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Security Blanket for Life (and Health)

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Summary: Over the last few years, the life insurance industry within the U.K. explored and developed techniques to use capital markets to help them with capacity issues.

Panelists discuss the factors that led to the development of securitization. They address the pros and cons of securitization versus reinsurance and discuss some specific cases. The panel concludes with a discussion of the applicability of these principles to the North American life and health market.

Mr. Steven W. Easson: Our panelists consist of Milan Vukelic, Brian Hirst and I. I'm an FSA and vice president of the Reinsurance Division of Sun Life of Canada, and I'm responsible for financial reinsurance, product development, and the operations of our Barbados subsidiaries. Milan Vukelic is a chief executive of Alternative Solutions, for General and Cologne Re Group in the U.K. A qualified solicitor, Milan gained extensive experience with Lloyds Bank in the U.S., and subsequently as a managing director with Chase Manhattan Bank in London. His expertise is in corporate finance solutions, particularly structured finance, mergers and acquisitions (M&E), and derivative applications. Milan will cover the U.K. environment.

Brian Hirst, FSA, is a corporate actuary with American Skandia. Brian has been an actuary for over 25 years working primarily in the area of corporate planning and financial reporting. Most recently, he has been responsible for capital needs financing at American Skandia. Brian will cover the U.S. environment.

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Note: The charts referred to in the text can be found at the end of the manuscript.

The main topics that Milan and Brian will cover will be:

1. The factors and the motivations for securitization in the U.K. and the U.S.;
2. Some specifics of securitization and other hybrid activity in the U.K. and the specifics of American Skandia's securitization of its variable product, mortality, and expense (M&E) fees;
3. The pros and cons of securitization and reinsurance;
4. Some brief crystal ball reading into the future.

Please note that when Milan, Brian, and I started talking about this panel discussion, we felt that it would be more of a discussion than a debate, but, after talking with my colleagues, it might turn into a bit of a debate.

Before turning the discussion over to Milan, I'll discuss a couple of things, mainly in the U.S. context. The first is the extent of the trend towards securitization in general, and the second are the similarities and dissimilarities of reinsurance and securitization, both conceptually and structurally.

I think that it's appropriate to start with definitions of securitization. I'll provide three definitions. First, securitization is the bundling of cash flows into securities that are sold to investors. Second, securitization has the effect of converting or transforming balance-sheet assets and liabilities to cash. The two previous definitions focus on the process of securitization, but the following one is a better conceptual definition: Securitization involves better knowledge about the behavior of the collateral than knowledge about the behavior of the originator.

I can't take credit for the last definition. That credit goes to Jason Kravitz, an author in the December 1997 edition of *The Financier*. I'd like to clarify the terms I will use for counterparties. I think that everybody is familiar with the user and provider of reinsurance, namely cedent and reinsurer, respectively. In my references to the institution that benefits from an asset-backed security issue, I will use the term originator, and the provider is logically called the investor.

There are increasing rates at which certain U.S. financial intermediaries' assets are being securitized. In the past five years, the proportion of residential mortgages involved in a securitization program has increased from 44%–52%. Percentage-wise, the growth in commercial mortgages, credit card receivables, and auto loans has been higher, but less dramatic in dollar terms.

On the insurance side, there has been a fair amount of activity on the property and casualty (P&C) side, particularly securitization of catastrophe risks stemming from hurricanes. These securities are widely referred to as catastrophic bonds. In addition, there have been other novelties such as CatEPuts and contingent surplus notes; however, this is a topic in itself, and it's not within the scope of our discussion.

I'm not addressing securitization per se, but there is a growing phenomenon. In 1993, there was \$11.1 trillion in direct face amounts, and, in 1998, there was \$14.5 trillion. If you recognize that a financial intermediary's main functions include

origination, servicing, and risk bearing, one reason for the increasing proportions of reinsurance volumes is increased specialization, whereby cedents are concentrating more on origination and servicing *vis a vis* risk bearing. As of Sept. 17, 1999, the Munich American life reinsurance survey wasn't quite final. The *Reinsurance Reporter* just came out, and I believe the correct figure for 1998 total ordinary reinsurance in-force face amount is \$2.6 trillion, as opposed to the 1993 figure of \$1 trillion.

I'll preface my comments on similarities and dissimilarities of reinsurance and securitization by briefly discussing the issue of financing of financial intermediaries. Various financial instruments provide various benefits to the originator or cedent. I'll lump "balance sheet enhancement" into the category. Both asset-backed securities and reinsurance can improve the balance sheet because the investor's or reinsurer's return is based on the performance of specific collateral, as opposed to the overall performance of the cedent or originator. Both can increase actual surplus and decrease required capital. Asset-backed securities can also increase liquidity. To see this, just imagine that the effect of the securitization is to replace an account's receivable on your balance sheet with cash. Both can improve certain financial ratios. One example is, if part of the proceeds of an asset-backed security are used to retire debt, then the interest expense coverage and the debt-to-equity ratios improve.

In many respects, reinsurance and securitization are similar conceptually and use similar structuring techniques. I will list some similarities and dissimilarities, more from a theoretical point of view, which I hope will trigger the question of why reinsurers or insurers would use one over the other. Milan and Brian will shed light on this question. Again, I'd like to emphasize that these are merely my observations from doing a fair bit of reading on securitization.

Let's begin with the list of similarities from the perspective of the user, which is the cedent or the originator. First, let's look at financing. As alluded to before, both are instruments that should be used in the context of formulating an overall optimal capital structure for the cedent or the originator. Both involve transferring the risks and rewards related to the collateral, which affects the balance sheet. Both can be used to allow the cedent or originator to divest a noncore business line or focus on origination and servicing. Relief from regulatory capital goes hand in hand with sufficient risk transfer.

From the perspective of the provider, that is, the reinsurers' and investors' point of view, both are an investment. Asset-backed securities provide funds, either debt or equity, usually to a special purpose vehicle (SPV), and, in turn, the SPV buys the collateral from the originator. This structure is the classic one for asset-backed securities. If reinsurance vehicles or securitizations around life reinsurance or P&C are going to proliferate, they may take on slightly different structures. As mentioned before, specific collateral is used to pay back the investors, as opposed to the dependency of overall company results. Conceptually, both should involve significant pooling of risks. In theory the more homogeneous the risk, the less volatility to the reinsurer or investor, which, theoretically reduces the yield to the reinsurer or investor.

