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ASSET/LIABILITY ISSUES OF SYNTHETIC GICs

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What are the asset/liability implications of synthetic GICs? What are the investment risks, and how are companies handling these risks?

MS. CHERYL A. KRUEGER: We have three great presenters. They will be open to questions at the end of the presentation.

We have two synthetic GIC issuers and one buyer, who will speak in that order. Our first presenter is Joel Coleman. Joel leads Providian Capital Management's Group Retirement and Savings Sales Unit and is the product manager for traditional and synthetic GICs. Joel joined Providian Capital Management in 1992 as director of product development, where he was responsible for pricing and product design for the company's group pension and accumulation business.

Second, we have Daryle Johnson, an executive vice president of Pacific Mutual Life Insurance Company. Daryle is in charge of Pacific Mutual's pension business unit. He has been with Pacific Mutual for 38 years, and he serves on the company's management and investment committees. Pacific Mutual's managed and wrapped pension assets amount to approximately \$8 billion, and the company entered the synthetic GIC business in 1993. Finally, on the buyer side we have Allan Fen, Senior Vice President from Fidelity's Managed Income Group. Prior to joining Fidelity in 1987, Alan was the actuary responsible for John Hancock's nationwide GIC pricing, where he developed the GIC pricing and underwriting structure.

MR. JOEL L. COLEMAN: I'm going to speak mostly from the issuer's perspective and how we think about asset and liability considerations for synthetic GICs. I work at Providian Capital Management. (Providian was formerly called Capital Holding.) We're the investment arm for Providian, which does two things. We do all the investments for all of Providian's insurance affiliates, and we also market the accumulation (annuity) products. We currently have about \$7 billion in traditional GIC products and about \$11 billion in our trust GIC product (our synthetic product), which was started in 1991.

I was formerly the product development/risk management actuary for Providian and now I'm heading up the sales area.

I will talk about probably the most common type of synthetic, which has three defining characteristics. The first one is that the investment performance is passed through to the buyer, through the contract crediting rates. At the earlier session, they mentioned it's possible to do a whole lot more, such as make synthetics look like a traditional GIC with its guarantees. However, I am going to address the most common type, which is what we sell.

Second, the issuer guarantees benefit payments at book value. Essentially that means the AICPA definition of book value paid on employee-initiated events such as retirements, death, and disability. Finally, the insurer charges a fee for this benefit responsiveness. This is not a spread-based product like traditional GICs were.

There are essentially two risks arising from benefit responsiveness. The first one is due to minimum crediting rates. In an absolute sense the prospective crediting rate cannot fall below 0%. The second one is due to the impact of benefit payments. To the extent that there are interim fluctuations in the market value of the asset portfolio away from the account value or the book value, the asset performance may have exposure for the issuer. There are differing levels of participation in benefit payments. The issuer can take all the risk for benefit payments, or can pass most of it back through to the plan for participating-type contracts. With minimum crediting rates, if the assets totally fall out of bed, then the issuer is exposed. Benefit payments can be an exposure in and of themselves (nonparticipating contracts) or can affect the crediting rate. Although investment performance is intended to be passed through, the issuer retains at least a slight contingent risk. You can think of the minimum crediting rates and the impact of benefit payments as limitations on the ability to pass through investment performance.

What are the asset and liability implications? Issuers want to wrap securities with completely predictable, positive returns. You want to minimize the potential that the asset portfolio value will be unequal to book value over time. Purchasers typically want things like preservation of principal, stable crediting rates, crediting rates that track market yields, and diversification or elimination of credit risk.

From an issuer's perspective, high returns are not compelling, whereas from a purchaser's perspective, high returns are good. They're also generally not at the expense of some of these other things.

How do we bring a synthetic GIC together? From our perspective, the underlying investments are (and should be) the most important element to buyers. We expect our customers to select assets, and we construct the wrap to suit. Essentially, the assets are the dog and the wrap is the tail. That's not to say you can or should wrap any type of assets. You have to be very careful with that. I noticed in the program it said we would present an understanding of how you structure the investments to support synthetic GIC liabilities. We take the opposite approach. We try to ask, How do we structure the contract and the process to manage the risk?

During the remainder of my time I'm going to focus on issues that issuers need to resolve in this business. It's difficult to think about assets and liabilities separately for this product. The potential liability is, of course, the account value of the contract. I would argue that's not really the real liability. For example, if the market value of the portfolio is greater than the account value (or the book value), it doesn't mean you have a negative liability. By the same token, if the market value is less than the book value, it's not clear that's necessarily a liability, if you intend to pass it back through to the plan prospectively.

There are at least four considerations in determining the real liability. The first consideration is the underlying cash flows in the plan. The liability is a function of when the plan needs cash. This is determined by using a solid underwriting process. That's part art and

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part science. It's important to understand the risks and to only underwrite those that you can understand and manage.

The second issue is the benefit responsiveness type. Essentially, how are you going to make benefit payments? Is it a participating contract? Is it a nonparticipating contract where you take all the risk of the difference between book and market, if there's a benefit payment? Essentially, how much risk do you want to take with this kind of contract? The third issue is the contractual controls and limitations. An example of that is the exit provisions. How does the issuer get out of the contract? How does the buyer get out of the contract? How does the contract mature? You need to tie these things with underwriting. For example, we have limitations in our contract on changes to the plan structure.

Finally, a critical issue is ongoing monitoring. Much of this business is written as perpetual (managed accounts). It's important that you reunderwrite the business periodically to make sure that the liability looks the way you thought it was going to look when you put it on the books. Participant behavior shifts over time. Funds shift over time. You have to make sure that you're up to speed on that. You need to be aware of when and if the plan is ever going to need cash, and if it does, what happens?

With that being said about the liabilities, what about the assets? It's important to distinguish between two types of contracts. First, there's the buy-and-hold type of contract, where securities are held to maturity. They can be sold in certain circumstances, but are usually kept until maturity.

The second type is a managed contract where the assets are managed over time without a maturity. It's an evergreen type of structure. The process for each of these differs. There are four aspects to be discussed: (1) the asset manager approval process, (2) investment guidelines, (3) exclusions from book-value coverage, and (4) the monitoring process.

