doing historically. That gap has been closing recently according to the data, but there's still a gap. On average, the industry is still paying a crediting rate above that long-term average.

From a traditional actuarial perspective, the cost of capital for going into lower credit quality investments only a small portion of the cost is involved. If you picked investment-grade bonds and you assess an average at 200 percent risk-based capital (RBC), you come out with roughly 0.6 percent of capital for those sorts of assets. If you looked at how much annual spread you need, it's only a small proportion. It tends to be about 10 percent. We assumed you would earn 5 percent pretax on the assets backing capital and discount on 10 percent. If you do the math in terms of what you earn on that capital and then discount it back, you'll find that the cost of those assets is roughly 10 percent of the capital that you have to hold on to. The spread is not a big issue. It doesn't cost you that much to invest in BBB from a pure actuarial type perspective.

Table 2 demonstrates that from a traditional actuarial perspective, in early 2003, you were actually better off going into lower quality credit. The excess of gross spread minus expected defaults, minus the capital charge, tended to increase the more you went into credit risk.

Table 2

Depending on the level of credit spreads, there may be a strong incentive to reduce credit quality

	Rating	Gross Spread[1]	Default & Expenses[2]	Capital Charge	Net Spread
@ 12/2003	AA	55 bps	9 bps	6 bps	40 bps
	A	65	14	6	45
	BBB	115	44	21	50
	BB	225	168	62	(5)
@ 3/2003	AA	85	9	6	70
	A	110	14	6	90
	BBB	180	44	21	115
	BB	450	168	62	220

[1] Source: Bloomberg

[2] Tillinghast data

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Interestingly enough, that picture reversed in the last nine months of the year. From the gross spreads, you subtract defaults and you subtract capital, and the net spreads are actually peaking at BBB, which is the lowest investment grade. Then they turn negative, so it doesn't pay to invest in BB, even from a traditional actuarial perspective.

To analyze what that means on a policy basis, we developed a simple case study using a generic SPDA product. We used a rough industry average right now, so you have an average size of $30,000, with some expenses. The target spread is 1.6 percent net of default and expenses, which originally was closer to 2 percent, and then we subtracted about 30 basis points of default and 10 basis points of expenses. There are some surrender charges and some lapse assumptions, including the typical shock lapse at the end of the surrender charge period. We did profit testing for 20 years and used the 5 percent level of capital, which was essentially what an A-rated company was assumed to be.

If you did that in the traditional actuarial world, deterministically, of course, you would find that if you earned 5.1 percent on your assets and you credited 3.5 percent, that would give you that 160 basis points target spread. If you discount profits at 9 percent, it would give you a profit margin of 0.66 percent of premium after tax or an internal rate of return (IRR) of 11 percent. We've done some profitability surveys in the industry, and from the data we had it looked like annuities were in the 10 to –12 percent range, so I would consider this 11 percent

result fairly representative of the industry. You can also ask how to get to the 1.6 percent spread. There are two ways to get there. One is obviously to take credit risk. The second is to allow for duration mismatch. Again, I would say that the industry overall with the lowering of rates until recently has gone out much further on the asset curve and has allowed for an increase in duration mismatch.

I interpret "market-consistent" as if somebody else were doing this outside the industry. How would they look at it? You can view market-consistent in the sense that everybody in the industry is doing it, But that's not necessarily the right perspective—market-consistent is in respect of how the financial markets would value that, and ultimately what the fair valuation is going to be. If you did that, then you would really discount that same liability at a rate that is consistent with the insurer's credit quality.

As seen in Table 3, assume a AA-rated insurer by S&P or Moody's. The spread for AA right now is 55 basis points, as we saw earlier. If you contrast the two approaches, you would allow for a spread of 55 basis points above the 3.5 percent, which gives you 4.05 percent for market-consistent. You would also discount at the same rate; that's your risk-adjusted rate for the spread you have. I did not allow for cost of capital in the market-consistent example. If we included that, that would be a small additional cost. But it would not be very big, because you'd also be earning at that rate on the asset, so the cost you have on capital is really a tax on investment earnings, which is almost negligible in this point. The results look markedly different between the traditional actuarial and the market-consistent valuations. The very same example tells you that on the basis of what you've been doing, your present value of profits is actually negative 2 percent after tax, rather than 0.66 percent, which is a huge difference in result.

Table 3

A market-consistent (fair) valuation of SPDA liabilities would discount liabilities at a rate consistent with the insurer's credit quality

- Assume an AA insurer credit quality with a 55bps spread
- Results are the same as assuming a AA rate for both asset earnings and risk discount rate

	Traditional	Market-Consistent
Earned Rate	5.10%	4.05%
Discount Rate	9.00	4.05
Cost of Capital	Yes	No*
PV @ Issue (% of Premiums)	0.66%	(2.03)%

* Financial theory would input some additional cost to holding capital, called "agency cost", as well as taxes on investment income on capital.

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You can see how the difference arises by looking at the cost of funds. If the credited rate equals the Treasury rate—at the point we did it was 3.5 percent and now it's 4.8 percent, but you could do the same example at the 4.8 level plus 1.6 percent and get the same result—if you look at the up-front commissions and expenses, they add about 1.05 percent. You then get some benefit from surrender charges, which give you an allowance bank of 0.13 percent. So your net cost of funds for this product is roughly 92 basis points above the Treasury rate. Again, if you were AA-rated, your cost of funds should only be 55 basis points if you went out in the open capital markets. There is a deficit of 37 basis points, which is the 92 minus the 55. If you apply an annuity factor to that, discounting at 9 or 10 percent, you get a factor of about 8. Then you adjust for tax, which is how you get your 2 percent loss. You can simplify this pretty easily.