I think both reinsurance and securitization should be structured to leave significant incentives to the cedent or originator to service the business. Examples are retention by the cedent and, on the asset-backed security side, requiring the originator to assume the junior tranche or structuring service fees to the originator, which are dependent on the performance of the collateral. Another method of diversification, which also theoretically reduces the yield to the reinsurer, is to pool the sources of collateral by including a number of cedents under one reinsurance treaty. On the asset-backed security side, it means grouping multiple originators, such as in multiseller conduits.

I have a few more similarities. Transactions can be structured so the reinsurers, as investors, have a high probability of receiving their target return, or at least minimizing their chances of loss (which is typical of financial reinsurance structures and through overcollateralization with asset-backed securities). Future cash flows can be tranching so that there could be multiple risk/reward bases offered to investors or reinsurers. An example in the reinsurance world is a multilayered stop-loss structure, and collateralized mortgage obligations (CMO) are the classic tranching structure on the asset-backed security side. There are a number of credit enhancement techniques with asset-backed securities, such as debt reserve funds, spread accounts, bank loans, letters of credit, and financial guarantees. On the reinsurance side, there are cut-throughs.

Not all risk pertaining to the underlying collateral needs to be assumed by the reinsurer or investor. The typical reinsurance example is yearly renewable term. An example on the asset-backed security side is the investor's desire for call protection and avoidance of prepayment risk. This led to the development of CMO tranches, which reduced these risks.

Let's discuss dissimilarities. Asset-backed securities can be publicly traded or private placements, whereas on the reinsurance side, contracts are considered to be private placements. The reinsurer's counterparty is the cedent, whereas, with asset-backed securities, the investor typically invests in a special purpose vehicle or a special purpose entity that is bankruptcy-remote from the originator. The investor, especially with publicly traded asset-backed securities, will rely on third parties, such as modeling firms or rating agencies for cash-flow projections. The argument the investment banks put forth is that, at least with P&C reinsurance, pricing and capacity is cyclical and reflective of recent underwriting results. From what I've read, asset-backed securities usually involve existing assets; however, one exception is revolving credit card securitizations.

Because the asset-backed security investor is usually dealing with a bankruptcy remote special purchase vehicle, the investor is largely immune to the consequences of the bankruptcy of the originator. With reinsurance, I believe that it's understood that the reinsurer is in the same priority class as other unsecured creditors with respect to receiving future cash flows to amortize any unamortized initial cash investment. With many asset-backed securities, it's critical to have a rating given by rating agencies whereas, with reinsurance, the transaction is usually never rated. Reinsurance transactions can produce taxable income to the cedent, depending on the attributes of the deal. However, my understanding of asset-

backed securities is that they're usually structured as a true sale on the originator's books for accounting purposes, but they are structured directly or indirectly as a loan for tax purposes. Finally, reinsurance involves far less documentation.

Having given you a flavor for the trends towards securitization and the similarities and dissimilarities of reinsurance, I shall now turn the session over to our panelists to give their presentations on their respective territories. First, Milan will discuss the U.K. and second, Brian will discuss the U.S.

Mr. Milan Vukelic: When Steve asked me to talk to you about securitization, I had a problem because, to me, securitization is a meaningless term. It's just a delivery mechanism. What insurers tend to talk about is generating surplus and/or cash on their balance sheet in a very tax- or accounting-efficient manner. The topic is securitization, so I had to hunker down and do something on the topic. The first thing is, what is securitization?

As Steve said, securitization is the transfer or sale of assets or cash flows. Often, it is off-balance-sheet financing. Outside of the U.S., it's really been used in a life context in terms of monetizing in-force value. In-force value is very often an inadmissible asset for regulatory purposes. Depending on the company accounts and what jurisdiction the company is in, in-force value may be on the balance sheet for GAAP purposes, but not always. Nevertheless, it is an asset, has economic value, and is capable of being financed.

I will also draw some parallels and distinctions between securitization and reinsurance, and then make some predictions.

All the deals that I've been involved in, whether as a banker or as a reinsurer, have been focused on generating regulatory capital or statutory capital. It is very rare that companies are concerned about their GAAP capital position. It's not always the case, but it's generally the case. Why do they do it? They do it to boost free assets, primarily. Why do they need to boost free assets? In the U.K., the *en vogue* thing is guaranteed annuity options. Minimum interest guarantees are attaching to with-profit policies that were sold 15–20 years ago, and they are now coming home and biting us because of the low level of interest rates. The regulators are requiring very significant reserves to be set up, and the companies need regulatory capital to cover those reserves.

Another way to create regulatory versus GAAP capital is to increase investment flexibility. Away from the variable environment, the free assets of a company dictate what its asset mix can be. The more free assets the company has, the greater its equity weighting can be. Companies sell on the basis of their free-asset position because policyholders expect a better-than-average return from equity investments. Sometimes companies just want leverage. They never say they want leverage because that's a no-no, but the reality is they believe leverage is good, particularly in a rising market.

Companies are increasingly looking at the cost of capital. I guess embedded values started it, economic value added (EVA) is now taking it one stage further, and it's

empirically what you do when you do profit testing. If you can reduce the cost of capital, you can be more aggressive in terms of pricing or generate a better return for your stakeholders. People are looking to monetize in-force value as a means of monetizing the working capital of the company and reducing the overall cost of capital.

In the last few years, we've seen very significant interest in using these techniques to fund acquisitions in a M&A context. Why? Companies, when acquired, are merged into regulated entities. Sometimes a mutual, when buying, has a very significant statutory capital hit on an acquisition. Outside the U.S., the ability to use pooling of interest is significantly diminished, and everybody counts on an acquisition basis. Goodwill is not an admissible asset for regulatory purposes. Finally and traditionally, the most frequent use of this type of technique is in the financing of a new business strain.

When you look at all the reasons for doing this, there is one common theme, which is to improve financial efficiency. A few years ago, one of my competitors invited me to a gathering it held for senior actuaries, CFOs, and CEOs of the life industry in the U.K. The company sent out a questionnaire that asked people to rank the issues that kept them awake at night. I was surprised when I saw the results. At the top of the list, with a weighted ranking of 125, was improving distribution; next, at 110, was reducing the cost of distribution. Down at about four or five on a weighted basis was improving return on equity. It's no wonder the U.K. industry is in such bad shape. That's now changing; people are looking at financial efficiency as a core driver of the business.

The basis of securitization is in-force value. I was at the economic value added session, and one of the panelists asked who uses embedded value in their companies. I was surprised at how few use it. In-force value comprises the surpluses that are expected to emerge from an in-force block using best-estimate assumptions. If it's an investment product, in-force value may be fund management charges. It also may be mortality profits or loadings and premiums. It's all the sources of profit going to account shareholders, and not account policyholders, that are expected to emerge on an expected basis using best estimates discounted to today at a risk discount rate. It is just a number.

