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**SYNTHETIC GUARANTEED INVESTMENT  
CONTRACTS (GICs): AN OVERVIEW**

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*Synthetic GICs are gaining popularity. What are these products? What are the product development and investment implications? What is the current regulatory environment?*

MR. KLAUS O. SHIGLEY: Before I introduce our very fine panel, I want to spend a little bit of time defining what we mean by a synthetic GIC and provide just a little background on the entire GIC market. I know there are many ringers out here, so you're going to have to bear with me, because I think there are also some generalists in here. GICs today are issued primarily in a defined-contribution market, which is now over a trillion dollars. Most of these are retirement savings plans where the employee makes the investment decisions. The most commonly selected investment option in these plans is the diversified equity, employer stock, and what used to be called the GIC option.

For at least the last two years, the GIC option has been redesignated as the stable value of a fixed-income option. The allocation to stable value in these participant-directed plans represents about 31% of the assets in these plans. We estimate the total GIC market is currently about \$250 billion. Now, the ideal stable value fund responds to interest rates a little like a money market fund, but has the returns which we would normally associate with a bond fund. Thus, the main challenge for the investment manager of the stable value fund is to maintain a stable crediting rate that never gets too far away from current intermediate bond rates.

For a long time, the traditional GIC was the only answer for meeting the investment objectives of the stable value fund. Traditional GICs are characterized by a full suite of guarantees—guaranteed fixed rate, guaranteed fixed maturity date, all participant transaction on a fully guaranteed basis with gains and losses absorbed by the GIC issuer, traditional GICs issued primarily by insurance companies, and the assets supporting these GICs maintained in the general account.

Then came some key historical events which changed this tidy little picture. First came the 1991 insurance company insolvencies of Executive Life, Mutual Benefit, and later Confederation Life. These created an intense desire to diversify away from the insurance industry. Then in 1994 the American Institute of Certified Public Accountants (AICPA) clarified the accounting treatment for GICs. The AICPA took the position that as long as participants could access account balances from an investment contract without

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unreasonable restrictions at book value, then these investment contracts could be valued at book value.

Now, this position legitimized book value treatment for an entirely new variety of investment contracts with much weaker guarantees than those contained in the traditional GIC contract. These two events gave a kick start to the emerging GIC industry. More recently, New York withdrew its objection to the issuance of synthetics for insurance companies licensed in New York. This opened up a mad scramble by the insurance industry to develop synthetic GICs.

So what is a synthetic GIC? To get a handle on what a synthetic GIC is, start with a traditional GIC and see what we need to do to change it into a synthetic. First, we unbundle or separate the investment manager from the guarantee provider, and the entity that provides the guarantee is called the wrap provider. The concept here is not unlike what's happening with some variable annuity or variable life contracts where the insurer wraps some other investment manager's funds.

Next, the assets are removed from the general account and held either in the separate account or in a trust. When assets are held in the separate account, the synthetic GIC is often called an alternative GIC. When assets are held in a trust, we generally refer to this as the true synthetic. The distinction is that in a true synthetic, the plan owns the assets. In an alternative GIC, the assets are held in a separate account and the insurer has title to the assets.

Many people feel that this is a distinction without a difference. However, there are real purchase decisions that make this an important distinction. The additional comfort of owning the assets brings with it some additional baggage. If the plan wants to own the assets, it's necessary to have a custodian. If there's a custodian, then it's necessary to have a three-way contract between the investment manager, the wrap provider, and the custodian. This introduces many moving parts compared with the simplicity of a traditional or separate account GIC. It can also add some Employee Retirement Income Security Act of 1974 (ERISA) complications.

Finally, synthetic GIC contracts usually come with a menu of guarantees which range from fully guaranteed or nonparticipating to almost no guarantee or participating. Either type of guarantee—participating or nonparticipating—can apply separately to the asset risk or the benefit-responsive risk. Now, this fragmentation of the guarantees relates back to the AICPA ruling which holds that as long as participants can transact at book value, the investment contract can be almost anything it wants to be and still be valued at book.

Thus, we're seeing much investment risk absorbed by the plan that used to be absorbed by the GIC issuer, but this aspect is no longer unique to synthetic GICs. General account GICs also are being designed to carry weak or weaker guarantees. My best guess at the current market share is that synthetic GICs are roughly 25% of the GIC market and headed in the direction of 40%. Thus, I think we're seeing that synthetic GICs are approaching the neighborhood of a \$100 billion market.

Our three speakers will elaborate on three different aspects of the synthetic GICs. Mark Goldman is actuarial director at John Hancock. He was heavily involved in the start-up

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phase of alternative GICs, and he's currently responsible for pricing and underwriting of alternative GICs. He will talk about the role of the investment manager in the creation of a synthetic GIC.

Jim McDevitt is vice president at State Street Bank & Trust in the Capital Markets Division. Jim has been associated with GICs for over 20 years from various perspectives. He was a senior vice president at The New England, responsible for the GIC business unit before moving to Stable Value Group at State Street. His current job at State Street is head of the business unit which provides the stand-alone wraps. Jim will address the responsibilities of the wrap provider in the manufacturing of the synthetic GIC.

Judy Markland is president of Landmark Strategies, a firm which specializes in strategic planning. Judy is an economist by training. She's a former president of the National Association of Business Economists, as well as a former head of the GIC Business Unit at John Hancock. In 1995, she was selected by her peers as the most respected GIC professional of the year. Judy will address some of the strategic choices that need to be addressed by companies that wish to enter the synthetic GIC business.

MR. MARK JOSEPH GOLDMAN: I want to give you the investment manager's perspective on the synthetic GIC market today. As Klaus mentioned, in a true synthetic GIC, there's a three-party arrangement among an investment manager, the plan and the wrap provider. When I refer to the plan for the rest of my speech, I'm talking about the stable value option of the defined-contribution plan. The three-party agreement is among the investment manager, the plan, and the wrap provider. In the case of separate account GICs, where I have most of my experience, the investment manager and the wrap provider are combined.

Now, I've had more experience on the wrap-provider side, but I've had enough interaction with our investment managers in working with plans directly that I'm sure I can give you a fair overview of the investment manager's view on this synthetic GIC market. Now, since I'm taking on sort of a new persona today, allow me, if you will, to take on the persona of one of Tom Wolfe's characters in *Bonfire of the Vanities*. One of the bond traders had this kind of view of himself.