Again, including cost of capital would slightly increase the market-consistent funding cost. I should also point out that this analysis did not allow for the fact that if you were getting defaults, you could pass on part of that to the policyholders by way of lowering the crediting rate over time. It might give you a bit of recovery on those defaults, but there would be a time-lag effect.

At current market rates, which the average right now is about 3.5 percent, selling the typical SPDA product does create an economic loss for the insurance companies. It's interesting to me that there are still companies out there selling business at 4.5 to 5 percent crediting rates. I don't see any banks crediting that

sort of rate on their business. Even the five-year CD doesn't give you that rate right now. In a way, there's a transfer of risk going on between the banks and the insurance companies, and the banks are snatching up those products because they wouldn't sell at that rate.

In a fair value accounting world, some of our current interest-sensitive products would definitely look less profitable than what we're used to, or what we've made our companies believe, or what we've made ourselves believe by doing traditional actuarial analysis. I would also say that a small change in credit spread can have a significant impact on profits, so just because credit spreads have come down doesn't mean the problem has gone away.

I think that companies need to be more open, or maybe that the methodologies need to be improved for assessing credit risk, given some of the recent bad experience. Clearly that has led to a loss of credibility among the rating agencies. S&P is just now turning back from their negative outlook to a neutral outlook on the industry. That's better than negative, but it's still not good. Obviously, that's not where you want to be in the long term.

Companies have to think about how they can creatively shift risks to policyholders, rather than just taking them on as a company. There are two ways to do that. If you compare a fixed annuity, you can go into variable. You have some risk with a fixed option, but you're shifting most of the investment risk to the policyholder because they are separate accounts. To the extent you're offering guarantees, you want to offer them on a rider basis and price appropriately for those guarantees. The second way is one we've seen an upsurge of most recently in the current yield curve environment, where the long rates have increased significantly over the last couple of months. Companies are now going back to developing market value adjusted (MVA) products with interest guarantees of one, three, five, seven, all the way out to 10 years, which then have market value adjustments if policyholders make early withdrawals or early surrenders.

If you want to measure credit risk appropriately, you do need to allow for volatility in spreads and defaults. You can't just do one or the other; you need to allow for both. We do know that some companies in the industry have started doing that. And, finally, I think you do need a sound asset/liability management (ALM) process to monitor the risks. Senior management, in the days of Sarbanes-Oxley, is very concerned about revenue volatility and very concerned about properly measuring the risk you're taking.

MR. SAM GUTTERMAN: This is a very interesting and complex topic. On the surface of it, the question could be looked at as we have in a debate, either are you in favor of it or are you against it, but this will be something that will continue to be discussed. My "pro" position is, in essence, a summary of an issue paper that the International Actuarial Association (IAA) put out a couple of years ago when responding to the International Accounting Standards Board 's (IASB) insurance

issues paper of December 1999. However, that doesn't necessarily mean that the IAA would agree with that today.

In addition, this is not suggesting that either the IAA or I personally am in favor or not in favor of fair value accounting. The question posed here is what is the impact of credit risk and particularly the company's own credit risk on a fair value basis, if, in fact, it was so adopted. Moving from the hypothetical to the current, right now if an insurance company has a financial instrument that's not an insurance contract, they will be subject to this under International Accounting Standards or if the FASB adopts or implements its current Concept 7. Interestingly enough, in the next couple of weeks FASB will be putting out an exposure draft on fair value of liabilities or fair value in general. I'm sure that this issue will be given some prominence so that people can comment on it. Therefore, it's a relevant, current and prospectively important topic.

In the pro position in our debate, I will be providing some accounting context and accounting criteria from which we can further discuss the issue. I will put forth the arguments against recognition and some possible alternatives, if, in fact, my position loses.

To give an accounting context, first of all, if you have a fair value measurement, what are its objectives? Although we are trying to look at both assets and liabilities, the context of this discussion is the fair valuation of a liability. It's not to say the fair valuation of an asset for which the market reflects some sort of credit quality in the instruments' value, but it typically is looking at the liability in a non-actively traded market.

The objectives of such a measurement are to provide useful financial information on a transparent basis and to avoid decisions made simply for accounting reasons. In the ongoing fair valuation discussion and debate, the emphasis is on true economic value and avoiding accounting arbitrage. A market-based system based on economic values for a market-traded instrument reflects expected cash flows to be received by its owners. But the question is, is this relevant in the measurement of a liability, especially if not traded or tradable?

The two key accounting criteria in accounting debates, at least at the international level, are relevance and reliability. It's useful to frame that discussion by looking at the definitions of these two items. First, the information must be relevant to the decision-making needs of users. If it's not relevant, if a user can't use that information, then that shouldn't be reflected in a financial statement. Second, as to reliability, the framework says a measurement should be free from material error and bias and can be depended upon by users to represent faithfully that which it purports to represent or could reasonably be expected to represent.

I now enter into my arguments. First, looking at the reliability criteria, the result of reflecting a change in the credit standing, though not necessarily the credit

standing itself, will produce illogical income statement results. This is an argument that has been often provided by insurance companies and banks with respect to this credit standing adjustment. If you have a company downgrade, the company results look better. If there is an upgrade, for example if an S&P market upgrades the company so that it looks stronger financially, the company results will automatically look worse. Does this provide reliable or relevant information, or does it potentially provide misleading results? In part, this is due to the independence of the liability and asset measurement. If the credit risk results from credit risks of its asset portfolio, for example, then the assets will be adjusted, but the liability may not necessarily be adjusted in the same time frame. So, is this relevant? It's more likely to be potentially misleading.