The in-force value is probably categorized as the working capital of a life fund. It's the circulating capital, and it's the equity that the fund has invested in its business, which is going to come out over time. It's no different from inventory or receivables as far as a regular corporation is concerned. Regular corporations don't use their own capital to finance receivables and inventory. They use somebody else's capital, which is cheaper, and they borrow money. Life companies don't like borrowing money. I'm not sure if it's illegal in many places, but it's just not done. What they've been looking for is a way to generate financing against this working capital, or this in-force value. Again, for regulatory purposes, they release the embedded value, the value that's embedded in the in-force business today, by generating cash against it today. Because there is no liability established in the regulatory balance sheet, it comes out as capital. That capital has a different cost from the capital provided by a shareholder. The cost depends on the transaction,

but it is often below the risk discount rate companies employ in calculating their in-force value today; otherwise, there's no point in doing it.

It's very often calculated against asset yields. Part of this in-force value includes inadmissible assets, such as indemnity commissions and commissions paid to a distributor, which are earned over time, provided the policy doesn't lapse. That is an asset; it's written off for regulatory purposes, and it can be financed. Very often that asset has an implicit yield, and it can be financed at a yield below the implicit yield on the balance sheet. Companies only use these techniques if the cost is less than the next best alternative, which could be subordinated debt. It could be the equivalent of surplus notes, it could be preference shares, or it could be issuance of equity. The other reason they do it is because some of these alternatives are limited in terms of how much they can count towards solvency margins. In the U.K., subordinated debt cannot count for more than 50% of the company's solvency margin; a "securitization" can account for 100% or more of its solvency margin.

What's going on? I believe financing and securitization are synonymous. They just have different delivery mechanisms, different providers of funds, and they have been traditionally provided by the reinsurers and supplied to fast-growing companies with a new business strain. This has taken place almost exclusively in the U.K. with variable life and pension companies and not with what we call with-profit companies. I don't think Steve would regard that as securitization. That's standard, old-fashioned, boring reinsurance, but it has the same effect.

The world, however, has changed. It's becoming significantly more sophisticated, and the clients are getting more sophisticated. As I said, people have more of a focus on capital efficiency. What has driven these techniques out of the fast-growing, small company market and into the establishment market has been the acquisitions that we all see going on worldwide. The need to fund acquisitions and create regulatory capital has meant that the largest and most established companies are now looking at these techniques and using them in their M&A process as well as in demutualization. A number of demutualizations—in fact, all the ones in the U.K. over the last four years—have used these techniques as a means of promoting capital efficiency postdemutualization.

Finally, the world is becoming a more volatile place. Regulators are getting even more conservative and they're requiring companies to establish provisions against a wide variety of things that hitherto have not caused concern. These additional provisions are causing significant strain on regulatory capital.

This has led to much bigger demands on the available capacity in the traditional markets, i.e., the reinsurers. It has led to nontraditional users looking at these techniques, and it has also led to a significant amount of creativity in developing solutions.

A few years ago, the reinsurance model had many lines (Chart 1). I guess you would call this modified coinsurance (modco) or something like that. It was an assumption of reserves—reserves deposited back as the ceding commission,

minimum interest rate on the deposit to earn back the ceding commission. And there was a tax dodge. The reinsurer took the strain. You don't need to worry about it because the world has moved on. The world is getting more sophisticated, but the answers are a lot simpler.

The reinsurance model now is called the reinsurance advance (Chart 2). The insurer receives the reinsurance advance on day one and pays premiums back over a period of time as a function of the surplus emerging from an identified block of business. It's capital for regulatory purposes and it might be capital for GAAP purposes, depending on how the company accounts for it; however, for tax purposes, it's explicitly alone, so it's very tax-efficient.

Why does it work? There is a contingent liability, i.e., the liability of the insurer to pay back the reinsurer as surplus emerges. This is offset by a contingent asset, which is the recognition or the realization of in-force value over time, and it isn't recognized on the balance sheet for regulatory purposes. The two things are offset. The funds received are treated as a capital receipt. That's the basis for all the traditional, old-fashioned deals and for all the securitizations that have been done.

The banking market can also play this game, but instead of it being a reinsurance advance, banks have provided nonrecourse debt into a life fund (Chart 3). It's illegal in some jurisdictions, but in many countries (like the U.K., Germany, Switzerland, Hong Kong, and Australia), it works. The repayment of the loan is again contingent on future margins or surplus emerging, and, again, there is the asset/liability offset. I only know of one deal that was done directly by a bank, and every other deal has used a reinsurance company as a conduit.

Some people say that one of our competitors, Hanover, has been very innovative in doing two securitizations, and they are currently working on a third. I'm not here to say nasty things about Hanover because it's a great company, but frankly, this is not a securitization. What it did was a box-standard quota-share financing in which the reinsurance advance and the premiums keep coming back (Chart 4). Hanover had a reinsurer that could have been an SPV. It really didn't matter who did that financing. A bank provided contingent funding to the reinsurer. L-1 was a new business line. Basically, the bank and the reinsurer gave Hanover a pen and said, "You can write up to 100 million deutsche marks of new financing along these lines. These are the parameters." L-2 was the financing of an existing block. It's not a real securitization.

Outside of the U.S., there has been only one true securitization ever done, and by that I mean a capital markets deal.

It was done by a mutual in the U.K. called National Provident Institution (NPI), which basically set up an SPV mutual securitization entity that borrowed money (Chart 5). It made a contingent loan, just like the banks can do, directly into NPI. NPI had a deal. It put a little of its surplus that was emerging into a sinking fund to collateralize the transaction. It made a repayment as surplus emerged. Again, this was nothing more than contingent loan methodology. It was done against nonprofit

and variable business, because of a technicality that it could not securitize with-profit business.

There was a ratings trigger. If NPI's rating fell below a single A rating, horrible things were to happen. There were prepayment penalties, which meant that NPI was in this deal for a long time, even if it didn't want to be. It is a true capital markets deal. I saw this deal in a bit of detail—not at the front end because we pitched to NPI when I was at Chase—but when NPI was demutualizing and being acquired by AMP. This is a personal opinion and not the view of General and Cologne Re, but I believe this was one of the most effective poison pills I've ever seen. It was a horrible deal. AMP has very good credit. It has acquired this company with its embedded debt in it at a cost way above what AMP would pay, and it cannot pay it back because interest rates have come up and the prepayment penalties are just horrendous. If anybody is looking at doing one of these things, I would take some really, really serious advice first.