For the moment, let's assume that I'm no longer Mark Goldman, but I'm a master of the universe in the investment world and I want a piece of this trillion dollar market that Klaus was talking about. For the moment, let's say that I have expertise in Latin American bonds. (I'll show you my credentials as to why I'm a master in that field in a moment.) As master of the universe, this is my view of the world. I think that I can do anything that I need to in the investment world.

However, from the eye of the plan sponsor, there may appear to be too many masters of the universe who are more than willing to help them with their plan by managing their money. Table 1 is based on information taken from the 1995 Money Market Directory, and it shows a number of asset managers by assets under management within a given asset class. Now, if you look at the bottom line of this chart, you can see why it was so easy for me to be master of the universe in the Latin American bond market.

However, for a plan that's looking for a mortgage manager, let's say, and the sponsor thinks if he or she can find a manager with more than \$1 billion of mortgage assets under management, he or she might have the right choice. But if you look at Table 1, you can see there are 41 mortgage managers with over \$1 billion of mortgage assets under management. So a plan sponsor is going to have to look for more than just assets under management when he or she wants to find someone to help manage assets in the synthetic market.

TABLE 1  
INVESTMENT MANAGERS

Asset Class	Assets under Management (by Class)	
	> \$100 million	> \$1 billion
Corporate Bonds	128	34
Mortgage Securities	108	41
US Government Bonds	196	49
High Yield Bonds	28	6
Latin American Bonds	1	0

Source: Data from 1995 Money Market Directory (1983 Managers)

Exactly what is it that a plan would look for in trying to find the right manager? First, the plan should look for a manager who has fixed-income experience and a proven track record. The stable-value option has been financed almost exclusively with fixed-income instruments, and, to a small extent, with some equities. I'll talk a little bit about this later. However, not all fixed-income instruments might qualify for this market. For example, if my Latin American bonds were not dollar denominated, they probably wouldn't qualify for very many investment policies. As I mentioned, to date, there has been very little use of equities within this market, but I will talk later about how they may be used.

Second, they may look for an investment manager who has some understanding about the defined-contribution market. The investment needs and strategies for a pension plan can be significantly different from those in a defined-benefit market or mutual funds. As we shall see, they can be very specific in design for any particular plan. So the manager will have to have investment skills to manage against a market benchmark, as well as have immunization skills in order to manage a portfolio that has been designed to meet a plan's specific needs.

What exactly are plan-specific needs? I'll try to sum up in about 30 seconds what entire conferences have been dedicated to. As Klaus mentioned, all plans have, as an objective, to keep the crediting rate on the book-value option as high as possible, yet remain responsive to current rate changes. This is done by managing the asset duration of the portfolio with the plan-specific cash-flow characteristics in mind. A given duration can be obtained by using various strategies, including laddered maturities or constant

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duration portfolios with money market buffer funds, or combinations of fixed- and floating-rate portfolios.

Once a plan has a target duration in mind, it clearly has to look at asset diversification. Before the 1991 insurance company defaults that Klaus talked about, the main means of diversification in the GIC market was to buy GICs from several high-rated carriers. However, that has changed today. Now, diversification for the stable-value option will mean perhaps holding some GICs so they have some insurance industry credit, but the plans are trying to diversify their credit risk away from the insurance industry by specifically having either separate account assets or the synthetic contracts we're talking about where the plan owns the asset and, for the most part, will take on the credit risk.

Initially, the asset of choice for the synthetic GIC market were mortgage assets that had government agency guarantees. While these did provide credit risk protection, the interest rate volatility of the early 1990s, along with the waves of homeowner refinancing, caused several of these assets to lose value as they extended or prepaid. So while a plan may have picked up some credit protection, there was realization that they'd have to diversify their portfolio away from interest rate risk and also make sure that their investment selections are across all investment sectors.

The liquidity needs of the stable value option are also a consideration. Is the option using its assets to replenish its buffer funds? Does it have to throw off money for benefit cash flows? Is there a net positive or negative cash flow into the fund? Is the fund planning on adding new options where they'll have a lot of money for one-time transfers? All these factors will go into an investment strategy that the plan needs to put together.

Finally, the size of the plan or, more specifically, the size of the amount of money that's going to be placed will help determine an investment strategy. Smaller amounts to be invested may result in the plan either entering a commingled account or entering into what I'll talk about later—a single security buy-and-hold-type synthetic. Larger placements can utilize more active management.

It's worth taking a minute here for me just to qualify the rest of my talk. A significant percentage of the synthetic GICs that have been placed today consist of a single, highly rated, AAA-quality asset that is purchased and wrapped on a buy-and-hold basis. Now, these assets may be traded if they tend to underperform, but generally they're expected to be held until maturity. Now, these single-security assets don't need investment managers in the traditional sense. They do require some investment expertise for their selection and a little bit of ongoing monitoring, but the active investment manager is not needed. In fact, to the active investment manager, these things probably are a threat to their skills and the manager might think about these the way one of our competing panelists is studying dread disease insurance. Well, this could be a dread disease for the active investment manager.

For the rest of my talk, I'll be referring to the manager of multiple-security actively managed portfolios. Once the stable option has its broad strategy in place, it will implement it through a series of portfolios put together by and given to different investment managers. The portfolio strategy can include either a fixed horizon or a constant duration strategy. A fixed-horizon strategy has portfolios that are immunized against

stated maturities either in a lump-sum payout or staggered payout amounts. The constant duration portfolios are total return strategies at different points on the yield curve.

Investment guidelines for each manager will set duration limits, the overall portfolio quality limits, sector allocations, as well as limits on individual asset qualities or individual asset limit amounts. How the plan's total portfolio is managed can be reflected in the aggregation of all the investment guidelines for the various managers. Some plans may have all managers at the same duration with the same sector allocations that reflect the plan's overall goals. Other plans might have specialty managers—some managers managing corporate credits only, other managers managing only mortgage securities, and some managers managing at longer durations or shorter durations. In aggregate, they all should come together and fit the plan's objectives.

Investment guidelines should also include specific performance benchmarks that would be linked to the investment strategy. Within our separate accounts, we have several benchmarks varying from certain benchmarks that are generic, (like Fannie Mae mortgage securities, an intermediate mortgage benchmark) to some custom-made benchmarks that are composed of 24 treasury strips in various weighting for special liability.

Synthetic contract guidelines should also have a liquidation strategy for benefits. This would tell the manager the order in which benefits need to be paid out of the portfolio; and may involve liquidation of assets that are the shortest duration, assets that are selling closest to par, or pro rata liquidations that effectively would leave the portfolio's profile, its yield, its duration and its market-to-book ratio unchanged.