My second argument is that the credit standing of the risk of the insurance company doesn't transfer on the basis of fair values. There are a couple of different definitions of fair value, but in essence it's the amount that a company would exchange—the value of the instrument—would there be an asset or liability? The credit standing of the company doesn't transfer with that sale, so the credit standing of the current owner of the liability, or that entity that provides that obligation, is not really relevant to the transaction price. If a company can sell a liability to another company, the credit standing of the company that's currently holding the liability is not really relevant. It's been the credit quality of possibly the succeeding company, although arguments could be made that fair value is the fair value with the credit standing of the current company. They have to add that tag – line because they have to qualify the fact that the credit quality of the company is not really relevant on an exchange or sale. This is important because of the current lack of active markets and, in fact, the credit quality in a fair value context is not particularly relevant to the current value of the liability.

My third argument is that it results in a measurement mismatch of assets and liabilities. The IAA has not taken the position, and I believe at least in the near future it won't attempt to take a position, that fair valuation of liabilities is good or bad. But the one principle that the IAA has indicated is important is that in order to produce a relevant financial statement, there should be matching on the basis of the valuation of assets and liabilities. Due in part to the lack of recognition of intangible assets—the value of the company, the value of the management that could lead to a change in credit standing, whether it's a change in operational risk, credit risk or market risk—those risks don't automatically adjust or are reflected in the valuation of the tangible assets. In addition, the normal lags in recognizing changes in credit standing can create unreliable and unstable income, especially for non-traded financial instruments. For example, in a credit standing in a quarterly reporting entity, you might have a downgrade or potential downgrade in asset quality of a company, or the mortality experience turns worse. Whatever the risk underlying that instrument is, by the time the market recognizes that, you are often off by at least a quarter, so what you get is an instant mismatch. You get an increased volatility, rather than recognizing the asset and liability in the same

period. That means the measurement isn't perfect, and as long as measurement is not perfect, then you create less meaningful and less reliable results.

My fourth argument is that this whole concept is inconsistent with the going concern assumption of a company. Remember, we're not looking at the valuation measurement of an asset. We're looking at the measurement of a liability. In fact, one of the concepts in the framework of the IASB, although not with respect to FASB, is that the company is a going concern. By recognizing the credit quality of the individual company, you are, in effect, assuming that there is a probability or a possibility of a going concern. Therefore, being inconsistent is one of the fundamental assumptions of financial reporting of an entity.

In addition, the effect of credit-threatening events on cash flow is not particularly relevant to most users' decision-making processes or information use. For example, management typically doesn't recognize the probability of its own potential insolvency in making ordinary business decisions. In coming up with a business decision, a company will naturally assume that they will be an ongoing concern. Therefore, if you reflect in the liability the value of its own credit or demise, you have fundamentally inconsistent management decisions. It's the same thing with a creditor. Such credit defaults or future bankruptcies really result from future events. In an accounting framework, unlike an economic framework, it is usually as a result of historical or past events, and to reflect future events would be inconsistent with the accounting framework.

We've heard a lot about transparency. The whole emphasis on future financial reporting is to try to increase the transparency. If the liabilities are shown on a net basis, net of its own credit standing, you will tend to hide valuable information. Many users of a financial statement will want to know the size of the company's obligation, not necessarily net of its own credit spread. My fifth argument is that although it might be in part overcome by inclusion of an explicit contra-account or disclosure item, this brings up potentially moral hazards of an insurance company reporting on the possibility of its own demise.

My sixth argument involves the effect of accounting constraints. Revised IAS39, the international accounting instrument rule on financial instruments, requires a deposit floor. If applied, then the credit adjustment would often have a negligible effect. So why bother with this argument at all? If you're going to be using an entry fair value basis as opposed to an exit, which is an exchange, the entry value would in effect eliminate this issue altogether, because you've automatically assumed that this has been reflected. Therefore, no additional adjustments would be needed, and the value as indicated in the initial premium is the initial fair value, which you would treat accordingly.

Another accounting constraint is the implications of regulatory guarantees. If you look at Concept Statement 7 of FASB, which is the current U.S. guide to fair value measurement, it adds a reflection of future government actions, that is the effect of

future guarantee funds. I contend that this is a very difficult item to measure and to estimate. The possibility or potential effect of government guarantee funds by product line, by segment, by type of insurance company or by priority becomes a difficult, if not unreliable measure.

My seventh argument is even if it's theoretically okay, even if we get beyond the hurdle of these other issues of unreliability or not being relevant, it's often nonmeasurable. It's not measurable because of the lack of observable values of insurance company liabilities. It's not practical to measure directly. The only way method of measurement or calibration of these items is indirectly through the reflection of some kind of cost of capital on an entry value basis. The only way of doing it is to look at current market prices. A company that is no longer issuing business can't measure its differential between market price and its own prices. There are so many other factors there to calibrate this entry level that it leads to reliability issues. In addition, the problem of measurement is that it is subsequent to that policy's issue.

The eighth argument is an obligation–specific nature of measurement. A big practical concern is the credit adjustment would vary by duration of each cash flow by instrument for a multinational company. It may, because of different governmental constraints, vary by country or by line of business. The underlying question is how do you measure it? It's easy to say you can get a 45 basis point spread adjustment, but we're supposed to be measuring this on a contract-by-contract basis, an instrument-by-instrument basis, not on a company basis. Therefore, in order to do this properly, you would have to adjust every cash flow, or at least every grouping of cash flow, by instrument. That would be a monumental task, and even in today's world of supercomputers, this could be a challenge.

I also wanted to address third-party guarantees. Trying to identify the effects of them, with the complexity of partial guarantees, adjustments in allocations between the policyholder and the shareholder, can be very difficult.

There is an interesting question about whether you should reflect cash flows or discount rates. FASB's Concept Statement 7 says that you should be adjusting this preferably in cash flows. But in order to be able to measure that, you typically look at it in terms of discount rates or default rates. You get into a complex calculation or a question about how you do your credit risk adjustment.