Are reinsurance and securitization complementary solutions? Reinsurance has an established methodology, so everybody is happy. Regulators are happy, boards are usually happy, and accountants are happy. However, securitization is appealing. People want to do it because it's new, different, and on the cutting edge. There's a price to pay, however. Reinsurance has capacity constraints. Very often the reinsurance market cannot provide the amount of capital companies are looking for.

The securities markets, obviously, are broader and deeper, and they have a significant advantage. Reinsurers are not good at lending cash. I know because I'm a reinsurer. We are lousy at lending cash, and we're very expensive. You don't want to borrow cash from a reinsurer, but securitization cash is at the core.

The capital markets are no good at contingent funding. Why? You might do a deal in which you are relying on your counterparty being around in a couple of years' time. The capital markets are pretty anonymous. In a real securitization, you don't know or can't select your providers. You have to do a private placement. There's also the issue of how much cash is needed. Insurers usually don't need cash, but sometimes they do.

Reinsurance, we like to say, is client-driven, and the ability of a reinsurer to do a deal is based on the knowledge of the client. Securitization is ratings-driven. If you are a AA risk and do a securitization, they're going to mark you one or two notches below and you're going to pay based on a single A yield curve plus a bit more because it's appealing. It shouldn't be because reinsurers are cheaper, because, frankly, the way we look at it is, if it's a debt-type security, why would we charge less than the capital markets? If we can buy the equivalent exposure in the capital markets, why should we charge any less?

Pricing is quite difficult. Cost may be an issue for reinsurance. It may be an issue because, hopefully, we're smarter, but it's also because we often have a lack of capacity. Securitization, theoretically, should drive down the cost because you're accessing a deeper market. Reinsurers would much rather do short-term deals. The capital markets, however, are prepared to do very long-term funding.

One of the big advantages of using the reinsurance market is that reinsurers know the industry. If you want to have good fun, try educating a fixed-income fund manager about the vagaries of the life insurance market. The NPI deal took 15 months to put together. The quickest reinsurance deal I've seen is two days. Reinsurance can be very flexible and deals can be changed on an ongoing basis as needs change. Securitization, because it's commoditized, is very difficult to change. Again, witness NPI, where the ownership of the company has changed and doing anything with the deal is severely limited. Reinsurance, obviously, has to and will include underwriting risk. Securitization will, to the extent possible, exclude it or minimize it. As I said, there is regulatory comfort, when looking at reinsurance. I have empirical evidence of this, whereas there is significant regulatory caution when looking at securitization.

What does the future hold? There will be more deals. The deal sizes are going to grow. When I joined General Re, the largest financing that we had was about \$50 million (U.S.). The largest deal that we've done to date is 1 billion sterling or \$1.6 billion U.S. Those deals are not going to get smaller. They're going to have to be smarter. The deals are going to have to be cleverer to take advantage of tax, accounting, and regulatory issues.

Box-standard, old-fashioned reinsurance financing will not go away. It will be the preferred route of monetization for small-to-medium deals. Why? Because the capital markets aren't interested in small-sized to medium-sized deals. Bank financing will continue providing cash support into reinsurance structures, and bank financing will allow reinsurance structures to get bigger. You can probably tell, I'm not a huge fan of capital markets deals. There will be more capital markets deals, but what I think the capital markets have to do is to come up with a better mousetrap.

I think they're much more likely to be risk-repackaging transactions than purely using old-fashioned contingent loan methodology. What we envision is a situation where the traditional insurance or reinsurance market assumes the insurance and volatility risk, and the capital markets take the funding and, hopefully, the base credit risk of the transaction.

Under that scenario, you might see deals where SPV Re provides the financing to the insurer. SPV Re is owned by a holding company that raises the funds from the capital markets, but it also benefits from the volatility cover provided from the reinsurance market.

Finally, do you need cash? I think Brian is going to talk about a particular circumstance where you do need cash, but if the insurance market needs cash, we get worried. The reality is that, very often, you don't need cash. I'm not going to give you all the secrets, but I think that this is the latest technology. This is a deal where a reinsurer assumes liabilities. Net liabilities are reduced and regulatory surplus is increased.

The claim from the reinsurer is written down in the future as a function of future surplus emerging. No cash changes hands. There is a claim on the reinsurer and

that is indexed or written down as future surplus emerges. If there is a shortfall at maturity, the reinsurer has to put cash in, and that's his or her loss.

It's basically a catastrophic cover on actual performance being at or below that which is assumed in the regulatory basis. In the last 12 months, 2.2 billion sterling in deals has been done using this technology. I think this is very powerful because it's not restricted to unit-linked or variable business. It's not restricted to nonprofit business, and it can be written across a whole book. Even though you may have to restructure it a bit, it can be used in the U.S. I should also say that the NPI deal, the one true securitization, was led by Walberg Dillon Reed. Somebody I know went to see Walberg Dillon Reed and asked about the future for securitization and the company said, "No, we've disbanded the team." When asked why, it said that the reinsurers have come up with something better, and this is it.

Mr. Brian L. Hirst: I was trying to think about the relationship between Milan's talk and mine. If I had to make an analogy, Milan's information was what you would study for if you were trying to become an ASA. There is terrific theory with models and how they all work. What I'm going to talk about is what you learn when you're an FSA. That is, why you can't do it the way the models work because you have an insurance commissioner who's going to say, "No." So what we're going to do is talk about the U.S. This will just give another indication of the way the world is running away, and we're trailing the pack because of our constraints in terms of dealing with multinationals in the financial services industry and our ability to compete.

For the U.S. situation, the most comparable transaction for a life company is the amount of asset-backed deals or securitizations with respect to mutual funds and the 12B-1 fees. For those of you who understand mutual funds, there are typically three types of shares traded on a mutual fund: A, B, and C shares.

The A share is a front-end load with no back-end surrender charge. There's no real need for cash financing on these because the front-end load essentially goes to pay the acquisition cost. The B share is a back-end load; it looks a lot like a back-end loaded deferred annuity in that there is a peel-off fee, an asset-based charge to the customer for some period of time (typically seven years), and a surrender charge. These 12B-1 fees, the peel-off fees, are what become securitized and pay back the cash advanced on the note.

This is what has been funding the growth in the mutual funds over the last ten years or so. The early growth in the mutual fund industry, from, let's say, the mid-to late-1960s going forward (the period of Fidelity's growth) was really funded on the backs of A shares with no need for cash financing.