There are probably as many different management styles for any objective as there are managers. I'm sure any manager, as master of the universe, would tell you how different he is from other managers or better than other managers. But rather than run through management styles, I just would like to run through some of the asset classes that are used for synthetics and tell you how they may be used in various strategies.

As I mentioned before, mortgage security bonds were the first asset of choice in the first generation of synthetics. Today, pack bonds are still highly valued for buy-and-hold synthetics, but many plans have reached their limits for exposure in this asset sector and are moving on to other high-quality asset-backed strategies. Pack bonds still have a place in actively managed immunized portfolios where targeted payouts help meet fixed liabilities. Mortgage pass-through securities tend to be used more in constant duration total return strategies, but their liquidity does make them useful in immunized strategies as well.

Today's mortgage securities include not only securities backed by residential mortgages as the first generation of synthetics used, but also those backed by commercial mortgages as well. As I mentioned, some of these plans are now using other high-quality asset-backed securities, such as credit card or auto loan receivables in these single-security portfolios. While these portfolios aren't diversified single assets in the classical sense, the underlying collateral of these securities and how their payments are structured give them a high credit rating and a fairly stable cash-flow pattern that these buy-and-hold securities can hold.

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In addition, the available financial analytic on such online systems as Bloomberg allow these assets to be managed with ease without a professional or without much active management. So they've become sort of more managerless portfolios.

Other asset-backed strategies—structured finance, project structured finance—will require more credit analysis and are sometimes sold as private placement or 144A securities.

Investment managers using these types of assets can add significant value in either constant-duration or immunized portfolios. Corporate bonds clearly have their place in any asset and sector diversification. Securities with nonconstant maturities lend themselves very nicely to immunized strategies, but a manager has different ways of doing value analysis or sector rotation and can make these assets an integral part of any total return portfolio. Some plans are still a bit shy about taking credit risk and many limit their overall quality to AA or AAA or better. Nevertheless, a well-diversified portfolio of investment grade assets can add significant value to the stable-value option. I have yet to see any investment policy that allows for below-investment-grade securities, but the lack of demand for these assets has caused spreads of up to 200 basis points between BB-rated and BBB-rated paper. We believe that in an appropriately diversified portfolio, some of these assets can give much higher returns than these spreads would warrant; and they may have a role as some small part of an overall, well-diversified portfolio.

Derivatives are legitimate in any portfolio's strategy. By derivatives, I'm not referring to highly leveraged assets that can lose half their value overnight; I'm referring to things such as interest rate swaps that can turn a fixed-rate portfolio into a floating-rate portfolio, or total return for fixed swaps, or an investment manager may do an active constant duration type style and manage against some type of index and trade that index for a fixed return.

For example, a manager may be able to manage against the Lehmann Brothers aggregate bond index and swap that return for a given number of years, receiving some fixed treasury spread for the same number of years. In this way, the portfolio will have received a fixed rate of return, plus the difference in the manager's over or underperformance versus his benchmark. In this way, we've synthetically turned a constant-duration strategy into an immunized portfolio.

Equities themselves are far too volatile for this stable-value option. However, there can be strategy where a manager has an offsetting long-and-short position, allowing the manager to eliminate the beta risk or the market risk from this equity portfolio. In theory you'd earn a risk-free treasury rate plus twice the alpha on the assets that he selected. Now, given an appropriate wrap, this might allow for a significant or a complete diversification from the fixed-income market. This strategy is currently being marketed to the stable-value options, but, as yet, has not been embraced.

Finally, there are some management responsibilities that a manager has to make sure he can do in the synthetic market. Some of these are the same for any manager. First, the manager has ERISA fiduciary status with respect to the plan. Judy will touch on this a little bit later. The manager has to provide normal financial reports of the plan, including portfolio holdings, gain-and-loss analysis, and transaction summaries.

In addition, the manager should be able to provide a source of gain or loss analysis on his performance against his performance benchmark. In general, this analysis would be a retrospective total return comparison. But it should be remembered that this portfolio is being translated into a crediting rate for a stable-value option. Generally, the crediting rate formula will depend on variables that are found within the portfolio profile, such as yield on the portfolio, portfolio duration, expected cash flows, and actual or expected total returns of the portfolio. Any changes in the crediting rate can be broken down into changes in some of these portfolio components, and the manager should be able to explain such changes.

In addition, the manager must supply—and this is in a three-party arrangement—required asset information to the wrap provider who, based on the portfolio data and the contract formula, will calculate the crediting rate and use it on book-value statements to the plan. The final responsibility is a no-brainer. This is good performance, because with good performance, the manager can be, if not the master of the universe, at least employed by the plan.

MR. JAMES F. MCDEVITT: The refreshing thing is that I guess I'm the only one who is not a John Hancock-affiliated employee. That's Klaus' definition of a jury of your peers—three John Hancock employees and one non-John Hancock employee. I'd like to followup with Mark, who gave an investment manager perspective. My speech is entitled "A Wrap Provider Perspective." After listening to Mark, maybe it's how to control the investment manager and still make money.

I'm going to give you an overview of what a wrap is. I may be duplicating some of the things that Klaus talked about, but I think it's worthwhile. I'll talk about what financial institutions are providing wraps and synthetic type of products, the type of products that are actually available—and there's a wide variety of products that are actually available—the risk management considerations in these products, and finally some of the issues that wrap providers should be considering.

What is a synthetic GIC? Well, a synthetic GIC consists of two pieces. It consists of the security or portfolio securities held in trust for the benefit of the plan; and then it consists of a benefit-responsive wrap agreement issued by a high-quality financial institution. I think it's important to look at the distinctions between that and the traditional GIC. In the traditional GIC, you have a guarantee of principal and interest in maturity, and benefit responsiveness at book value, and it's backed by the financial strength of the issuer. It's not backed by specific assets. To the insurance company, they're in the spread management business and GICs are one of the types of products in that business.

A separate account GIC is different from a synthetic GIC. With the separate account GIC, the assets are owned by the insurance company. They're usually managed by the insurance company or an affiliate thereof. The wrap is embedded in an annuity type of a contract.

What are the features of a benefit-responsive wrap agreement? I'm going to touch on these three. Basically, there's a minimum level of interest guarantee, at least 0%, employee-initiated benefits paid at book value, and book-value accounting. Going over each one of these very quickly, I should have put the word guarantee in quotations;

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because for the most part, most synthetic products do not guarantee the performance of the assets, but provide for a stable value or book value which is available in the event benefits are needed.