If the rating is determined by the rating agencies, even though I think very highly of various rating agencies, the question is are they up to this and are they up to having their results being reflected directly in the liabilities? We get into the cycle of which comes first—the rating agency actions or the company liability calculation. It's very nice conceptually, but will it work practically? If management determines the rating, rather than in reference to a rating agency or the market because there is no market for these financial instruments, there may be a potential inherent

conflict of interest, because those responsible for measurement would be those being judged in the first place.

Lastly, there are a couple of possible alternatives. If you are interested in the economics, you might do this through disclosure. You might provide disclosure information resulting in capital adequacy, an indication sensitivity of your values or your liabilities to various changes and assumptions. However, I wonder, in terms of this debate at least, whether or not an adjustment in liability is the way we're going.

There may be appropriate separate rules for debt and interest-bearing instruments that might implicitly reflect the risk. In other words, particularly if you're doing a change in fair value, this may not be the appropriate method. But if you're doing it on the asset side and in an act of trading, you will implicitly have this reflection in an asset.

Separately there is an alternative that has been floated, which I'm not a keen fan of, where you could have a separate measurement initial with the entry value approach that reflects the initial price versus a subsequent measurement, therefore assuming the entry price at issue. Those are various alternatives that can be taken if you want to drive things economically.

Between this and the future investment margins, if you fully reflect this in your future investment margins, you may in some cases have a loss. For practical reasons, it may not be relevant to most users of financial statements, and it is not sufficiently reliable for the various reasons that I've put forth. The bottom line is that there is sufficient argument to support not reflecting credit risk in an insurance company's liability.

MR. BURTON D. JAY: Sam gave you a lengthy and well-thought-out series of arguments for not reflecting credit risk. In general, the practical problems with fair value accounting, particularly for insurance liabilities if not any financial liabilities, may be so large that one really seeks arguments to suggest that it's theoretically not the right thing to do either. I'm going to present the arguments of financial engineers, and some actuaries as well, for taking credit risk into account.

First, to cover a bit of background, both the IASB and FASB have a definition of fair value of financial liability in general. This could be an insurance contract liability, a bond that a company has issued or any other kind of financial liability. The fair value measurement is an amount for which the liability could be settled between knowledgeable, willing partners in an arm's length transaction. Alternatively, which means somewhat the same thing, it is the amount that an enterprise would have to pay a third party on the reporting date to assume the liability or the exit value.

Sam talked about the problems of fair value accounting for insurance liabilities. A market value can't be used for insurance liability because there is no market. The

insurance contract liabilities aren't traded freely in the market, at least not in this country. In some countries, there still exist some forms of assumption reinsurance where the whole responsibility is shifted from company to company. That might be a source in the future to look for a way of finding a value, what we call calibrating what the trade would be, but we don't have that now and it's certainly not true in this country.

For the prescribed hierarchy of valuation methods, if there isn't any market value for financial liability and there's not another similar financial instrument that you could use by reference in fair market value, then the rule is to discount the expected value of the cash flows. Generally, this requires projecting all of the cash flows or a large sampling of the cash flows using a stochastic model of some kind and then adjusting the values for risk—any kind of risk—as the market would adjust them for risk.

The focus of my comments is primarily going to be narrower than all those practical issues related to fair valuing insurance contract liabilities. There's already been a lot of discussion about the challenge to actuaries in developing the models that would be reliable, where two different actuaries would get the same result when measuring the fair value of a financial liability, or especially an insurance contract liability, under the same circumstances. My comments are only going to focus on whether the reported value of financial liability should be reduced to reflect the reporting entity's likelihood of default on these liabilities.

There was an article in the January 2004 *North American Actuarial Journal* called "Credit Standing and the Fair Value of Liabilities" written by Phillip Heckman. He uses an example that I'd like to refer to, because it's a simple example that illustrates the real issue without getting into other complexities. He talked about a company that's rated as a BBB that has a borrowing rate at 12 percent. At the same time, the risk-free borrowing rate, however you measure risk-free, is 5.8 percent. The bond matures in 10 years; it's a zero coupon bond. Mr. Heckman argues that the issuing company should initially book the liability at the risk-free borrowing rate or $5,690, which is $10,000 discounted for 10 years at the 5.8 percent risk-free borrowing rate. He says that any going concern should always be required to book the full amount it would have to pay, assuming there was zero chance of default.

At the BBB rated company's borrowing rate of 12 percent, the bond would actually be sold for $3,220, the amount that would be required because of the credit rating of the company. The purchaser who buys the bond would book the asset for what he paid for it—$3,220. Under current GAAP accounting and the proposed fair value accounting on the international scene, the issuing company would also book the liability at $3,220. Mr. Heckman argues against the way we do it now, even to that extent. Under the proposed fair value accounting as well, the liability would be restated on each reporting date to reflect the issuer's then current borrowing rate. The bond purchaser would restate his carrying value to the same amount.

The Academy issued a monograph called "Fair Value of Insurance Liabilities, Principles and Methods." I had the opportunity to chair that task force a couple of years ago. We explored this very issue in some depth without coming to a conclusion. The actuaries on our task force were split. Some of them could see both sides of the argument; others felt a lot of fervor for one point or the other, so we presented both sides. But the "pro" arguments that we presented included the following points. If a bond has a public market, which many bonds do, the value does indeed reflect the credit standing of the issuer of the bond. The issuing company might buy back the debt or issue more debt at the same current market value, which still reflects the issuing company's credit standing. If the liability was booked at a larger risk-free rate, as Mr. Heckman argues it ought to be, the issuing company could realize a windfall by extinguishing the debt at the lower market value. That doesn't seem to make sense. He argues that repurchase should only be taken into account if the actual terms of the repurchase are explicit in the contract. Presumably the contract would provide for full payback or the discounted value of full payback based on a default-free rate that the borrower is responsible for the full payment of the loan as long as the borrower is solvent. It's kind of a moral issue. In fact, I argue that his arguments more are moral arguments that really ignore the reality of what really happens in the real world. It's maybe not the way we would like it to be, but it's the way it is. If a bond is widely traded, anyone can buy it at its market value, again reflecting the credit standing of the issuer. If the issuing company buys it back, the debt is extinguished for that cost.