Milan talked a lot about sources of capital, so I will briefly repeat this. There are six or seven ways a life insurance company can generate capital. One way is that it can get money straight from a shareholder, whether it's through a parent or through an initial public offering. You cannot pay the capital back to the parent except through retained earnings. You also want to think about capital in either of

two ways—real surplus, or, in the case that I'm about to talk about, cash as operating capital or working capital, as opposed to equity capital.

The second method of generating capital is surplus notes. Surplus notes for mutual companies were a favorite of the large mutuals five to ten years ago. Most of them generated additional working capital that way. One of the constraints is that you need the approval of the insurance commissioner. There are other constraints and parameters in terms of paying back the notes.

A third method of raising capital is to borrow money. As Milan said, insurance companies are reluctant to do that. Part of it is cultural, because it does not look good on the balance sheet. The lenders really would like to have a more senior position than the insurance regulators will give them. Insurance regulators always put the lenders below the call of the policyholders, so you are paying an extra premium for always issuing essentially subordinated debt.

Reinsurance was obviously the favored pattern for raising capital, and one of the largest sources of it. Finally, there is securitization, which we'll talk about here.

If I rank the items in Chart 6 in terms of cost of capital, going from top to bottom, the top two are capital contributions or retained earnings in terms of the expected rate of return or required rate of return on the money. At the bottom, we have more pure borrowing costs that are surplus notes, fixed borrowings, or securitization financing. Reinsurance ends up somewhere in the middle.

The difference is that the one large risk that the reinsurer does not have but the direct writer does (at least in the U.S., if you're thinking about coinsurance or modco reinsurance), is the expense risk. If sales suddenly drop and you're stuck with a lot of overhead, that impacts the direct company, but the reinsurer has fixed allowances built into the treaty. It has much less of an expense risk than the direct writer does; therefore, in the spectrum of risk and reward, the reinsurer's rates of required return are somewhere between pure capital and pure debt.

How does securitization work in the life insurance company? I remember when I was taking exams, Dean Crofts used to say, if you worked at one company, you can always say that most companies that you know about use this technique. If you worked at two companies and they did it, then you could say that virtually the entire industry does it. I will tell you that most companies use this technique.

We have a stream of future revenues from a U.S. product that we are trying to securitize. American Skandia is purely a variable company. We sell only variable annuities, and we just started selling variable life. We have no other sources of cash from old blocks, so we need cash from somewhere else; perhaps it will be from either our parent, a reinsurer, or, in this case, securitization. Approximately 98% of our business is variable annuities, so we have the M&E fees on a variable annuity. These are back-end loaded, deferred annuities, so there's a surrender charge that typically runs out over seven years.

We could assign this revenue stream to an investor. You can assign the M&E fees and they're protected by the surrender charge. Conceptually, you could also expand this to universal life or variable universal life. You would have both the M&E fees and cost-of-insurance (COI) charges or some margin on the COI charges, depending upon the relationship of your COI charges to your mortality cost. On a permanent or a fixed portfolio, such as a whole life block, you could securitize the premium loading, but, to our knowledge, we're the only company that has completed a securitization here in the U.S.

What do we do? The life company issues a note to the investors. The investors have been other large insurance companies that wanted to take these notes. Assets are classified as asset-backed for their general account portfolios. The note and the interest is sourced from the specified revenue stream, in our case, the M&E fees, and the size of the note is dependent upon the present value of the revenue stream discounted for the volatility. Much stochastic testing is done to determine the amount of the securitization. For our purposes, these are nonrecourse notes. In other words, if at the end of the specified period the note isn't paid up, that's the risk the investor took. It is part of the negotiations in dealing with the commissioner in Connecticut, which is where American Skandia is domiciled.

I'll get more specific. A block of variable annuity contracts is used. It is an in-force block, which is fairly standard in the industry. It has 140 basis points of M&E asset fees and a seven-year surrender charge. The acquisition cost is what you pay the agent. There is also an up-front commission and some other modest acquisition charges. Then you're expecting to recoup this cost back over time from the peel off on the M&E fees.

You have to allocate some portion of that M&E fee to cover ongoing maintenance, and if you also have an ongoing asset base, you have some other kinds of compensation charge running out. You have these ongoing expenses to take care of, and what you're left with in this particular example would be a 1% asset fee on the account value of these contracts to repay the investors. We securitize the block by assigning, without recourse, the rights to the 1% asset fee on the account value and the surrender charges. The latter protects the investor if, for whatever reason, there is a run on the bank and all the contractholders take their money out. The policies would all be assessed the surrender charge, and in all cases, that would be in excess of the size of the note, thereby paying off the note in full.

The size of the note relative to a deterministic expected present value of the revenue stream is typically 60–70%. When you put the stochastic distribution on top of that, the typical rating for most insurance companies would be a BBB, although I think it's also because there are not many of these deals out there. There's a small premium over what you'd normally expect for a BBB rating, although the last one that American Skandia did, for the very first time, achieved a cost or an interest rate that was below an analogous 12B-1 fee done by Chase.

We're starting to get the investor confidence. In fact, we just paid off the very first deal that we did at the end of 1996, which I also think is a first in terms of notes being paid off, as compared to rolling over.

Another issue I've alluded to is what the investors require to make the deal work. They know how to use efficient capital, but we have regulators who are concerned about policyholder safety. They're not comfortable with this arrangement, whereas they are comfortable with reinsurance. The policyholders are primary in everything, but the investors want to be at least primary on this block of business, so there's a natural tug of war. Generally, the regulators win. What we have been able to structure with our deals is that, in the event of an insolvency or a rehabilitation, the fees or the securitization could be put into an escrow account for up to a year, but only for a year. Then, the regulator would have to fish or cut bait—either release the fees or default on the notes.

So between this and the analysis of the overall claim-paying ability of the company and the overcollateralization on the actual securitization block, the investors have become comfortable. It has become a commodity in that they don't like to change the deals at all, but they're willing to keep doing the same sort of deal.

The accounting treatment for statutory purposes is surplus-neutral, which is another plus in terms of the regulators. The regulators get nervous when you start enhancing your surplus because you told them you did some reinsurance. When you do a securitization, you put cash on your balance sheet and put up a liability for essentially the value of the note. Afterward, you amortize it over a standard schedule, as opposed to the actual fluctuations that would occur on the pay down.

For U.S. GAAP, securitization is not a true sale treatment. The reason it's not a true sale is because, after the end of the surrender charge period, the rights to the future M&E fees come back to the insurance company. The accounting profession won't allow us to call that a true sale. In the mutual funds, however, in the 12B-1 deals, what happens is that, at the end of the surrender charge period, the mutual fund contract rolls over into a C share and the 12B-1 fees go away. Insurance companies are not allowed to do this or to roll the contract into something that would pay on an asset trail (at least if you're a New York company). We must do a manual rollover and, therefore, we can't assume what would happen; therefore, it's not a complete true sale. Right now, for GAAP, it's considered debt; therefore, you have to worry about rating companies analyzing debt-to-equity ratios.