In terms of the asset and/or the manager approval process, again there are four considerations. First there are security types, applicable to both buy-and-hold and managed portfolios. You want predictable, stable asset types that you can depend on over time so that crediting rates can be reset accurately. The next two considerations are really more applicable to managed accounts. The second one is the strategy. You're looking for a sound strategy over time, with limited risk and high control, not just a past record of how a strategy did or a theoretical model of how a strategy might do. You need a proven, logical process where you understand where the performance comes from.

Third, you need to consider controls and risk management, to ensure that your manager has the process, the systems, and the expertise to control and manage the risks in the portfolio. Finally, reporting and monitoring are important for both buy and hold and managed portfolios. For buy and hold portfolios, can you get timely, accurate information on the cash flows so that you can reset crediting rates accordingly? For managed accounts, can you get accurate and timely information on portfolio holdings? Generally, you need a strict and disciplined process for approvals of either assets or managers.

The second asset consideration is investment guidelines. For managed accounts, you want to construct investment guidelines which allow the manager to have significant flexibility to add value and to manage risk, but not impair the wrap's ability to control risk. You

have to describe the appropriate cash-flow considerations for the portfolio as a whole and for individual securities.

The third asset consideration is exclusion from book-value coverage. There may be some risk that a wrap provider is not comfortable with in a wrap portfolio, but that a customer still wants. You can structure contracts to eliminate those risks. For example, in the event of one of these risks, you don't guarantee book-value coverage anymore. You then need to determine the accounting treatment of the book value.

The final asset consideration is the monitoring process. Again, as with the liabilities, we feel this is a critical part of the management of this block of business. Again, I have four considerations. The first is obvious—portfolio holdings versus guidelines in a managed account. You need the active involvement of skilled people who can act as independent auditors on the portfolio, and know what's actually in there. It's very difficult, sometimes, to know the details of the mortgage-type portfolios, but you need someone with the required level of expertise checking the portfolios to make sure you don't have exposures you're not aware of.

Second, is a reconciliation with custodial reporting. Is what you thought was in the portfolio actually there, and is it what your managers thought was actually there?

Third, you have to decide the frequency with which you're going to monitor portfolios. That can be a function of asset types or the type of portfolio. There may be some portfolios that need to be monitored more frequently than others. You can also use the monitoring process to reset crediting rates.

The final consideration is, in the event of violations of the investment guidelines or underperformance, it must be clear who is responsible. If a wrap provider and the manager are independent entities, it is difficult for the wrap provider to take the responsibility for these issues. Additionally, there needs to be a reporting process if one of those things happen. Who knows internally and externally and who needs to know?

Finally, I'll talk about four considerations in putting the assets and the liabilities together. The first one is obviously vital; it's the crediting rate. The second one is the maturity determination. This was mentioned in the session on synthetics as well, but in this case we're talking about buy-and-hold contracts. In the early days of synthetics, some issuers (mainly bank contracts), essentially guaranteed maturity on mortgage-backed instruments. Underwriters were pummeled when prepayment behavior became fairly violent. Today most buy-and-hold contracts mature whenever the underlying assets mature. This is one way to use the structure of the contract to eliminate an asset/liability mismatch.

The third element is horizon, a concept we use in thinking about risks in synthetic GICs from an investment perspective. The ability to pass the investment performance from the portfolio through prospective crediting rates depends on having time to do so. As long as you can predict the cash needs of the underlying plan liabilities, you can also determine what the horizon is (how long you have to pass through that performance). That's a function of underwriting, but in our view, it has a limit. For example, if you have excellent underwriting today, it's not clear that you will have excellent underwriting three or five years from now, so you need to tie your crediting rate and your contractual limitations to your horizon.

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Finally, contractual controls and provisions are important. These contracts are extremely flexible. They have a number of potential controls and provisions in them now, and I'm sure they'll have more in the years to come. For example, the interactions of your assets, your underwriting, your liabilities and your horizon may determine whether or not you want to issue a nonparticipating or a participating contract or something in-between. Your contractual controls are determined by your asset/liability considerations.

There's another example that can be triggered in your contracts based on portfolio performance, market value of the portfolio, or benefit payments. These may change the investment strategy or the crediting rates and therefore affect the asset/liability (AL) dynamics. As a final example, you need to figure out the contractual consequences if the portfolio falls outside of investment guidelines.

There are a number of considerations for crediting rate calculations. First and foremost, the issuers need to pass through the investment performance. Crediting rates are internal rate-of-return calculations that do that automatically. The crediting rate depends on what your horizon is and what you think the liability is going to be. Second, the client needs specific behaviors from the crediting rate. Desirable features for clients, like stability, are provided by a crediting rate design that gives those characteristics. You may need to alter your crediting rate in some circumstances. For example, under certain circumstances you may want to accelerate or slow down amortization of gains or losses, or if the contract is about to mature, you may need to change the crediting rate. You have to decide whether you're going to do crediting rates on a security-by-security basis or in aggregate. Finally, you have to decide the reset frequency. You need to be able to reset crediting rates frequently enough so that you can pass through investment performance, but you don't want to do it so frequently that you cause unnecessary volatility. Putting the assets and liabilities together is really the meat of what we're doing. We're trying to tie together the investment guidelines and the asset strategy to the liabilities and the horizon to construct the wrap.

In summary, there's tremendous flexibility in the product design and risk management in synthetic GICs. You need to structure the contractual controls to prudently connect the assets and liabilities. There are almost limitless tools available in these contracts to do that with. Finally, I probably didn't emphasize enough the strict monitoring and management required throughout the life of the business on both the asset and liability sides.






















MR. DARYLE G. JOHNSON: I'm with Pacific Mutual Life Insurance Company. We got into this business in 1993. We got out of it in 1994 because of some regulatory concerns in California, and now we're waiting to reenter the business. We have about \$1 billion of wrapped assets, compared with Joel, whose firm has over \$10 billion. I want to share with you what we've learned so far about this market.



Today in the stable value market, about 60% of the funds are in traditional GICs, 5% are separate account GICs and about 35% are synthetics. Separate account GICs have been losing favor, while synthetic GICs have been gaining popularity rapidly, especially with the very large plans.