The key question is: Is the corporation a separate entity from the owners of the corporation? The Academy's monograph argues that fair value of a firm from the owners' perspective would reflect that the owners can walk away from the investment. His stock can't go below the zero; when the company's assets fall to equal or below the liabilities, the company is solvent and the shareholder can walk away with zero value. He doesn't have to come up with any difference. For the owners, the fair value of the firm's liability can't exceed the assets then because when the stock goes to zero, at that point the assets and liabilities are equal. This again requires that the value of the liabilities have to reflect the credit standing or the risk of default of the issuer.

Mr. Heckman's response is that the insolvency option (which it's often called) is an asset on the owners' account, but not on the corporation's account. The insolvency option, which is also called a put option, is the difference between the liability stated with and without reflecting the default risk. How much difference does reflecting default make in the carrying value of the liability? This might provide some insight into the reason for the different viewpoints. For this presentation, I'm going to argue that the primary purpose of the general purpose accounting system, not statutory accounting, but in this country GAAP or the general purpose accounting system is to provide information to the owners and prospective owners on whether or not they should buy, sell or hold shares of ownership in the company. Then the collective amounts of all of the shareholders for their interest in the firm is the account of the firm. It's the same thing. The firm doesn't have a

separate mind of its own and its own morality is different from the owners of the firm. The owners can always change management of the firm if they want to and change direction in any way they want to. They have the control. There are legal constraints, of course, but in general they have the control. They're not different.

Well, Sam, talked about the users of the financial statements, too, and mostly didn't focus on the owners and prospective owners, but talked about creditors and customers, employees maybe, and vendors and the community at large. They're all stakeholders. I would say that no single accounting system can really maximize the needs of each of the shareholders. They have different interests. The financial liabilities stated to reflect the reporting entity's credit standing provide, I would argue, the best reality for the owners and the prospective owners of the company. The other stakeholders may well have a different interest and may prefer to see the liability on a no-default risk basis.

Then is there one solution that can make everybody happy? Is there ever? But what about stating the financial liability on the balance sheet to reflect the credit standing of the company as I've been arguing, but then disclose the value of the put option, the difference either in a footnote or as a separate surplus item. Then if we would argue the prospective owners are not the primary users and that some of the others are the primary users, you could go the other way. You could state the liabilities on the basis of no credit risk, but then disclose the difference, the put option in the footnote, so either way anyone who has an interest can get to whichever value, whichever statement he has the most interest in. All the information that he needs is there somewhere.

Then what about insurance contract liabilities? The argument provided for bonds that I've just talked about. It can be extended and has been to insurance and annuity contract liabilities as well. There are other issues, of course, and Sam mentioned some of them, such as how to reflect the contingent insurance risk, the variability because of just the insurance risk itself and the liabilities values. This is a risk that would also be valued and should be reflected in fair value.

When the simple bond issue is decided, the extension to insurance contracts will be a topic again for another discussion that will take even longer than the one I just presented. Thank you.

MR. MUELLER: Now, as we promised we left a lot of time to hear from you, so we want to hear your comments on this issue more so than questions.

FROM THE FLOOR: It seems to me that credit risk on the asset side is analogous to mortality risk on the liability side, so would you not want to have consistent treatment when the credit risk spreads change similar to mortality studies over time?

MR. RUBIN: When the mortality risk is perceived to increase, the liabilities increase. When the perception of a credit risk of the financial instrument increases, it goes the opposite direction—that is, the expected values of future cash flows decreases. The question is, although there are risks, are they really analogous? While the first in terms of the change in the mortality risk would result in a reasonably resulting change in income statement, maybe the risk that we're talking about may not.

MR. JAY: I guess I would also add to that that the value presented should reflect the probability that the cash flow will occur or the amount of the cash flow. If mortality increases, the liability would go up, probably reflecting earlier payments of those cash flows. On the other side, a liability that is based on the credit standing to the extent that a liability may not be paid because a company that goes broke, as the credit standing of the company decreases, the probability of that payment occurring reduces as well because it won't be paid because the company becomes insolvent and is unable to pay it. As you get closer and closer to that point, the likelihood that the cash flow occurs reduces.

MR. B. JOHN MANISTRE: There's another way of looking at this, which I know has been written about quite extensively by Luc Girard over the years. I won't claim to have read and understood all of Luc's work, but essentially he says that you ought to be able to start with another principal or let's say whatever world you're in you've got some regulatory environment that you have to deal with and then you could back into the fair value of liability by starting off and applying what I'd say is a true market valuation to the distributable earnings as defined by whatever regulatory regimen you're in and say, "If I got market risk in my distributable earnings, I should discount those with appropriate risk neutral kind of processes. If the nature of exposure to credit risk means that there's credit risk in my distributable earnings, then I should properly reflect that." To me, at least as a starting principal, if I say I want my balance sheet surplus to be the risk-adjusted present value of future distributable earnings, doesn't that lead to, mathematically at least, a unique solution and a resolution of all these issues? Having stated that, I would ask the question of the two points of view we've been looking at—which of them would come closer to reaching that goal, or perhaps neither?