Employee-initiated benefits are your traditional death termination, retirement, disability loan features, transfers among different options within the plan. Those are considered employee-initiated transactions. A wrap contract does not usually provide book-value guarantees for what we call employer-initiated transactions, which could include a sale or a spin-off, a layoff of a substantial number of employees, or an early retirement incentive program. So it's important to understand that.

As Klaus talked about, the AICPA has basically come up with a book-value accounting that allows these contracts to be valued at book value if the previous two are available—namely, a minimum guarantee of 0% and the employee initiated benefits being paid at book value. The book-value mechanism is basically a mechanism that provides for an accruing of a “book value” at interest; and that book value is calculated prospectively to amortize the difference between book and market value basically over the duration of the assets. Over time, the book and the market value should converge to each other.

Who are the major wrap providers? I put domestic banks on the top not necessarily because I'm from State Street Bank, but they are basically one of the major wrap providers at this point in time. Banks have been around for quite awhile in the stable value marketplace. In the mid-1980s and late 1980s, the banks were offering bank investment contracts in direct competition with GICs. At that point in time, banks also had FDIC coverage for these types of instruments.

While the insurance companies were looking at this as a spread management business and basically purchasing private placements in commercial mortgages to try to meet the GIC liabilities, banks were looking at this on an opportunistic basis as another cost of funding. In the mid-to-late 1980s, banks basically are London Interbank Offered Rate (LIBOR)-based borrowers. In the mid-to-late 1980s, when you convert LIBOR to fixed, the spread on a fixed basis was substantially greater than it is right now.

Banks could basically loan money out, then swap it into a fixed rate, come up with a very high fixed rate after taking into account any costs associated with the benefit responsive wrap, and come up with a very competitive rate relative to GICs. Banks were in and out of the market at that point in time, and they commanded a fairly good amount of the business only when the swap market allowed it to basically produce a rate of return.

A couple of things have happened since then. One, the FDIC coverage has basically gone away for these types of products. Second, spreads in the swap market are back to what may be considered normal, I guess. Therefore, even without the FDIC coverage, just being a LIBOR-based borrower and converting that into a fixed rate won't produce a competitive GIC rate of return.

With regard to domestic banks, there are very few high-quality domestic banks and very few of them are in the wrap business. Banks had their industry downgraded quite a bit

earlier than the insurance industry; banks are an A-rated industry. I think the insurance companies are gradually heading towards an A-rated industry. There is no AAA/AAA domestic bank at this point in time. Morgan Guarantee originally was AAA/AAA, and now they've lost one of the As. There is only a handful of banks that have an AA rating. The equivalent of the claims-paying ability rating is basically a CD, or short-term deposit type of a rating. Therefore, there are only a handful that are in the wrap market.

There are a number of high-quality foreign banks that are in the market too. A couple of examples would be Union Bank of Switzerland and Deutsche Bank. They were in the market back when the bank investment contracts were very popular. There's a number of noninsurance companies that are in the business. In fact, a number of representatives are in the audience today. So if you have any questions about insurance company wraps, they would probably be able to address that topic better than I can.

I'm unsure of New York insurance companies mainly because of the Circular Letter #9 that was issued a couple of years ago and that Klaus has referred to as having been rescinded with Circular Letter #12. Judy is going to talk about that. Maybe in the question and answer session we can have some discussions about that.

The demand for a wrap type of business or a synthetic type of business has grown dramatically. Traditional GICs used to command 80–90% of the funding of stable value funds. On a new business sort of basis, anywhere from 30% to 40% of new business now is going into synthetic types of structures. The supply seems to be following with the demand. There have been quite a few high-quality wrappers that have gotten into the marketplace within the last six to nine months, one of them being State Street Bank. With the Circular Letter #12, there could be quite a few New York insurance company type wrappers.

I'll talk about the types of synthetic GICs. Mark's talk eluded to a couple of them, but focused most of his attention on the investment management side of the house. There actually are such things as true GIC replicas. Actually, back in its infancy of synthetic GICs in the early 1990s, both Morgan Guarantee and Bankers had what they called the magic and the basic product respectively. What that basically did was provide all the things a traditional GIC provided—full guarantee of principal and interest, maturity, and book-value benefit responsiveness. Basically, assets were set aside in trust, hopefully assets in sufficient value, that could provide the guarantees.

I remember a boss of mine used to have a famous saying: "No good deed goes unpunished." Well, most of the collateral was collateralized mortgage obligation (CMO) that seemed to have some very good yields; but as we saw in 1992, 1993, and 1994, CMOs turned out to be one of the most volatile investments. On a yield basis, the original yield did not meet expectations. Those companies have since taken that product off the market, although there are still a couple of what I'd call GIC replicas that, from time to time, come up with competitive yield versus a traditional GIC.

The buy-and-hold is a very well-used type of synthetic GIC. That is an individual security, as Mark eluded to, that is wrapped by a high-quality financial institution such as a bank or an insurance company. A CMO, an asset-backed, or a corporate have been the investments of choice. It's a pass-through sort of mechanism so that, with the

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CMO, if there's prepayment or extension risk, it's borne by the plan. As principal and interest comes in, it gets paid to the plan.

There's still quite a bit of use of this, and I would have to say the majority of the purchases in synthetic GICs have been of either a buy-and-hold or a structured type of a product. A structured product goes one step beyond a buy-and-hold; and through the effective use of swaps and options it creates a synthetic type of a structure. I thought I'd give you an example of a synthetic GIC that's a real one that we worked on a couple of weeks ago, and the pricing of it is the same right now.

The plan would purchase an AAA credit card, floating-rate asset back that has a five-year soft bullet. It pays interest monthly at one-month LIBOR plus 17 basis points. This was actually a First USA card. The Money Store came out very shortly thereafter on a home equity basis of 24 over one month LIBOR. Now, you can swap one month LIBOR in for a fixed rate and at that time the fixed rate was 613, payable each quarter for five years. That fixed-rate swap was a five-year treasury plus 22 basis points.

When you combine the two of them together and you take into account the difference in the timing of the cash flows, you can come up with an annual effective rate of return before wrap fees of around 648, which is 57 basis points over treasuries. Then you provide a benefit-responsive wrap fee, and I won't say what the wrap fee is except to say that the net result is a very competitive rate with a GIC. What you have is a high-quality structure, AAA rated, AAA backed. Cash flow is very predictable. We said that about CMOs, but I think asset-backed securities have a much more predictable cash flow.