Table 1 compares traditional GICs with separate account GICs and synthetics on a relative basis. (A box that is half shaded is less important, but not necessarily half as important as one that is fully shaded.) Although critical success factors for synthetics vary between

buy-and-hold contracts and actively managed contracts, I haven't distinguished them here. On the synthetic side, there are four boxes shaded in. They are extremely important if you're going to be in the synthetic GIC business. One of them is expenses. It's absolutely mandatory that you have reasonable and very low expenses to compete effectively in this market. Second, if you're going to be in the synthetic GIC business, you don't want to issue a synthetic GIC first and then worry about the asset/liability modeling (ALM) issues. You want to worry about the ALM issues upfront and then structure the synthetic GIC so that you eliminate the ALM issues. That's very, very important in this business. For product design, you have to be able to accommodate unique situations. Finally, underwriting is extremely important.

TABLE 1
GIC CRITICAL SUCCESS FACTORS

Critical Success Factors	Traditional	Separate Account	Synthetic*
Expenses			
Credit Rating			
ALM			
Asset Management			
Product Design			
Underwriting			
Investment Track Record			

Relative Importance  → 
High Low

* Assumes non-affiliated manager.

Table 2 compares how risks are shared or assumed by an issuer or a plan sponsor for traditional versus synthetic GICs. If the issuer (insurance company wrap provider or bank) defaults under a traditional GIC, the plan sponsor bears the risk. Synthetic GICs are structured such that there is only a risk if the book value exceeds the market value. Asset default in the case of a traditional GIC is assumed by the insurance company (the issuer). In the case of a synthetic, that risk is shared. If you have wrapped a portfolio of assets and one of the assets defaults, that's going to impact the investment performance, right? That investment performance is going to impact future interest rates that get credited. This is the risk being taken by the plan, or ultimately the plan participants. The provider or issuer assumes this risk only if the default experience is so bad that it drives the credited interest rate below zero.

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TABLE 2
RISK COMPARISON

Risk	Traditional GIC	Synthetic GIC
Issuer Default	Plan sponsor	N/A, except if BV > MV
Benefit Responsive/Liquidity	Issuer	Depends on wrapper structure
Asset Default	Issuer	Shared
Credited Rate Fluctuation	N/A	Plan
Investment Manager	Issuer	Shared
Interest Rate Risk (prepayment, extension, and so on)	Issuer	Shared
Book Value Maturity	Issuer	Issuer

Similar considerations apply to risks from the investment manager and interest rate risk. Book value maturity risk is assumed by the issuer, even in the case of a synthetic. Synthetics have maturity provisions, which allow termination at book value. The issuer must make sure that they're able to bring book value and market value into parity by the end of the termination period or maturity period.

Briefly, how do you value these wrappers? What are they worth and how should we set them up? A plan sponsor has a portfolio of assets that it carries at market value. On the liability side, they have a book-value record. To bring those two into sync, the wrapper has a value equal to that difference, as shown below.

ASSET/LIABILITY REVIEW

Asset	Liability
Market Value of Portfolio Owned by Plan Sponsor	Book Value Record
+	
Value of Wrapper = BV – MV	

Book Value Record	

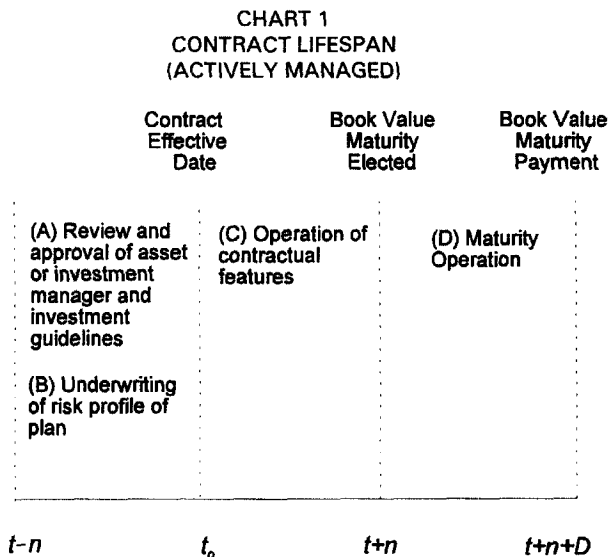
What are the issuer's risks? One is benefit responsiveness (nonparticipating). You can write these contracts as experience-rated for benefits or not. If the contract is not experience rated, the issuer makes good whenever there's a benefit withdrawal and book value is greater than market value. The risk from benefit responsiveness would not be shared with the plan.

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Second, there is the risk of book-value maturity, and finally, the 0% floor credited rate which was mentioned earlier. A synthetic GIC is very simple. It's nothing more than a device to pass through investment performance, however good or bad, through the credited interest rate mechanism. Market value fluctuations are smoothed out. The interest rate can't go below zero otherwise you would be invading principal. If investment experience is so poor that it would drive the credited rate below zero, the issuer has an exposure until market value recovers.

What risks are shared? First, there is the risk of asset default. If the experience is terrible, the issuer has some risk, but typically asset default experience simply impacts investment performance and causes future credited rates to be reset downward. In the case of an actively managed synthetic, both the issuer and the plan are exposed to the risk of how good a job the investment manager does. The benefit responsiveness risk is being shared under a participating arrangement, where benefit experience is passed along and impacts future interest rate resets. All of these risks are shared due to the zero credited rate floor.

Chart 1 shows the life span of a typical contract. Before you enter into one of these contracts, you must do two things. One is to review and approve the investment manager and the guidelines they are going to follow in managing the portfolio. You want to know if the managers have experience in managing defined-contribution plans. Do they know what the plan sponsor is striving for? Is the manager's style compatible with the guidelines?



Second, you must underwrite the risk profile of the plan. Suppose you were going to do a synthetic GIC and you were looking at wrapping J. P. Morgan's 401(k) plan versus McDonald's 401(k) plan. In the case of J. P. Morgan, you might decide that there is a likelihood of some selection. In the case of McDonald's, where the employees are scattered among many different locations across the country, you're probably not going to get that kind of selection.

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Table 3 gives more detail on reviewing and approving the investment manager and investment guidelines. It is important to do both qualitative and quantitative reviews of the manager. On the right-hand side, the five risks that are being impacted by review and approval of the investment manager and the investment guidelines are in bold. The only risk that you're not impacting is the benefit responsiveness risk.

You obviously need to look at the investment guidelines in terms of duration, the types of assets that are going to be allowed, and the credit quality that's going to be required. This is just traditional underwriting. It will be combined with underwriting the asset manager because their performance is going to impact the interest rate reset on your wrap, and that's what impacts your exposure or your risk.