MR. JAY: I think we both probably have a response to that, but I would say that I worked on the Academy's Task Force on Fair Value. Sam was a participant in that and Luc was as well and Luc uses it in terms of calculating the internal rate of return or taking the required capital into account and the cost of capital, using methods that are more familiar to actuaries that he demonstrated that if consistent assumptions occurred that you would come back on either the fair value approach or the discounted earnings report taken across capital and come back with the same result either way, to the extent that the cost of capital reflects the credit standing of the company, which it generally does. The higher the credit standing is, the less money they can borrow money for and vice versa, then that would suggest

that the credit standing should also reflect the fair value if they produce the same results with consistent assumptions.

MR. GUTTERMAN: I have a little respect for the argument and the discussion. This is very closely related to the question of what is fair value in the first place and, at least right now, I doubt very much whether or not a purist fair value will actually be implemented. I think it gets into the underlying question, What is fair value? which is part of the discussion that we've had. I alluded to it with whether it should be an entry value or an exit value and if it's an entry value, is it the entry value of the particular instrument or is it the entry value of the market? If you have a credit standing that's different, does that drive the difference in your price? If it does, then the entry value would automatically adjust for that, which is similar to the argument Luc raised that the cost of capital is automatically adjusted for in a measurable market. The question is: What is going to be the applied fair value and how is it going to be calculated? It's not clear yet what that will be, but there are a lot of economic arguments underlying it, but you also have to realize that that embedded value approach, although right now it's being pushed by the CFO Forum in Europe, may not be the ultimate result.

UNIDENTIFIED SPEAKER: Also if you look at Luc's framework, it's really not consistent with either of these arguments because he is really taking the insurance company itself as one big asset-backed security, and what are the rules for how you would determine the value of an asset-backed security? You'd have to go into how S&P would rate it, how Moody's would rate it and then put some value on it.

MR. GUTTERMAN: Just like on the asset side, obviously a tranch of a particular asset might be put as a different credit quality if there's a different tranch in the same asset instrument. If you want to do an analogous situation, you may very well want to have a different credit standing adjustment in each set or element of cash flows because there's a different timing risk for credit cards, which brings us up to the tactical question of how do you do it.

MR. JAY: I would just add to that. If the same insurance company issues bonds and has insurance contract liabilities to the extent that policyholders have a primacy, they get paid first. You would have a difference in the effect on your bond issues from your contract liability.

MR. GUTTERMAN: One last comment. Any accounting standard setters are very careful to say it's not the default risk of the company that's a question. It's the credit quality of the financial instrument, which solves some problems, but creates other problems, like what is the credit quality of an insurance liability?

UNIDENTIFIED SPEAKER: Who does their own S&P? I agree with Mr. Gutterman. I really don't understand the purpose of taking inferred valuation if you're not going to buy or sell and if we're looking at a going concern from a credit analyst's point of view, the company, especially when you have a conglomerate of companies, those

companies that are available for sale, we treat them very differently in terms of looking at the credit quality. If the company's management tells us that their subsidiary is actually going to be sold, we have a totally different view of the credit aspect of that company. If they're always available for sale and take an inferred value, it's very questionable about what is the ongoing purpose of long-term capability or financial strength of the company especially with long-term liabilities. The other argument is, we might want to have an accounting standard so we can compare companies across the board especially, for example, on the bond side where a lot of companies were writing down bonds, but some others weren't. It took a year longer to do the same thing. We wanted to at least compare them across the board and we have to meet some kind of standards, but that could be additional reporting like some of you said, as opposed to changing an entire system that could cause more problems than really create especially for the analysts in the external community looking into the companies. It could be very confusing. There are a lot of assumptions, there is a lot of management flexibility in terms of what they can do which creates a lot of problems and in general, globally, it might be just too difficult to consistently apply standards. What is the purpose of this? It would have to be very clear in terms of the application. A better value, for example, would be to look at companies that are ready to be sold and that look like a better value from consultants and third-party analysis and their price at the end turns out to be totally subjective, whereas usually a third of that is embedded value, so it takes a little bit of the credibility out of the picture.

MR. MUELLER: There's a big development right now in Europe, that the European multinationals have a group of CFOs that has essentially agreed to publish embedded values on what's called a market consistent basis, which means that they're going to properly disclose the cost of options and guarantees for all their subsidiaries world wide, not just for the European subsidiaries. Some of the European multinationals have already started doing that. In fact, if you look to some of the recent embedded value disclosures for year-end 2003, for example, if you went to the AXA Web site you would find that in their embedded value disclosure they did have disclosure for the cost of options and guarantees. They have been done on a real-world basis so far, though, not on a risk-neutral basis, but the expectation is from the European CFO Forum that they will be able and willing to do that within the next year or two. Probably not by the end of 2004, but definitely by the end of 2005.

FROM THE FLOOR: You gave an example of credit spread narrowing over a nine-month period. I'm wondering, when you wrote up the new business back in March at wider spreads and spreads have narrowed over that nine-month period, do you not have the benefit of credit upgrades or lower expected defaults from that business that was written in March because something would have happened over that nine-month period for the spreads to narrow, so is there an offsetting gain on in-force block?

MR. MUELLER: That's an interesting question. I guess the first point is from a new business basis, the message was you get quite a significantly different answer if you looked at it a year ago versus three months ago. Also, if you started combining any trading profits from the in force with what you're doing on new business, you then have essentially also moved your in force stuff at the same level, so you can say, "Okay, I can use that to offset some of the risk," and in this case it actually worked in your favor because the credit spread narrowed, so the existing assets would trade up in market value. You're locking yourself then in, essentially, on the lower credited rate and the lower earned rate, so that's something you can do and it will help you offset some of the fluctuations, but you've now essentially locked yourself into that lower rate. If the picture had been the opposite and let's say March 2003 would have been the narrow picture and year-end 2003 would have been the wider picture as it was maybe more like in 2000, three years ago, would you have asked the same question?