The big risk with the asset back is if the collateral ends up being absorbed (if the structure ends up being absorbed too quickly), there's an early amortization at 100 cents on the dollar. You don't have the extension risk problem for the most part. Liquidity for benefit purposes can either be provided by what we call an advance mechanism or by selling of the securities.

Continuing on with the types of synthetics, the other two are what Mark talked about—the actively managed immunized and the actively managed total return. The immunized on an actively managed basis comes the closest to a traditional GIC. It's a fixed maturity, hopefully a stable rate of return and, depending upon the ability of the investment manager, the manager will try to manage to a spread over treasuries. The actively managed total return is a little bit different in that it has no target maturity, but it's the marriage of the best of the investment manager and the wrap provider in that the investment manager is given a longer term bogey, such as Mark had talked about—the Lehmann corporate government or the aggregate. They try to manage to that and the wrap provider basically provides a book value of protection. That creates some interesting questions both with the buyer and the seller of the product; because the structure of this without having a final maturity is a little bit different than what stable value options have been used to.

I'll go quickly over risk management considerations, because I have a couple of points to make later. The risk management considerations are the structure of the assets and the level or lack thereof of investment guarantees. Also, the structure and the experience of the plan is much like you would use with a traditional GIC; you underwrite the plan and the level of benefit-responsive guarantee.

The big difference, however, is that the benefit-responsive risk is now isolated and it's not the spread management business anymore, as with the traditional GIC where the benefit responsive risk was one risk among many risks that were managed in the general account and GICs were one part of the general account. That has much to do with the type of structures that banks and insurance companies would be willing to do on a wrap basis.

A couple of points about that. I mentioned the unbundling of the risk. But what's happened also, except for those synthetic GIC pure look-alikes, is there has been a transfer of risk from what I would call the issuer default risk of a GIC that guarantees everything, but is still subject to the credit risk of the insurer, to a risk of investment performance in cash-flow experience, the benefit-responsive side, now to the plan.

In a subtle sort of way and in a not-so-subtle sort of way, the risk is being transferred from the issuer to the plan participants. Therefore, how these synthetics are designed and structured, and how they fit into the overall plan is very important. The objectives of a stable value option still are safety of principal, stable return, and meeting employee expectations.

On the asset structure issue, these go along the same lines as Mark talked about, except now we look at it from the wrapper/provider perspective. Much depends upon the structure we're talking about. The controls you place on the duration and the credit risk and the cash-flow volatility depend upon the structure and the level of guarantee or performance that the wrapper/provider is providing.

For instance, on an immunized portfolio, we place a high priority on the management of the assets, the duration management of the investment manager, and the lack of cash-flow volatility that are in the assets. It's very, very difficult to do an immunized portfolio with securities that have cash-flow volatility. A few years ago, there was a school of thought among many investment managers that the perfect vehicle for immunized strategies were mortgages under the theory that many CMO structures had good, stable cash-flow experience and that you were going to get high yields associated with it. It turns out that they were the most difficult type of investment class to manage on an immunized basis.

Mark talked about credit risk. We've seen below investment grade in the investment guidelines. It depends upon, again, the structure you're talking about on the wrap side, the investment performance, and the investment guarantees. If it's an evergreen type of a structure where the investment manager has managed to a total return, the real focus should be on the investment manager's experience and ability to meet the stated objectives and how he's going to diversify the portfolio among many risks; one of them could be below investment grade. Another one could be mortgages. The more restrictions there are on the investment guidelines, the more structure there is in the wrap itself.

One thing that wrap contracts rely on is a series of contractual features that basically try to limit the investment manager's options and at the same time increase the potential liability for the wrap provider too much. The real liability for the wrap provider is when the market value is significantly less than book value and there could be a benefit drop. Usually, contractual features as such are basically what I'd call safety nets or risk

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control features in that if the difference between book and market gets too severe, then the investment guidelines are tied in quite a bit tighter than they were before.

On an immunized strategy, for instance, one of the things in the investment guidelines is that as you get closer to maturity, the types of investments that are allowed are narrowed in considerably because you're trying to target in on a final maturity.

The plan structure issues are very similar to what the underwriters do for a GIC. They underwrite the plan sponsor and the plan design. The reason why you underwrite the plan sponsor is because of the one thing that you're concerned about, which is what you want to call event risk that could upset the whole makeup of the plan. The plan design issues are what are the types of options available that participants can use to move money in and out, how often can they transfer money, and what is the different cash-flow experience?

The key feature that a wrap provider looks at, too, is the liquidity structure. What is the probability that the assets you're wrapping are going to be needed for benefit payments? That depends upon how the stable-value option is managed for liquidity purposes. Since the benefit-responsive wrap is now isolated out from the investment management side of the house, it's a very, very difficult risk to manage if you're on a first-call basis for benefits. So most of the time, a wrap would require some significant level of liquidity ahead of you, such as a cash buffer, or certainly contributions that go into the plan, and also the maturities from existing GICs.

There are three types of benefit-responsive guarantees. One of them is what we call fully experience rated. That's basically the least risk to the wrap provider. All of the experience of the plan, investment experience and cash-flow experience, is taken into account in the calculation of the reset rates. The only thing that the wrap provider is on call for is in the event that the effect of those two is to produce a rate of return on a book value basis less than 0%; that benefit draw at that time would be guaranteed at book value.

A nonparticipating basis is much like a traditional GIC. One thing about a traditional GIC is if you have a benefit draw and the crediting rate was 6% before the withdrawal, it's 6% after the withdrawal. A nonparticipating type of a wrap basically has the same type of a feature; if a benefit draw occurs and market value is less than book value, the wrap provider makes up the difference, and vice versa. If it's greater than book value, they get the benefit of that.

The effect is that the composition of the synthetic structure economically remains the same after the benefit as it was before. That's a potentially high-risk type of a structure for a wrap provider. Again, there's an awful lot of liquidity structure ahead of it to make sure that the probability of call is relatively small.

There's a hybrid of the two that's gaining much interest, and that is fully participating up to a certain level and what we call sort of stop-loss protection thereafter. What if you have many withdrawals at a time when market value is less than book value? The resulting effect on the credited rate could be a drop in the credited rate. That, in itself, could produce some more benefit withdrawals, as participants aren't very, very happy with the rate they get. You basically get what we call a death spiral type of an effect.