**TABLE 3
MITIGATION OF RISK: REVIEW AND APPROVAL OF ASSET OR
INVESTMENT MANAGER AND INVESTMENT GUIDELINES**

	Risk Reduced	
	Shared	Issuer
1. Investment Manager Approval <ul style="list-style-type: none"> ● Qualitative Review ● Quantitative Review 	Asset Default Investment Manager Interest Rate Risk	Benefit Responsiveness Book Value Maturity 0% Floor Credited Rate
2. Investment Guidelines and Asset Approval <ul style="list-style-type: none"> ● Duration ● Liquidity ● Allowable asset types ● Credit quality ● Concentration limitations 		

Table 4 focuses on the underwriting of the risk profile of the plan. You want to look at the plan in terms of its historical cash flow, the way it's structured, whether there are buffer funds that stand ahead of your wrap that could be accessed in the case of benefit payments, etc. This is going to impact the benefit responsiveness risk.

**TABLE 4
MITIGATION OF RISK: UNDERWRITING OF RISK PROFILE OF PLAN**

	Risk Reduced	
	Shared	Issuer
<ul style="list-style-type: none"> ● Plan historical cash flow ● Plan structure ● Benefit payment methodology ● Type of contract desired experience rated vs nonexperience rated ●Use of buffer funds	Asset Default Investment Manager Interest Rate Risk	Benefit Responsiveness Book Value Maturity 0% Floor Credited Rate

You've underwritten the portfolio manager and the plan. You've agreed to wrap this portfolio, and you've agreed to certain terms. You've priced it, you've set a fee schedule and now you're in operation. The structure of the contract impacts some of the ongoing risks, as shown on Table 5. If you issue a wrapper and reset the interest rates once a year, 12 months in advance, you have to live with that interest rate regardless of the portfolio performance for the next 12 months. One way to reduce that risk is to reset interest rates more frequently.

TABLE 5
MITIGATION OF RISK: OPERATION OF CONTRACTUAL FEATURES

	Risk Reduced	
	Shared	Issuer
•Rate reset frequency	Asset Default	Benefit Responsiveness
•Amortization period	Investment Manager	Book Value Maturity
•Investment manager monitoring	Interest Rate Risk	0% Floor Credit Rate

When interest rates are reset, there will be a difference between book value and market value. What you're trying to do when you reset the rate is bring those two into parity at some future date (over the amortization period). Let's say you have market value losses (book value of assets greater than market value) in the portfolio. If those are being amortized over a three-year period, it will have a certain impact on the interest rate reset. The shorter the amortization period, the more you'll be tending to keep book and market together and mitigating that risk.

Investment manager monitoring is very important. Make sure that managers are following the investment guidelines. Make sure you're getting frequent reports on the market value of the portfolio and that market values are being reported accurately. All of these things are very important. You can't just put guidelines in place and then hope everything will work out because you don't have enough money in this product line to cover mistakes. You have to be structuring and monitoring so that you're taking almost no risk.

Once a plan decides to terminate one of these arrangements, the book value wrapper goes away and the plan is left with the portfolio of assets at market value. It might be that market value is less than book value and they want to preserve book-value reporting to participants. Where this is desirable, the contract contains a "put" feature, which allows maturity at book value. For this feature, you need a strategy to make sure that at the end of this maturity period, book value and market value will be brought into parity. You can do that by forcing the investment manager to use an immunized strategy in the portfolio, or you can require a collapsing duration, so that by the time you get to the end of this period, book value and market value are equal. You can use these techniques to mitigate the risks highlighted in Table 6.

This business is typically priced as a service business, not as a risk-based business. There's no room for mistakes from what I've been able to see. This business may have started out with annual fees at 25 or 30 basis points, and it's probably down today to half that amount.

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TABLE 6
MITIGATION OF RISK: MATURITY OPERATION

	Risk Reduced	
	Shared	Issuer
<ul style="list-style-type: none"> ● Immunized ● Collapsing duration 	Asset Default	Benefit Responsiveness
	Investment Manager	Book Value Maturity
	Interest Rate Risk	0% Floor Credited Rate

Insurance companies don't have any risk-based capital requirements on this business (at least not yet). Our company management has put internal risk-based capital standards on this business. I've seen fees that do nothing more than give us a return on our risk-based capital, which leaves nothing to cover expenses and risk.

New entrants are going to be coming into this business. It can't put too much more downward pressure on fees, I think, but there may be even more pressure.

If you want to get into the synthetic GIC business, if you have an appetite to do billions of dollars of business, if you're willing to look at your expenses on a marginal basis as opposed to a fully allocated basis, and if you're willing to accept low ROE, then maybe you, too, can get into the synthetic GIC business.

I have some brief comments on regulation. Banks are regulated by the office of the comptroller of the currency (OCC). They don't price on ROE the same way insurance companies do. They don't have the same risk-based capital standards as the insurance industry. I'm not sure exactly what banks do in this business. Insurance companies don't have any standards on a risk-based capital basis yet, but I think in time we will. The NAIC has a working group that's looking at the synthetic business.

We got out of the business in 1994 when the California Department found out we were doing it. There's nothing in the code that prohibits it. The department responded by saying there's nothing that authorizes it. We had a lot of discussion and finally decided for a number of reasons that we would not spend a blue chip on this item. They said they didn't think it was bad business, it's just not authorized business. We got a bill sponsored, and we have a bill that was passed and signed by Governor Wilson not too many weeks ago. Some of you are familiar with the bulletin that the department has been working on. There are drafts that are out and I think we're going to see the bulletin very soon. Part of the bill requires that you submit, to the California Department, a method of operations telling them how you're going to manage the risk, and why you're so smart and won't lose money and expose the general account. We have that filing pending and I'm hopeful we'll get that any day. Pacific Mutual does intend to get back in the synthetic GIC business very soon.

New York put out a circular letter originally that said this was not an authorized business for insurance companies. They recently reversed it. Circular Letter No. 12 (I believe), said that synthetic GIC issuance is acceptable as an ancillary activity for certain kinds of insurance companies. Again, if you want to do the business in New York, file your forms and get approval for it.

MR. ALLAN M. FEN: I'm going to give a buyer's perspective on the GIC business. I work at Fidelity and we manage the stable value or GIC portfolios for 401(k) plan sponsors and participants.