FROM THE FLOOR: This is one of the issues we encounter when dealing with our senior management. When they see price spreads go out, they're saying, "Let's not buy more fixed income products." All I'm suggesting is that there is the duller averages approach that if you're going to be in there for the good times, be in there for the bad times as well.

MR. MUELLER: From what I've seen in the past, I don't see much correlation between the absolute level of credit spreads and defaults going future in the future. While there's a lot of correlation between relative credit spreads and default in any particular name or subset of names, you find that credit spreads blow out usually after you've had your disaster and they tighten right before the next disaster and the time you want to buy is probably when the absolute level is wide and then just avoid the ones that are relatively wide. Maybe you could see if you've seen anything similar.

FROM THE FLOOR: There are a lot of factors that go into the credit spread. An example is September 11. If you look at all the insurance companies, the spread widens beyond anybody's imagination. It looks like if you apply the full probabilities, it looks like everybody is going to default. Now those companies are doing fine, so you have to look at it in perspective.

UNIDENTIFIED SPEAKER: I think this brings up the question of timing, of recognition.

MS. SHIRLEY SHAO: I also had one observation. We actually looked below the BB to B. The relationship in the B is very different. In fact, we find out consistently B outperforms BB over the last 20 years, so that may be a market you want to look at, but it's a very thin market. If we just extend that table, that's the relationship we would see. On a separate issue, it always bothered me a little bit actually on statutory accounting, the relationship Larry just talked about because the regulators, as you know, would do the asset cash flow testing where you have to

look at the defaults and the spread going forward in a very long period of time. In the New York Special Consideration letter, they originally insisted that you should do these things consistently. In other words, when you do the projection you either do current spreads or current defaults going forward forever. As you know, a lot of this cash flow testing is 30 years, 90 years, whatever—or you do long term and long term. But we do cash flow testing by starting with current curves and almost by definition you have to add current spread because otherwise your relationship and market valuation would be really off, but at the same time the places you can get current spreads like K&V and all those models, they only look at the next year's current spread and you don't really want to use that for long-term projection, so in the last couple of years when the default and the spread relationship were really off when you saw a lot of the defaults, the regulars were really concerned with using that kind of relationship, but I don't know the answer. I'm just proposing that and seeing if anybody has any suggestions with that kind of dilemma.

UNIDENTIFIED SPEAKER: I have just one follow-up to Shirley's comment. Clearly cash flow testing is doing the analysis of reserve adequacy for a block of in-force business, so you already have those assets on the book. You've purchased those assets. You certainly can reflect your trading policy to the extent that you're trading and the assets are maturing over the course of the projection, but it's primarily sort of an in-force type of view whereas I was also looking at how you currently price new business and what optionality you're giving away to the policyholder, but maybe not quite offsetting risk factors.

FROM THE FLOOR: Right, I was talking more about reinsurance when you have new asset purchases in the model. I wasn't talking about the in-force block of assets.

UNIDENTIFIED SPEAKER: Larry, do you want to ask what side of the argument people are on so at least we have some clue?

MR. MUELLER: Maybe we'll do a quick pool. How many are on the side of not reflecting credit spread in the liabilities? And how many are on the side of reflecting credit spread in the calculation liabilities?

UNIDENTIFIED SPEAKER: That was pretty close.

MR. MUELLER: I guess that means our presenters did a great job because they were either to convince—either people came in with preconceived notions or they're able to convince different folks. Who isn't sure whether we should reflect current credit spread?

MR. GUTTERMAN: I'm not quite sure.

MR. JAY: Yes, I think we might all do it. In fact, as Sam and I discussed, we probably could have taken reverse sides. We know both arguments pretty well.

UNIDENTIFIED SPEAKER: And I'm not going to give an opinion.

UNIDENTIFIED SPEAKER: I think you shouldn't reflect credit spread in an amount over.

MR. MARK BURSINGER: We flip back and forth between the assets and liabilities in trying to compare what's appropriate on each side and I'm trying to think and visualize in terms of just what happens in the industrial sector. We've got Ford Motor Company, which issues their bonds. When rates change, those of us who have bought their bonds readily recognize that the value has changed. Part of the argument made is, we as an insurance companies are like lenders—we've invested those funds. As this all held together, would Ford Motor Company as the issuer of the debt, would they restate the value of their bonds when their credit spreads change and reflect that in their income statement? They'd have really volatile income statements if they did. That's probably the wildest idea.

UNIDENTIFIED SPEAKER: They don't change it after they issue the bonds, but at the time they issue the bonds they reflect the current standing at that time so different companies could issue the same kind of bonds and book different values because they had different credit standings at the time they issue it.

UNIDENTIFIED SPEAKER: Also, I don't believe you have to be consistent with debt that is raised for capital purposes versus your liabilities, because that's your primary business and that's what you're in business to do and I'm not so sure that you have to get to the same answer on both.

UNIDENTIFIED SPEAKER: That's probably where the gray area gets created.

UNIDENTIFIED SPEAKER: One of the reasons is that you have sort of an observable market with a rating instrument, which Mark talked about, but you don't really have an observable and liquid market for trading these insurance liabilities.

UNIDENTIFIED SPEAKER: And if you can't make your primary obligation, if you default on your debt, you'll restructure, you'll stay in business. If you can't make your insurance obligations, I'm not so sure you'll restructure and stay in business.

FROM THE FLOOR: ISR9 already has fair value accounting for financial instruments, and it's not in the primary statements. You'd have fair value in the disclosure, so I was wondering if you anticipate it will go down the road where insurance liabilities will be valued on a vastly different basis and are not really consistent with national instrument liabilities.