On a fully participating basis, even though you're not on the risk until the rate of return becomes less than zero, allowing that death spiral can actually trigger the risk. So what we've seen an interest in is putting a stop loss on it whereby it becomes nonparticipating after a certain level. Actually, it can be shown financially that, for the wrap provider, economically that actually may be a less risky type of a structure than on a fully participating basis.

Finally, what are the wrapper concerns? The wrapper concerns are that the wrap provider should have an understanding of both benefit and investment risk. Insurance companies and certain banks that have been in the marketplace have had this specialty. It's difficult to build up this specialty on a product-knowledge basis and infrastructure basis, and that's a barrier to entry.

The one big risk that we see in the marketplace is how new entrants into the market, that don't have an understanding of the risks, view this as risk-less, and basically are driving the price down under the grounds that  $x$  basis points on many dollars is better than zero basis points on  $y$  or none.

What you need is an underwriting discipline and a pricing discipline. This may be a low-probability, high-impact type of risk for the most part. What you should be looking at is the ability to absorb what you may want to call some worse-case types of situations. What is the capital at risk? From a bank perspective, it's interesting. Judy is going to talk about this. From a bank perspective, as long as we do not guarantee against credit risk—namely, a default of a security—it doesn't fit into the risk-based capital structure of the bank because risk-based capital in a bank is a lending or a credit sort of a structure. But we do have off-balance sheet risks that have to be managed all along. We look at this on an off-balance-sheet basis based upon the amount of capital that would be needed to absorb something like a 1% or 2% probability, 2% tail probability risk.

What you do need are the risk-management tools. Actuaries have been known to use both their C-1 and their C-3 modeling-type capabilities. These are applicable in very much the same respect with certainly some different parameters in the analysis of risk for these types of structures. You need the ability to quantify and to manage these risks as well. There's certainly a growing demand as an alternative or replacement for traditional GICs, and the increased competition is exerting pressure on fees. I think it's a buyer's market at this time.

MS. JUDITH MARKLAND: Jim just has changed jobs within the State Street Bank and Trust structure. He used to be on the buy side and he wasn't saying it was a buyer's market then. On this panel—maybe that's indicative of the topic. We have a business that has been a life company business and, as you've gathered today, is now becoming an investment management business and a banking business.

My recent responsibilities have involved working with financial institutions and investment managers to try and help them design the best product for their firm to offer in this market. What I'd like to try and do is run through with you a very quick checklist of the kind of subjects you should probably think about if you're going to go through this exercise yourself.

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In order to decide what your particular product type is or what you want to offer, you have to answer or address each of those other issues in terms of what they mean for your firm and your company. I guess it would help me a little bit here if you could give me some indication of how many people are affiliated with life insurance companies? OK. Investment firms? Banks don't hire actuaries. For these people, yours is the enlightened firm.

As you've gathered, there are three different ways you can approach this market. You can be an active manager and provide investment. You can provide the risk assumption feature or you can do it together. The combination in the traditional GIC market is a combination, as is a separate account product. As Jim said, when you move to synthetics, virtually the only combinations have been the fully guaranteed GIC substitutes; and there are some reasons that we'll get into in a minute.

When you do this, once you've made your product choice, if you decide to do a wrap or assume the wrap function, you have another set of choices to make. One is the particular vehicle you want to offer. Jim talked about the characteristics of what these vehicles present, but the precise legal form can take many different definitions or contract forms. Again, the traditional is the separate account vehicle. That is a wrap. It's a wrap where the insurance company also owns the assets, so it's not usually called a synthetic. Now, the nonplain-vanilla types are the synthetic vehicles that are most commonly used. You can have a general account annuity contract, and that is what most insurance companies have offered. You can have an asset management agreement where you offer to manage the assets at book value. Banks have often done interest rate swaps—they are asset purchase agreements. There are as many forms and varieties out there of maintaining a relationship between the book and asset value of an asset as you can think of. There will probably be an infinite number in the future.

What I think is significant is that it's only the insurance company contracts that are liability products. The bank products and the investment manager products are asset agreements. That probably makes the most sense functionally, but maybe not in a regulatory sense. If you think about it, what this wrap is doing is making some sort of agreement to buy the asset to pay the benefits at market and pay back book, and perhaps somehow change it into an interest rate change. So you're absorbing a market value change and translating it into an interest rate change. That's an asset function, not an insurance contract-liability function.

You're probably going to make that last choice in terms of some of the other things. Once you think about this, you need to determine what the market is. You've heard about this already in various forms. These are sales numbers rather than the volume numbers that Klaus was dealing with. GICs are probably, last year, about 60% of new sales in stable value. Most people think that they will remain somewhere in the 50–60% range. Separate account is down to 6%, and that's a declining trend. Synthetics are rising very steadily up to about 35% of the market and they continue to rise.

Why are they so popular? One of these reasons that you hear is because of diversification away from insurance company default. Separate accounts do that too, because they're normally insulated from general account liabilities. Asset ownership is one way of saying diversification, but I'll discuss another way of doing some other things too.

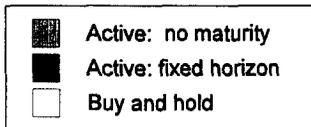
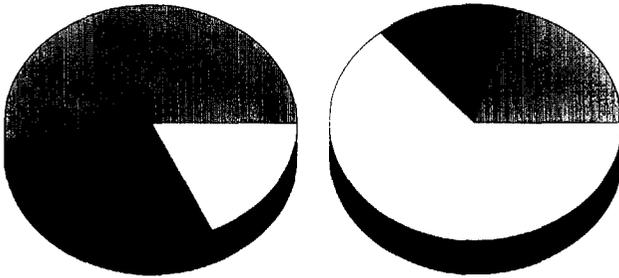
There's also the kind of flexibility these contracts offer. You can choose your wrap provider and your investment manager separately. You can get the best cost-value relationship on each piece. You can keep the wrap in place if you decide you don't like the investment manager and his performance, which is now a nonguaranteed performance objective. If he doesn't live up to it, you can keep the wrap in place. Last, but certainly not least, is lower fees. You rarely hear that mentioned. My sense is it's what driving the market here.

Now, I think many companies, once New York lifted its ban on synthetics, are excited, thinking that now they can go out and sell these actively managed separate accounts that they've been offering with, I think, quite good sales success. But now they can have a real stab at all those people who say they want synthetics because of ownership. Let's look at what people are buying and what is underneath these stated reasons. In Chart 1, the black wedges show actively managed with fixed horizon. The grey wedges are actively managed with constant duration, no maturity. The white is buy and hold. As you've heard here, a major portion of what's being wrapped in the synthetic market is buy and hold. So asset ownership and flexibility give people the latitude to do some things they couldn't do with separate accounts. They can just buy an asset. Conversely, they can wrap a piece of an existing fund, and that could be an index fund with low fees.