What's the future of securitization in the U.S.? Variable products continue to take up more and more of the market. They are cash hogs because, obviously, the entire policyholder deposit must be invested in the underlying subaccounts, or the underlying mutual funds, and the acquisition cost has to come from somewhere. As the older, mature permanent blocks of insurance go away or people start forming subsidiaries to sell just variable products, this becomes a true need. But it's a cash need, not a surplus need. The surplus strain on variable deferred annuities is minimal, but there's a big cash strain. Reinsurers are concerned about securitization because it's cheaper working capital, and they see something of a threat. They are now looking to see if they can't find some ways to work within the reinsurance structure to do the same thing effectively as securitization.

The way a typical reinsurance treaty works is that you get a full expense allowance up front with a 15- to 20-year recapture provision. The reinsurer prices it at a full

acquisition cost up front, then recoups all the M&E fees over 15–20 years, which generates a rate of return that comes out in the middle. However, you could craft a treaty in which you didn't take the full expense allowance up front, but instead took some percentage like 60–70% of the acquisition cost. Then you allow the recapture to occur at a point where, treating it like an experience refund, you keep track of the advance versus what you paid off. As soon as you're in the black, from the reinsurance company's point of view, you will be allowed to recapture the contracts you put into that treaty. You would then end up with an expected life of the treaty that is more like the duration of a securitization.

The other issue facing reinsurers is that they also, because it's insurance, have the same kind of target capital needs that the insurance company does, which has typically a higher risk-based capital than a pure bank does. The reinsurer also has to deal with that issue. Where is it going to get the capital? Can it get the required return on capital or work some other funding agreement?

That's where I think it's going to go. I've been somewhat surprised that it has not taken off more than it has. We did our first deal in 1996 and, through the end of this year, we'll probably issue notes in excess of \$500 million. It seems to be working well. It's reasonably efficient, but it's not as efficient as we would like it to be. We have not tried to tranche the back end for the extra 20–30% overcollateralization. Because of our corporate structure, we haven't had the need to do that, but I've just been surprised, given the growth in the variable market that it really has not seen more activity. That's what's happening in the U.S.

From the Floor: Milan, you mentioned when you were giving your predictions that one structure you could see happening on the life side was the capital markets taking a financial risk while reinsurers would take underwriting risk. However, in the P&C market, as I understand it, the capital markets are in fact taking a lot of underwriting risk. Do you see the capital markets taking underwriting risk on the life side at all?

Mr. Vukelic: The answer is yes, because they're already doing it. I just don't think it's particularly efficient. If you want to have a discussion on why P&C securitization is probably the world's worst idea ever, we can have that one. I think it's the question of what gives you the most efficient transaction, and I think Brian has probably seen a little bit of this in his pricing. NPI saw it in its pricing.

Brian's company has a credit rating of x. It can issue debt based on the yield curve of x. What he's basically doing is borrowing money against an identified stream of cash flows. Rating agencies will use a formulated approach. They will look at Brian's rating and sensitize those cash flows. There could be a 60–70% loan-to-value ratio and that reflects a very high probability of repayment. That may, in fact, be a probability of repayment that is better than Brian's rating, but the solvency of the company, for all the financing, is still exposed.

The rating can never be better than x, and what they'll do is say, "There's a little bit of uncertainty. Therefore, we'll have a margin on top of x and while it's new, there will be a margin on top of that."

There is an alternative way of doing it at the other end of the spectrum. Brian can go to a friendly AAA-rated wrap company that will say, "I will take the credit risk and the volatility risk and you can, therefore, issue securities that are AAA." That's going to give him a different cost. The cost there is going to be AAA-rated securities plus the cost of the wrap.

What I'm suggesting is that there's a halfway house, and if it makes more sense, repackage the transaction and put the different risks into markets that will absorb those risks most efficiently. There is funding straight into the capital markets. There is a box-standard base credit risk that goes straight into the capital markets. Volatility risk perhaps does not go into the capital markets. It goes somewhere else. If you look at the P&C examples, we can have an argument about this, but I've yet to see a P&C deal done cheaper than the traditional markets will do it.

Mr. Hirst: I think Milan's absolutely right. We can use 50% of the value, and you still are not going to get a rating above that of your claims policy rating less one or two notches. I agree with Milan and we have explored those. We haven't yet successfully found a AAA wrap company that will do this, but we have been looking at that.

Mr. James W. Dallas: When you said that your transaction on a statutory basis is neutral, I take it you're incurring the same strain as if you didn't do any kind of securitization? Did you do the transactions with the holding company and feed them down into the operating company? Is that how it works?

Mr. Hirst: Yes, that's correct.

Mr. Dallas: But then the regulators make you set up a liability on the statutory sheet for the payback.

Mr. Hirst: It is for the exact size of the cash event.

Mr. Dallas: On the GAAP basis, what percentage of your capitalization comes from these types of transactions? Is it 25% of your capitalization or 50%? What is your debt-to-equity ratio?

Mr. Hirst: You have working capital and growth capital. The basic arrangement we have with the parent is that it has agreed to fund the target surplus capital requirements. In terms of the straight capital requirement, the working capital needs we've been able to fund are essentially 80–90% from securitization since the end of 1996. We have done this at a time when our compound annual growth rate on variable annuities has been about 35%.

Mr. Easson: I have a question for Milan and Brian. It's more blue sky. I've jotted down three words that start with C: cost, capacity, and creativity. I'd be interested in comments from both of you pertaining to where you would rank those that will drive the securitization process. In terms of inhibiting the progress of securitization, could you please comment on the regulatory environment, the accounting treatment, modeling, and indices? I mention the creation of indices because, on the P&C side, the way catastrophic bonds are structured, the investor's

return is dependent on an industrywide index, as opposed to the actual losses of the issuer. This leaves the issuer with a basis risk. I think one of the issues with indices is acceptance by the investment community.

Mr. Vukelic: My view is that the cost and capacity are actually the same thing. If there are tons of capacity in the market, the cost will be low, and if there's a lack of capacity, the cost will be higher because it's a more precious resource. The thing that's more likely to drive this is going to be creativity. People are going to want either funding, as in Brian's case, regulatory capital, or GAAP capital for different reasons.

The winners are going to be those people who come up with the most creative solutions that provide the answers to what the clients need, and it is all about lower cost of capital.