Listed below are companies that are active or inactive in the traditional GIC market. Insolvencies have helped synthetics become a growing business. Since 1991 when Executive Life and Mutual Benefit had their problems, many companies have left the GIC business. Very few have come in and a number of others have cut back. Most of that cutback (leaving the business) is related to credit issues. There have been outright failures like Confederation or MBL, or just downgrades. If you're below AA, you really can't play in the GIC business. A few companies like Mass Mutual and Lincoln National decided to opt out even though they were certainly viable GIC issuers.

SHRINKING GIC UNIVERSE—SINCE 1991

<u>Exits</u>	<u>Entrants</u>
● Executive Life	● Sun America
● MONY	● Protective
● Mutual Benefit	● ING Cos.
● Connecticut Mutual	● Combined
● Phoenix	● Jackson National
● Mass Mutual	
● Great West	<u>Less Available</u>
● Lincoln National	● General American
● Aetna	● Travelers
● Confederation Life	● Prudential
● N.E. Mutual	● CNA
● Nationwide	● Pan American
● Home Life	● Penn Mutual
● Equitable	● Provident Mutual
● NW National	
● Southwestern Life	
● Constitution Life	
● Provident National	
● Crown Life	

Instead of being a bundled GIC with the investment and the benefit responsiveness all in one structure, a synthetic GIC is unbundled and the investment is done separately (owned by the plan) and the wrap is provided by a third party (insurance company, bank, and so on).

This is the new universe in the world of stable value. Previously, there were traditional GICs and bank investment contract (BICs), at one end of the spectrum. Then there were buy-and-hold or single security synthetics in the industry. With this type, you buy and wrap an individual asset, often holding it to maturity, but sometimes swapping or trading it. The other type of synthetic is a wrap bond portfolio (often referred to as evergreens where you wrap a portfolio). It doesn't have a maturity; you just reset the rate from time to time. Some plans are actually using unwrapped bond positions so their fund has a fluctuating NAV. This is now the universe of types of products that stable value portfolios use; different combinations are used by different portfolios.

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Chart 2 shows how our asset allocation between sectors has looked over the past few years. Part of the move from traditional GICs is the continued credit issues that have caused problems with more and more issuers. In addition, the spread is tightening, which is probably related to the smaller universe of GIC issuers. Spreads have tightened more on GIC contracts than they have on their alternatives in the synthetic market for similar maturity and credit.

**CHART 2
FIDELITY MANAGED INCOME INVESTMENT PLACEMENT REPORT**

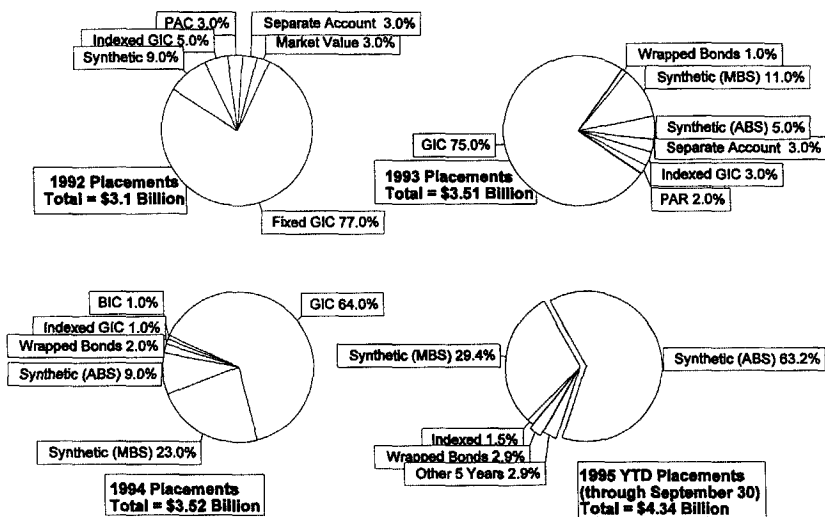


Chart 3 is an illustrative bidding chart. On a particular day, this is where we invested money for a particular plan. The triangles are GIC bids. You can see we're getting maybe seven or eight quotes from GIC issuers. It used to be 15 or 20 a few years ago. We actually invested in a Freddie Mac planned amortization class (PAC) I agency pass-through mortgage at one and three-quarter years, 6.01%. That's a synthetic. We also invested in an asset-backed security, the equipment loan trust. We also invested a third piece in a traditional GIC. Here is an illustration of the competitive environment and the spreads on GICs being tighter, particularly tighter than the asset-backed securities in the ranges where we're investing.

We have used a variety of asset types underlying the synthetic structures. We've used many credit card receivables and PAC bonds; we almost exclusively use PAC I. We use many auto loans, both retail and dealer loans. More recently, we've used commercial mortgage PACs, manufactured housing, whole loans, some corporate bonds and even some treasuries. We wrap treasuries (for some clients who are very credit sensitive), and some agency debt as well.

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CHART 3
FMIG BIDDING RESULTS

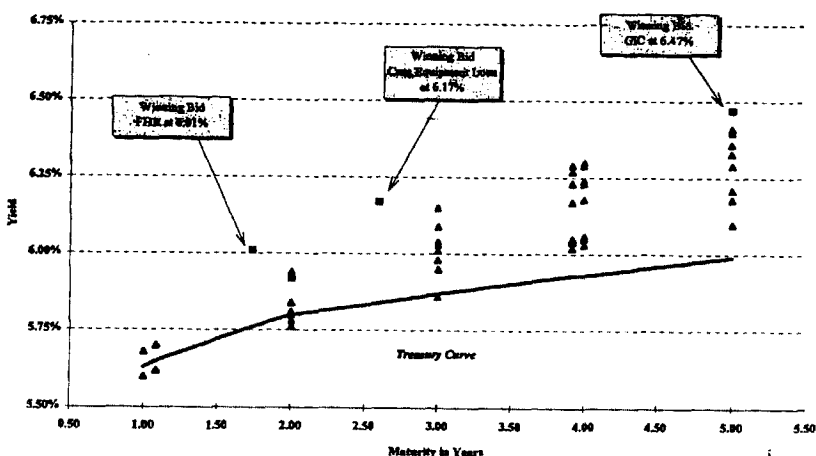


Table 7 gives an illustration of three securities that we wrapped. This was actually done very early in the year, right before rates started falling in January. Almost all of these are AAA or agency-backed credits. The standard credit card trust is a credit card receivable, AAA, with bullet maturity. The wrap fee is 15 basis points. The math doesn't quite work out between yield to maturity and net annual effective yield because you need to convert to an annual effective basis, which is how GICs are quoted. The middle one is a Freddie Mac. It has an amortizing structure with a payout window that's about 17 months, with the same 15 basis points wrap fee. Finally, there is an American Express credit card asset-backed security.