UNIDENTIFIED SPEAKER: That's a question that is currently under discussion. The IASB on the international side has formed or is in the process of forming two working groups, one looking at insurance contract liabilities and the other general financial instruments. They're both going to be looking at some fundamental

concepts or frameworks depending on your perspective in terms of what you call it, but they're going to be looking at some of those fundamental issues and whether or not there's a change to both. Hopefully they will have a consistent approach to both, because that makes sense. I think that the valuation of assets is far more developed than the valuation of liabilities and it's going to be—every indication I've seen—is you're going to have an honest and open discussion with interested parties that hopefully will be surfacing these issues. This is really an ongoing discussion/debate and I think whatever your perspectives, whether it's individuals through professional associations, through your entities or through entity associations, I think it's very important to communicate in a practical sense of what the implications of these are in terms of a transparent view of financial statements. That brings up the question: How do you report these and the impact on income statements? These are some very tricky issues and what we really want to do is come up with some meaningful financial reporting.

FROM THE FLOOR: I'd just like to tell you that for assets you can assume economic rationality and get a fair market value. For liabilities, you can't do that for policyholders because they don't have purely economic rationale for what they do, so fair market value is always going to have subjectivity and assumption, variance and bias in it that is just not going to go away and there's no way to square the circle on fair market value of liabilities.

UNIDENTIFIED SPEAKER: It always gets back to the way an insurance company operates. If they truly went to the capital markets and priced the options and their product, it would be insolvent because insurance companies don't exist to satisfy capital markets. They exist to satisfy policyholders and policyholder behavior and they take into account that capital markets are risk-averse and insurance companies are risk-takers and if you were to put them all into a risk-neutral framework, you'd probably end the reason for being in business.

UNIDENTIFIED SPEAKER: I'd like to make one more quick comment. Just ask all the participants in the debate—once you've adopted a system, whatever it is and once you've made a call on this issue and all the zillion other practical issues that you have to deal with, the reality is that drives management behavior and so my concern is that I don't want to wind up with an accounting system that ultimately motivates what I would call irrational behavior on the part of people managing the organization.

UNIDENTIFIED SPEAKER: You mean like the current one.

UNIDENTIFIED SPEAKER: The current one certainly has some aspects of that and I think everyone said that's something we want to get away from, but I think despite what may appear to be addressing some of the arguments that Sam raised, some of those results may be illogical, but perhaps those are the right things to do in order to motivate what I would say is proper risk management going forward.

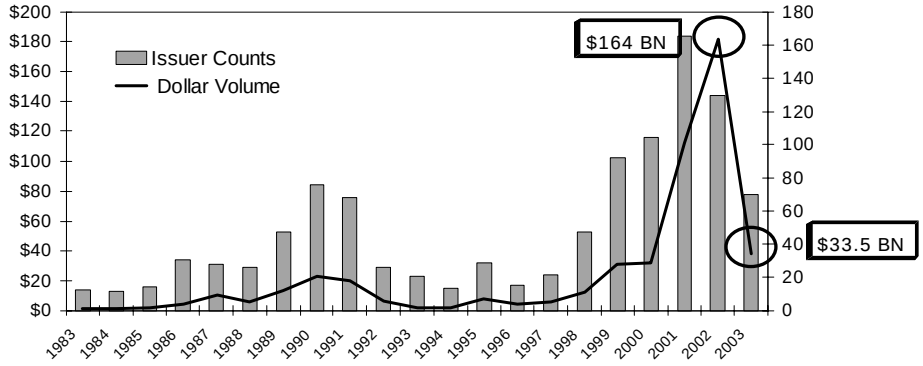
UNIDENTIFED SPEAKER: I think that's the whole purpose of financial reporting. I sometimes have significant problems when you make different decisions, constraints based on accounting while it may be inconsistent with underlying economics in terms of long-term value of a company. Therefore, nirvana is to be able to get accounting to reflect economic reality.

UNIDENTIFIED SPEAKER: Even today, of course, you have a lot of examples where management will make a decision to make next year look better even though in the longer term it's not a good decision.

Chart 1

Defaults jumped in 2001 & 2002, but declined in 2003

- Both by issuer counts and amounts



Source: Moody's

 8

Chart 2

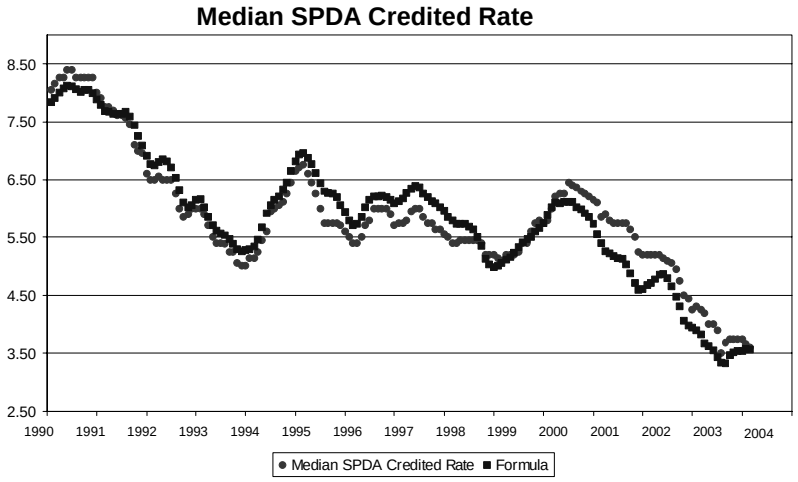
10-year "A" industrial spreads have declined to the level of the mid-1990s

Source: Bloomberg

 9

Chart 3

Credited rates on SPDAs have generally followed the recent downturn in interest rates



Source: Tillinghast

Formula Rate = 40% 3-mth avg + 30% 12-mth avg + 15% 36-mth avg + 75bp, where "avg" is average of 5-year treasury