What's going to stop the development of securitization in a life context? I don't know, but I think it's going to grow. I think regulators will become much more comfortable with the techniques. I'm not sure the U.S. is playing catch up. I just think that your regulation is different, but if the U.S. is going to compete on a global stage, the regulators are going to have to see about leveling the playing field. This is an insurance conference, but it's already happening with things like bank insurance, and I suspect it's going to happen in terms of capital management as well. The accountants always make life difficult, and the creativity comes in satisfying both the regulatory and accounting concerns. Modeling is not a problem. I think you guys probably produce better models than anybody else, so that's easy.

I disagree with what you said about indices. I think this is always going to be a very company-specific need, and the modeling will be company-specific. I cannot envision, in the near-term, transactions being done off the back of a box-standard mortality table. It's going to be adjusted for what the company is actually doing.

Mr. Hirst: Regarding the three Cs, if you believe in efficient markets, then all of these will start to move towards more efficient capital, however, slowly. I think cost and capacity are more a function of the fact that growth in the variable products arena is going to drive the need. For reinsurers, it depends where they are looking to place their money.

In terms of regulatory environment, I think one of the primary drivers we'll see in this area is the bill making its way through Congress that is going to tear down some of the walls between insurance companies and banks. When we start having both banks and insurance companies under the same corporate umbrella, then I think you're going to see a lot more creativity and optimization of funds.

We talked about the cost to the reinsurer in terms of its target capital. To the extent that there's a direct link to an affiliate, a parent, or a subsidiary that's a bank and can get those funds to them in a very efficient manner, then I think you're going to see more creative solutions. I think one of the triggers that might really accelerate this move would in fact be if that bill finally makes it through the U.S. Congress.