At Fidelity we have about \$20 billion under management. About \$7 billion of that is now in synthetics although, in the last nine months, two thirds of the money being invested has gone into synthetics. Of the \$7 billion, about 60% of it is asset backed of one type or another—credit cards, manufactured housing, auto loans. Maybe 35% is PAC and mortgage backed. The remainder is commercial mortgage backed, corporate bonds, and so on.

In our investment process, we look at the changing spreads of the different sectors—asset backed, mortgage backed and traditional GICs. That helps determine which sector you feel is attractive from a value standpoint. You not only consider spread, but you consider credit and prepayment risk and optionality. The spreads do change a lot on an absolute and a relative basis over time, as shown on Chart 4, so at some point traditional GICs might be attractive, and at some other points asset backed, mortgage backed or PACs may be more attractive.

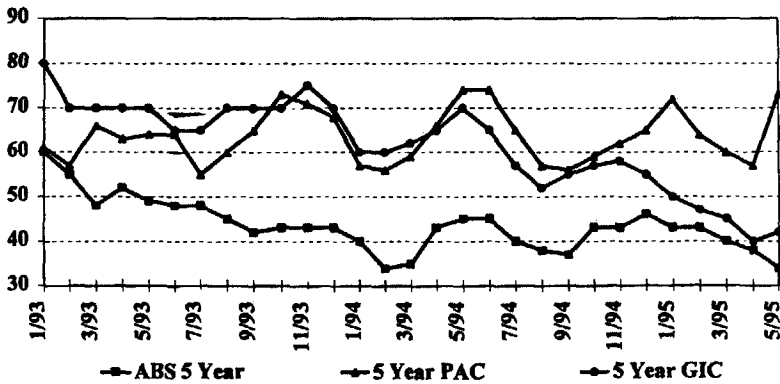
ASSET/LIABILITY ISSUES OF INVESTMENT GICs

TABLE 7
SYNTHETIC GIC—RECENT EXAMPLES*

Type	Asset Backed	Mortgage Backed	Asset Backed
Security	Standard Credit Card Master Trust 94-1A	FHLMC 1563C	AMEX 922A
Collateral	Credit Card Receivables	6.5%, 15 Year Mortgages	Credit Card Receivables
Rating	AAA	AAA	AAA
Expected Maturity	2/15/97	6/15/96-10/15/97	7/15/99
Average Life (Years)	2.13	2.18	4.50
Duration (Years)	1.97	2	3.70
Yield to Maturity	8.23%	8.32%	8.33%
Wrap Fee (Basis Points)	15	15	15
Annual Effective Yield	8.24%	8.34%	8.35%

*Fidelity has purchased these *synthetic* GICs instead of *traditional* GICs.

CHART 4
GIC, ABS, AND MBS SPREADS



I'm somewhat troubled by our large reliance on the three big sectors—traditional GICs, asset backed (particularly credit cards) and mortgage backed. We have to explore some new opportunities here. At Fidelity, we almost exclusively do the single security or buy-and-hold type of synthetics. We don't hire bond managers. We manage assets, we don't manage managers. We buy an asset-backed security, have somebody like Providian or Pacific Mutual wrap it, and put it into a client's portfolio. Our reliance on those three sectors is very heavy and we're looking at opportunities in other sectors, such as home equity loans, manufactured housing, commercial mortgages, whole loans and other types of mortgage-backed securities.

Listed below are some of the wrap issuers in the market. As Daryle mentioned, the list is growing. Credit isn't as important an issue as in the (traditional) GIC market. If you have a wrap issuer default, it's probably a nonevent. It might create a perception problem, but most of the time you could replace the wrap issuer without too much trouble; you may pay higher or lower fees, although fees tend to be coming down, so you could probably get lower fees at this point in time. Currently, issuers include insurance companies, and now we'll see more New York-licensed companies in this business, and foreign and domestic banks.

WRAP ISSUERS IN THE MARKET

- AIG
- Bankers Trust
- Chemical
- Deutsche
- Providian (Peoples Security Life)
- Provident Life and Accident
- J.P. Morgan
- National Westminster Bank
- RaboBank Nederland
- State Street Bank
- Union Bank of Switzerland
- Transamerica
- Pacific Mutual

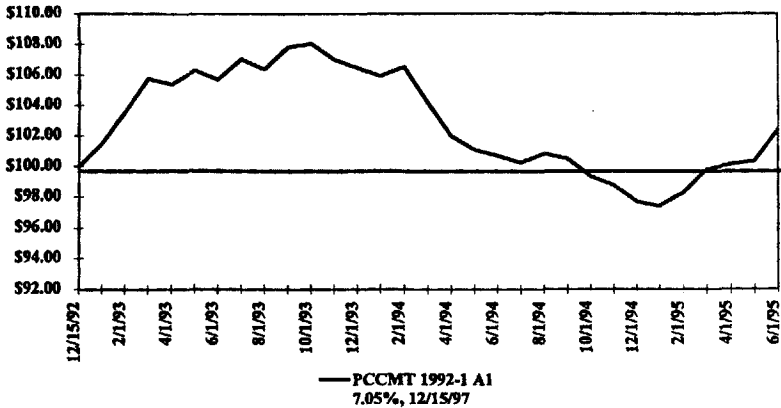
Fees are coming down. I still believe there's somewhat of a supply and demand imbalance. Only five or six of these issuers are in it in a big way and that probably does not provide as much diversification as you want among wrap issuers.

Risks to the buyer include prepayment/extension risk, credit exposure to the security, and unanticipated withdrawals when the market value of the security is less than the book value. The underlying asset, especially if it's a PAC or mortgage-backed security, may have prepayment and extension risk. Synthetic GICs are generally participating, so investment experience will be factored into a rate reset if there is an extension or prepayment of your underlying bond. If a security does default, that will be the plan's (participants') loss. The wrap issuer certainly won't take that risk. For the most part, the deals that we buy are participating, experience rated with respect to cash-flow variations (withdrawals in particular). The cash-flow risk is borne by the portfolio itself through rate resets. Again, since the credited rate cannot go below zero, a peripheral risk is borne by the issuer.