CHART 1  
INVESTMENT MIX

Plan sponsor mix

GIC manager



Notice the difference in these two profiles. Plan sponsors are out there buying quite a bit of active management. It's a good service for them. They like it. They like the participation. They're managing their own, which is an interesting thing. The managers are predominantly doing buy and hold. They are buying active management in

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index funds. Your success in this marketplace will depend a great deal on where your distribution outlets are and to which part of the market you have access.

You also have to think a little bit about the size of your customer's placements. I think if you're talking about placements of more than \$20 million, and this is typically active management in that size range, separate account and synthetics are very competitive. They offer comparable fee structures and the ability to go out and get your own fund tailored.

Below \$10 million, say at \$2–10 million, synthetics have a clear advantage on a cost basis and a flexibility basis. They allow the customer to go out and wrap an individual asset at an enormous premium over the kind of comingled separate accounts that insurance companies are offering, which tend to have quite small fees below \$10 million. You can also get an investment in an index fund wrapped, again, very cheaply. But it's still quite hard to do in a synthetic below \$1 million. There aren't many comingled trusts and the stand-alone wrap providers don't like to go much below that.

Once you've figured out who's buying what, then you have to step back and figure out what you're up against and who's out there. I think synthetics have changed the ballgame. This is a real unbundled product. This is doing to the GIC market what variable and universal life did to the whole life product, and doing it much quicker. One reason for that is because with this product you can buy the pieces separately, which you never could with variable or universal life.

If you're going to offer a bundled product, you're competing against the best that both the wrap world and the investment management world have to offer. You have to look at competition from both sides, because the customer is going to look for the best cost value from each piece; and he can buy them separately. So, who are these people?

Well, for the asset managers, this market has been opened up to Wall Street fixed-income managers. These are people who have very aggressively been marketing for years in the defined-benefit world. They tend to have very good track records and very good ability to explain themselves to customers to justify their value added. Based on what Jim said about wraps, you can see you have a whole new industry you're competing with—banks, and to some extent, investment managers. There's some potential there. It's very important to note that whether it's an insurance company or a bank, all of these competitors are very low cost compared to traditional life company people. They are pricing on what I think you could call a service cost basis rather than a risk-assumption basis. Incremental placements with the same wrap provider tend to get lower fees as the amount wrapped increases, just as asset managers reduce their fees for increases in volume under management. This is kind of opposite to what you would think about when you're increasing your risk of exposure to one plan. It's kind of backwards from a risk assumption point of view.

People here are competing on speed and "efficiency" of underwriting. Quick, efficient, streamlined contract terms. As Jim mentioned, you're now competing with people who have bank regulations driving them. Risk capital thoughts are different. They don't price return on equity (ROE) on risk capital the same way that insurance companies do. They don't reserve the same way. They don't have reserves in the sense banks do.

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There are very different dynamics that you're going to have to take account of when you think about the pricing and structure of your product.

You've looked at the outside world. Now how do you do this thing? Well, the first thing is getting it approved. Banks don't have much of a problem. As Jim said, they used the off-balance-sheet treatment. I just heard that New York has removed its ban. California is in the process of reworking synthetics but I don't think that either of those two large states has actually approved one yet. So while there's no significant ban, we're still a long way from what you would call real clear regulatory approval from the insurance arena.

It's not too surprising that insurance regulators are used to having reserves to look at as their control mechanism. It's very hard to have a reserve when the plan owns the assets and it's off somewhere else. So there will be much education and teaching here, I think, to help a department set reasonable standards. If, in fact, you choose one of those other contract options, one of the other ways to do a synthetic and it's in an asset agreement, do you need insurance department approval? I don't know, but I don't think you normally get commissioner approval for policy forms when you issue a new type of interest rate swap agreement. So it's a new type of problem and a new sort of thing to think about.

In fact, this is a whole new ballgame. You're doing the same thing that you might have done with a separate account wrap, but with different labels and the labels are what trigger regulatory activity. You're going to have to sit back and think through things that you didn't necessarily think about before; because somebody thought about them 20 or 30 years ago to get the regulatory approval to allow guaranteed separate accounts to be issued or guaranteed annuity contracts out of the general account.

A key area where you may have some of this difficulty is with ERISA. The plan owns the asset. The investment manager and the wrap provider are both fiduciaries, so any arrangement between them has ERISA fiduciary prohibited transactions or plan asset exemption problems. General account contracts and separate account contracts and bank deposits all have standing class-action exemptions against many of these things. Swap agreements don't. I don't think it's any accident that there is no large provider of bundled synthetics unless it's on a fully guaranteed basis or it's a GIC look-alike. I think it's the ERISA problems that have kept this out.

If it's not an annuity contract, if it's not a bank deposit, do you have securities regulation problems? The exemptions for those come with the contract form. If it's an asset transaction, you need to think about it. You may need to think about blue sky law problems as well. There are some more nitty-gritty things. How are you going to do the bookkeeping for this thing? What's the asset? What's the liability? There are no reserve standards yet. I think most of the insurance companies are booking the fee income they receive and setting aside voluntary reserves. That's one way to do it.

What do you set up for risk capital? Do you need more or less if it's off-balance sheet? How do you think about it? Banks have the off-balance sheet stuff down pat. As Jim said though, they're not used to taking risks of benefit types and their risk capital standards tend to relate primarily to credit and asset risks. So they have to learn pricing.

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They have to learn risk capital standards and disaster thinking for benefit risk, which is new to them.

Then there's the real nitty-gritty stuff. Can your systems handle a book-value customer-fund balance when the asset is outside the company? Aren't they mostly dollar triggered? Can they produce a customer fund balance that doesn't automatically translate into a general account reserve if you're doing a general account contract? Can they handle market valuations that are determined outside the company and maybe not on an NAIC accounting basis?

People have all talked about liquidity. If you're the wrap provider and you're paying the benefits, where does the money actually come from? Are you going to get it from the investment manager? Well, if it's a heavily immunized plan and you just have a tiny benefit payment, it's disruptive to pay a small benefit. If it has to hold all that much cash, you've lowered the yield. So do you advance it? Then where does it come from? If your wrap is absorbing the difference between market and book for the plan, how do you do it without translating that immediately to your balance sheet? You don't want all those gains and losses on your balance sheet either. How do you get payments from the plan to your wrap and out again without incurring taxes on them?