Chart 1

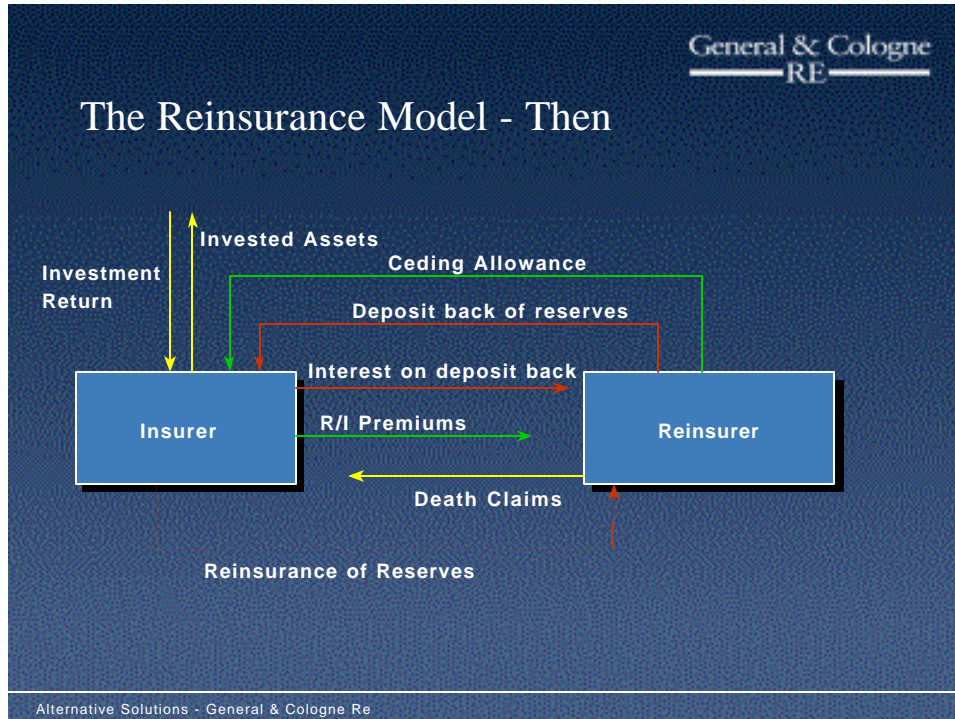


Chart 2

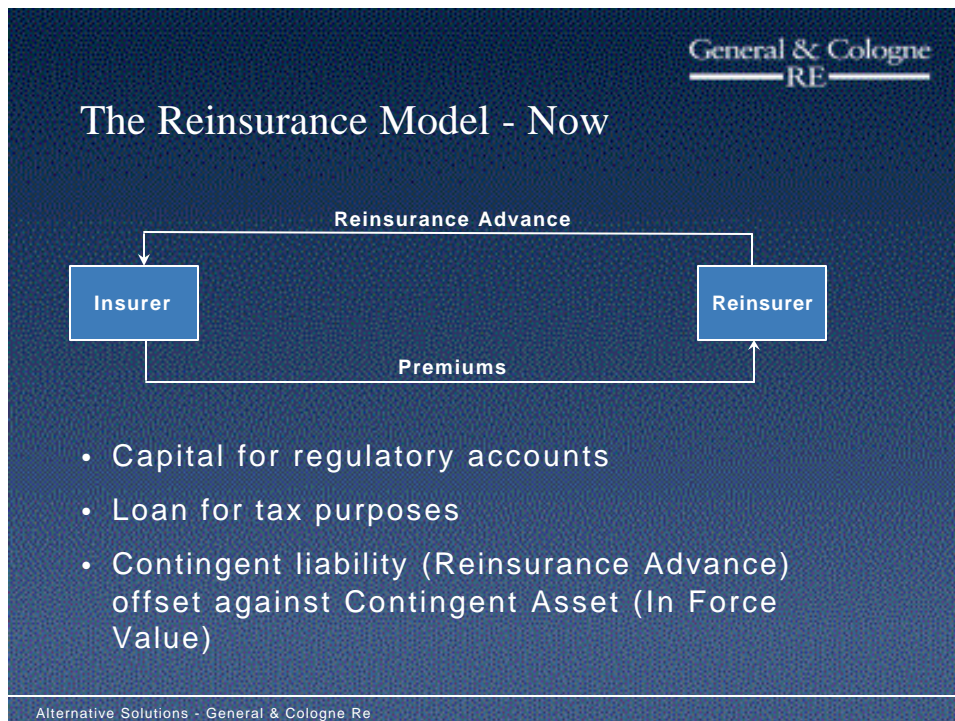


Chart 3

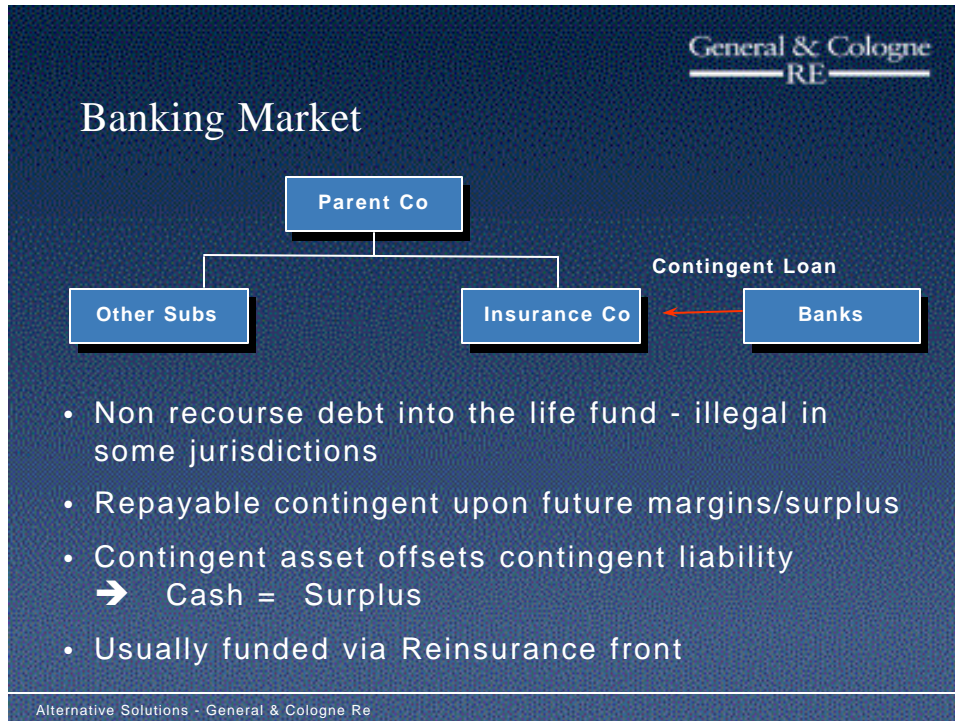


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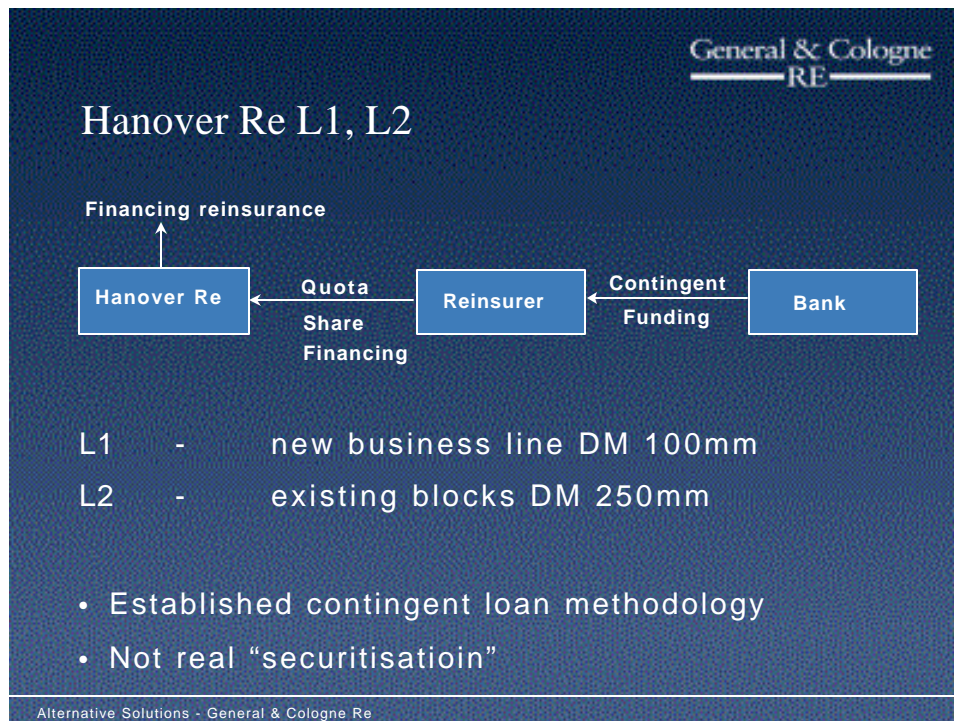


Chart 5

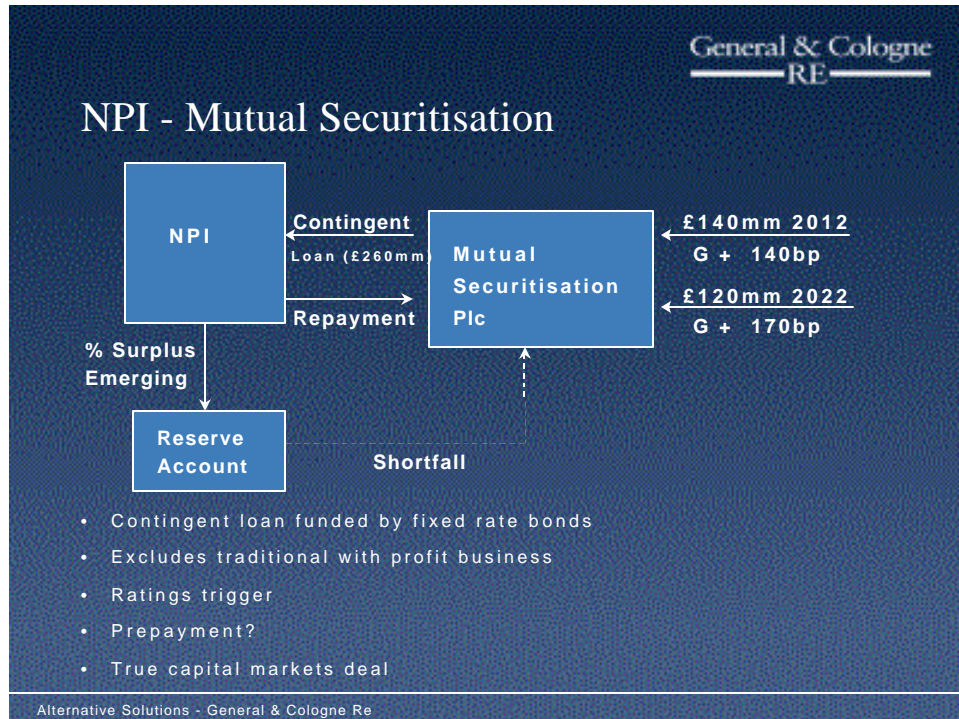


Chart 6

Cost of Capital