ASSET/LIABILITY ISSUES OF INVESTMENT GICs

Chart 5 shows a particular security and its price (market value) over a period of a couple of years. The risk to the issuer is when the market value is below book. We bought this asset at par, so book and par are the same. If the market value is less than book, and a lot of people withdraw so that we have to actually sell some of the asset to cover withdrawals, the issuer (wrap provider) does suffer a loss. He may not be able to recover it by rate resets. But that withdrawal has to be on the order of 50% or more of the plan assets. It's a very different kind of catastrophic coverage.

CHART 5
SINGLE SECURITY WRAP PROVIDER EXPOSURE



In summary, the wrap is a vehicle to amortize gains and losses. It's not meant to be real insurance. What we're trying to achieve is the accounting treatment that we need in a stable value portfolio, and most buyers of wrap contracts are not looking for any kind of protection. That's why most of the contracts are participating and have lower fees as a result. It's a way to rechannel a marketable security into a profile that's very stable and consistent with a GIC or stable value fund.

The issuer does have some risk with respect to market versus book values. For the most part, in this unbundled structure, the important components are the underlying asset credit and the prepayment structure of the underlying asset. The wrap is only needed for accounting purposes.

Table 8 shows an evergreen-type wrap. We don't do too many of these, but this also is relevant for a buy-and-hold or a single security type of wrap. The first column is the yield on the Lehman aggregate index over about 18 years in quarterly periods.

The second column is the total return on the Lehman aggregate for those quarterly periods. As rates go up, you have low or negative total returns. The third column shows the wrapper crediting rate. Had you wrapped the Lehman aggregate index at the beginning of this period, you would see the smoothing mechanism of a wrapped contract. The same thing applies with a buy-and-hold type of a structure, although the amortization period is not the duration of the portfolio as it is in this case; it's the payout structure of the remaining underlying single asset.

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TABLE 8
WRAPPED BOND PORTFOLIO LEHMAN AGGREGATE INDEX

Date	Lehman Aggregate Market Rates	Bond Portfolio's Total Return	Bond Portfolio's Credited Rate (Wrapped)
April 1977	1.82%	-0.81%	1.82%
July 1977	1.82	3.04	1.67
October 1977	1.79	0.90	1.72
January 1978	1.87	-0.10	1.75
April 1978	1.95	0.47	1.73
July 1978	2.03	-0.33	1.73
October 1978	2.15	2.70	1.74
January 1979	2.15	-1.40	1.80
April 1979	2.36	2.49	1.83
July 1979	2.33	3.91	1.83
October 1979	2.23	-1.26	1.85
January 1980	2.43	-3.08	1.87
April 1980	2.69	-8.17	1.84
July 1980	3.35	18.79	1.88
October 1980	2.45	-6.56	1.86
January 1981	2.97	1.36	1.89
April 1981	3.11	0.49	1.99
July 1981	3.25	-0.33	2.05
October 1981	3.45	-4.07	2.11
January 1982	3.89	10.58	2.19
April 1982	3.47	3.90	2.23
July 1982	3.49	2.84	2.33
October 1982	3.54	14.45	2.42
January 1983	2.94	8.47	2.45
April 1983	2.63	3.31	2.47
July 1983	2.62	1.55	2.50
October 1983	2.69	1.57	2.52
January 1984	2.75	1.70	2.53
April 1984	2.83	0.40	2.56
July 1984	2.97	-2.70	2.57
October 1984	3.28	8.78	2.62
January 1985	3.02	7.65	2.70
April 1985	2.73	2.24	2.68
July 1985	2.77	8.55	2.69
October 1985	2.46	2.13	2.69
January 1986	2.49	7.75	2.70
April 1986	2.25	7.76	2.73
July 1986	2.02	1.19	2.77
October 1986	2.02	2.37	2.68
January 1987	1.93	3.24	2.57
April 1987	1.88	1.65	2.57
July 1987	1.90	-1.78	2.53
October 1987	2.09	-2.73	2.48

ASSET/LIABILITY ISSUES OF INVESTMENT GICs

TABLE 8—CONTINUED

Date	Lehman Aggregate Market Rates	Bond Portfolio's Total Return	Bond Portfolio's Credited Rate (Wrapped)
January 1988	2.36%	5.81%	2.45%
April 1988	2.20	3.77	2.47
July 1988	2.12	1.17	2.47
October 1988	2.18	1.99	2.45
January 1989	2.23	0.75	2.48
April 1989	2.34	1.14	2.49
July 1989	2.41	7.96	2.49
October 1989	2.13	1.13	2.51
January 1990	2.18	3.71	2.48
April 1990	2.10	-0.80	2.46
July 1990	2.24	3.66	2.42
October 1990	2.18	0.85	2.42
January 1991	2.21	5.06	2.37
April 1991	2.07	2.81	2.37
July 1991	2.02	1.62	2.35
October 1991	2.04	5.68	2.33
January 1992	1.85	5.07	2.32
April 1992	1.63	-1.28	2.26
July 1992	1.82	4.04	2.24
October 1992	1.67	4.30	2.20
January 1993	1.51	0.26	2.15
April 1993	1.62	4.14	2.15
July 1993	1.47	2.66	2.11
October 1993	1.41	2.61	2.08
January 1994	1.36	0.05	2.06
April 1994	1.42	-2.87	2.01
July 1994	1.65	-1.03	1.96
October 1994	1.80	0.61	1.94
January 1995	1.87	0.38	1.93
April 1995	1.99	5.04	1.97
July 1995	1.83	6.09	1.97
October 1995	1.61	1.96	1.98
January 1996	1.61	4.26	1.98
April 1996	1.47	-1.77	1.96
July 1996	1.63	0.57	1.92

MR. FREDERICK S. TOWNSEND, JR.: I'd like to ask each of the speakers, from a credit risk point of view, what's the riskiest synthetic GIC you have issued or are willing to issue?

MR. COLEMAN: From a credit risk perspective?

MR. TOWNSEND: Yes. All these synthetic GICs have AAA assets exclusively.

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MR. COLEMAN: We have some portfolios that go to BBB in small segments, which is as low as we go. In terms of credit, the riskiest portfolio we have is one that will go 10% in the BBB securities.

MR. JOHNSON: Fred, we have not issued any that have below-investment-grade securities in them but I don't see why we couldn't. It's not that we necessarily have a prohibition against it. We would be very careful the way we would structure the contract, but it could be done.