Somebody worked all this out for separate accounts. I'm not sure how much of it has been done yet for these other products. So it's an interesting time, a challenging time, and one that I hope is going to keep all of us consultants employed well, but one, I think, that offers you much opportunity and many new ways to do things. I hope we've challenged you enough so you have many questions.

MR. ROBERT P. CLANCY: A couple questions for the panel. Do you think, for the defined-contribution plan of the future, there's going to be a roll in it for small plans, maybe for no plans, for balanced funds where there is maybe some stabilization that goes on through the wrap process that might be a vehicle to sort of encourage plan employees to be putting more of their retirement savings into equities and maybe be a little less fearful about volatility? My second question, which is totally unrelated to that, would be does anyone on the panel have any familiarity with the wrinkles in providing wraps to 403(b) types of defined-contribution plans?

MR. MCDEVITT: I'll start with the first one. I think on the balance fund concept that there has been a significant interest in what you call lifestyle funds. Lifestyle funds are basically prepackaged types of options to plan participants that basically balance off a no risk or small risk type of a structure, such as a stable value fund with a medium-risk equity and a high-risk, maybe growth-oriented type of a fund. This prepackaging would include percentages of the option in the stable-value option, so that's one way of introducing what you want to call a balanced approach to the lifestyle procedure.

If you don't do it that way, I think the big issue you have to deal with is just how do you basically have a balanced fund and also maybe a stable value fund on a noncompetitive sort of a basis. I have seen interest in that regard in having a wrapped portion in the balanced fund, but you get that way through the lifestyle type of an approach. I'm going to pass on 403(b), because that also has interesting problems. We deal with the 457 marketplace and so that's the furthest we'll go into the non-401 arena there. I recall days when you'd try to write group contracts to tax-sheltered annuities (TSAs). It

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was fraught with all sorts of problems because you basically have so many options available out there. How do you manage the potential antiselection that could go with any sort of a stable option?

MS. MARKLAND: I'll try the first one too. I think there is a great demand for a wrapped balanced option from the plan sponsor point of view. I think, as Jim said, that's the hard part. There are two difficulties with it. One is the competing funds issue and the arbitrage options with a traditional stable-value fund. That probably can be dealt with, as these things have been in the past. The other is it's hard to see who's going to be the person to originate this.

It's hard for a provider to do it because the plan sponsor is going to want diversification in the wrap provider. So it will have to be an asset manager, but I'm not sure how many asset managers are interested in offering this kind of an option, especially one that would have some restrictions on transfers in it. So you have the sort of chicken and egg problem where the people who would have the most interest in introducing it probably can't unless they get some consortium together. I don't know. I think the wrap providers have the most interest in trying to sell it, and yet they would have the most difficulty in developing it. I can't help with 403(b) either.

FROM THE FLOOR: This is more of a comment than a question. I chair the "A" Committee of the NAIC which deals with life insurance regulatory problems. There is a working group on synthetic GICs which is headed by Reggie Barry, who's one of the senior staff people in the D.C. Department. That working group was charged a year or so ago by the NAIC to determine if and what regulatory response is appropriate for these products. I'm not sure they've made too much progress, frankly, but I go away from this session motivated to kind of try to build a fire under that group. I'm sure that we feel we can use all the help we can get in understanding these products and what their appropriate regulations have. So if any of you would like to volunteer to work with us, we'd be delighted to hear from you.

FROM THE FLOOR: On the one hand, these are new products for regulators as well in terms of evaluating where the risk lies. On a very general level, it seems to me that insurance companies providing wraps are charging for a service and that probably entails assumption of a risk. From a regulatory perspective, we, of course, are interested in the appropriate evaluation of that risk and typically quantify it in terms of reserves on a company's balance sheet; because we want to know the amount of the company's capital that backed these particular products.

So I'd be interested in the panel's observations or opinions as to the extent to which synthetic GICs are providing less risk assumption on the part of the issuer than, for example, a separate account GIC and certainly in terms of a general account GIC. Can you provide a bit more definition? Clearly, the C-1 aspects are not necessarily present. On the other hand, the issuer is providing a valuable service. I'd be interested in your observations.

MR. SHIGLEY: There's no question that you've raised a good issue here, but the answer is not that simple. I think the capital requirements for synthetics can be very small, almost zero. In the situation where it's a fully guaranteed synthetic, it's the same as it is on a traditional GIC and that depends a little bit on the plan. I think capital

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requirements for a fully guaranteed GIC can easily go up to 2%. Some would be higher depending on how risky the plan is.

Depending on how the contract is structured, the capital requirements for synthetic GICs can get very, very low. You can structure a contract, so the only real risk is that the entire stable-value option evaporates, and that's your residual risk. If you think you have a plan where that's not a problem, then the required capital for synthetic risk can go essentially to epsilon. The answer is you go all the way from epsilon to higher than two.

MS. MARKLAND: I have some qualitative thoughts here. One is that this is a marketplace where the customers demand very high-quality assets. While there are people out there selling everything, including junk bonds, there are very few customers who are buying them because they are fiduciarily responsible for participants money. This is the conservative option in the plan and they care about that a great deal. In fact, I think the industry feels it is taking more interest rate risk. They're taking less credit risk than might be prudent.

One difference I've noticed from having seen separate accounts and synthetics both is that synthetics force a wrap provider to tie up all the contractual agreements in writing and to think them through in advance where very often, if the separate account is with an affiliated investment manager, these things are done verbally and they're kind of understood. However, many of the agreements aren't as tightly drawn and aren't as well-thought-through.

I think one extra protection that perhaps people haven't thought about so much is that with a synthetic you do have these tight documents and people do have to put things in writing upfront. I think if this is done right, and if the standards are done well, it gives the wrap issuer a level of comfort and control that they don't always have even with their own affiliated managers.

MR. GOLDMAN: Just one quick comment. Some of the traditional regulations, like New York Regulation 128, are based more on asset analysis. They're sort of standard haircuts on the assets that are determined and then there's some testing on the liabilities to see if extra reserves need to be set up. The plan-specific issues, which vary tremendously from plan to plan, don't enter so much in this type of testing. It's this asset, for the most part, that depends on the level of guarantees. It's this asset risk that's being removed from these products that leaves only the residual plan analysis, which is not very standardized and does make it much harder to do reserves. You will have to rely on each individual person's analysis of the risk.