MR. FEN: Wrap issuers stick to investment grade issues. On the buyer's side, that's reasonable when you have a whole portfolio. When you're dealing with single securities as we are, we generally stick to AAA or agency type of credits.

MR. TOWNSEND: I guess that's what I would expect, but now that the investment performance is passed on to the buyer of the contract, I assume they want a risk-free portfolio. Are you aware of any plan sponsors that have been sued because of below-average performance on a synthetic GIC contract?

MR. COLEMAN: I'm not.

MR. JOHNSON: I'm not either.

MR. FEN: Unless we do Treasuries, there's no risk-free portfolio, but I'm not aware of any lawsuits.

FROM THE FLOOR: Could you address the 12-month put feature and how that affects the way you look at selling to pools?

MR. COLEMAN: For pools, we put in our contracts a provision that makes the 12-month put participating. Essentially, if there is a 12-month put exercised, we amortize the gain or losses in your portfolio over that 12-month period, so we have an additional layer of participation built into our contracts. Also there is a pricing difference for pools.

MR. JOHNSON: We have not done a synthetic for a pool. I never liked the 12-month provisions on the pools even for traditional GICs.

MR. FEN: From the buyer's side, I have a much more benign view of the 12-month put. Like book-value accounting, that was there mainly to satisfy (I believe) the OCC in terms of bank pool regulations. It's also there because you do have to allow the participants in a pool to get out at some time, whether it's a year or longer. Having an out in your contracts consistent with that for your underlying plans makes a lot of sense. Since our clients can get out with one year's notice, we do feel we are obligated to have a put feature, even if we do not intend to use it. In case there is a run on the bank, we can actually pay them out as we promised.

FROM THE FLOOR: You've talked about participating contracts and eliminating risk. I'm curious whether there's any role for risk assumption in the wrap market, either from the plan's perspective or from the traditional insurance company perspective of providing risk management.

ASSET/LIABILITY ISSUES OF INVESTMENT GICs

MR. JOHNSON: We've been out talking to a number of people about our intent to reenter the market. We have seen a fair number of requests to write these contracts on a nonparticipating basis with a benefit responsiveness feature, such that when book is below market and we have a withdrawal, we have to make good on it. We will not quote those contracts, so I can tell you there is no move at Pacific Mutual in that direction.

MR. COLEMAN: The majority of our customers would mirror what Alan said. Basically, they're after the book-value accounting aspect and are not all that interested in paying the price for having us take significant amounts of risk. Most of our business is very participating, as participating as you can get, and that's where most of the demand is. I'm not a seller right now of nonparticipating contracts.

MR. FEN: Nobody wants to take the risk on the investment side because it will cause all sorts of reserve problems, but on the underwriting or benefit responsiveness side, there could be value. I'd leave that open to having some value added at the right price, but we have seen, even on traditional GICs, that the underwriting per se before synthetics has been losing significance, that people have been insulating their fund from benefit withdrawals and trying to reduce the underwriting charges. I don't think that was necessarily related to synthetic GICs. It just carried over into the investment side as well.

MR. JOHNSON: You can make a good plug for a traditional GIC here. You have plan sponsors going to portfolios where they want high credit and no foreign exposure. They can't get a wrap that provides nonparticipating benefit responsiveness. The traditional GIC does all that, but synthetic is a completely different animal.

MS. JACQUELINE D. GRIFFIN: Since you're purchasing book-value accounting, could you talk about what value you see to diversifying your wrap providers and what's a comfortable level of diversification?

MR. FEN: The credit of the wrap provider is not nearly as sensitive as the credit of a GIC issuer. If a wrap provider goes away, it's not going to be a real problem to replace them. In the worst case, you have an underlying asset there that's marked to market. At Fidelity we don't require nearly the kinds of diversification that we require of (traditional) GIC issuers, but I still would be uncomfortable if 30% of my portfolio was wrapped with one issuer, it changes the negotiating leverage you have due to the control that one issuer has over your investment strategy.

FROM THE FLOOR: I was just wondering about the experience of wrapper providers—have any of them incurred any losses on participating deals or nonparticipating deals or have they just been pocketing fees up until now?

MR. COLEMAN: I can only speak anecdotally. We have not had losses on our book of business at this point. There are people who made substitute investment guarantees, which appeared weak at the time, but turned out to be not so weak. Some of them did take losses, but I don't know what the extent of those were. I also know that a couple of banks have taken losses on nonparticipating type of contracts just from benefit payment experience.

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MR. JOHNSON: I'd have to admit that we had to "pay off" on one of the early contracts we wrote. I mentioned that at Pacific Mutual there is no move to write nonparticipating benefit responsiveness contracts. In one of our early contracts, we agreed to a provision wherein we would experience rate gains against losses, but at the end of so many years, if we owed money, we had to pay off. We recently had to pay off on one. I think our charges covered it, but we did have to pay.

MR. FEN: What Joel said is right. A couple of issuers, earlier on, guaranteed the maturity within a very tight range. The underlying security was mortgage backed. In 1993, they lost a fair amount of money, but most of the wrap issuers coming into business these days won't even think about taking that risk. They don't really think about taking the benefit responsive risk. They're just collecting fees for issuing monthly statements.

MR. NICHOLAS BAUER: We Canadians don't have a synthetic market yet and there's one aspect that I'm particularly confused by. It appears that the fully nonparticipating benefit responsive contract is exactly the same as a GIC guarantee with the asset removed. Why would you not write the nonparticipating guarantee and be happy to write the GIC itself? Second, I would like a simple explanation of why the book-value accounting is so valuable that people are willing to pay fees for it.

MR. JOHNSON: We haven't been able to get the margins we think we need in pricing to cover the risk—it's that simple.

MR. COLEMAN: I'm not opposed to writing a nonparticipating contract because we take almost the same risk if you take the asset out, but the pricing today for nonparticipating contracts is too close to par for me.

MR. FEN: On the traditional GIC side, more people going to participating for the cash-flow experience just like they're doing for the participating synthetics. To answer the second question, Table 8 shows the reason most people believe that book-value accounting is so popular. The return profile is just much less volatile and you can see it in any plan that has a bond fund and a GIC type of portfolio. The bond fund, when they have both of those options, is usually much less popular than the GIC stable value.

MR. COLEMAN: Basically, I think employers don't like to have to explain to employees why they lost money.

MR. JOHNSON: Some plans do not offer a stable value option.