



## International Society of Life Settlement Professionals

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### Understanding Longevity as a Principal Asset Class!

Sept. 9<sup>th</sup>, 2009 at 10:00 AM ET (New York)

#### BOOK INTRODUCTION: "Life Settlements and Longevity Structures"

**AUTHOR & PRESENTER: Dr. Jim Aspinwall**

**AH** = Andreas Hauss / ISLSP Founder    **GP** = George Polzer / ISLSP Executive Director    **JA** = Dr. Jim Aspinwall / Presenter-Author

AH    Ladies and gentlemen it is with pleasure that I welcome you all to the Autumn Kick-off Webinar of the International Society of Life Settlement Professionals. I'm Andreas Hauss the founder of the Society, an independent team of top life settlement professionals. I'm very proud to welcome a distinguished audience from all over the United States of America, Europe and the Middle East representing some of the most influential people from provider companies, actuarial services, funds, law firms, and above all, I welcome the high net worth investors and investment managers in the audience. Before we start I would like to thank George Polzer and Charmaine Wages for the excellent organization of this event.

Among institutional investors the International Society of Life Settlement Professionals is being perceived as the go-to resource for investment advice, and a constantly growing number of introductions among peers, companies and investors inside our exclusive network have been successful. In our previous webinars this year we have been speaking about market-to-market, the next generation of premium financing, European pension funds, risk assessment technology and build or buy considerations. The objective of presenting these topics is to provide investors with timely updated information to build investors confidence and to increase transparency in this fascinating asset class.

Today's webinar will cover the next milestone in Life Settlement Industry development, longevity structures. I am pleased to announce that Dr. Jim Aspinwall, author and world recognized life settlement investment authority has accepted our invitation to present and discuss his groundbreaking book by the title of *Life Settlements and Longevity Structures, Pricing and Risk Assessment*. George and myself have had the pleasure to read the book in the past days. Ladies and gentlemen, this book sets a milestone. It is probably the first comprehensive life settlement book for investment professionals. Not only is it crystal clear explanation for life settlement technology and outlining the road ahead for future investment vehicle, it is the vehicle itself to rapidly travel down the road to making life settlements one of the principle asset classes. Knowledge is power when it comes to protecting accumulated wealth, this is why every professional in the industry should have this book on its desk and his desk and refer to it for proper investment advice. Jim's book will help you get ahead of the curve and invest with highest professional standards in this rapidly emerging market.

ISLSP is proud to announce its alliance with the John Wiley & Sons, publisher of this book and other award winning journals and books. With Wiley & Sons supporting ISLSP we are glad to offer special discounts on life settlement books that ISLSP endorses.

Ladies and gentlemen it is a pleasure to introduce you to Jim Aspinwall as our guest speaker

today. Jim, please start your presentation.

GP Andreas, this is George, Jim if you could give me just a minute I'd like to go over the agenda of the webinar, is that okay Jim?

JA That's fine with me, yes.

GP Okay, good, thank you Andreas for the introduction. On the screen you should see the agenda, and we're going to try to follow this outline. Jim discuss his background and experience, and then give an overview of his. It is merely an overview, to understand the key concepts that will drive the growth of this new asset class. As many of you have not yet read the book, some have not yet received the book what I propose to do at the end of webinar is to go through the *Forum 24/7 Exchange* where after the webinar you can continue you're an online dialog with Jim and ISLSP concerning any questions about the book. Jim will also talk about the other asset class parallels. Jim is an excellent knowledge source about these parallels because he has experienced the emergence of numerous other asset classes becoming mainstream. He will share those parallels and lessons learned. The theme of the webinar is longevity as a principle asset class, we should examine what constitutes a principle asset class, what is the definition of a principal asset class, and what is the future of longevity as a principle asset class. Next we'll cover practical aspects related to the key factors and milestones for longevity to become a principle asset class. Finally, we will open up the webinar to our panelists and participants for the questions and answer session. We will leave a lion's share of the hour for the questions and answer section. Before Andreas' closing comments, I will conclude by giving a brief presentation of ISLSP's *Forum 24/7 Exchange*.

Thank you very much for attending the webinar. I will now turn this over to Jim. Jim please go ahead.

JA Thank you. I will follow this webinar agenda and run right down step-by-step. First off I'd like to say that the book was an effort on three of our parts, it wasn't necessarily all my doing. Jeff Chaplin and Mark Vann had a lot of input into the book, so it was a concerted effort. My background came out of academia into investment banking and spent probably the better part of 20 years in either academia or investment banking. I started out initially with a company called J.P. Morgan Chase working with interest rate derivatives, and we'll talk about all of this a little later. But as the initial process, the initial program for interest rate derivatives, did not receive universal approval, as a matter of fact most people just laughed at that product and said it would never work, and today it is the prime product that is used to manage and used to hedge interest rate risk. I've seen that happen over and over again using a number of different products and structures. For example, I moved from interest rate derivatives into the mortgage-back securities market where I was again in the derivatives area but followed the mortgage-back security market closely and that product absolutely exploded and I see, provided we can structure it correctly, I see the life settlement industry following the mortgage-back security industry closely. I went from mortgage-back securities into exotics and other interest rate derivatives and finally into the credit derivative area which is how I got involved in life settlements in the first place because we were working with collateralized debt obligations and we were looking for ways to dampen the volatilities and correlations among the different tranches, and anyone who has dealt with credit derivatives doing swap calculations know that what you do on a default swap calculation is when the credit defaults dies, and so we poured over all the actuarial science from the actuaries and life settlements into credit derivatives and used those models to model and risk manage credit default swaps and price credit default swaps. Now obviously a credit default swap has other problems with it in that the default corporate bond when it dies it can be resurrected, whereas when a person dies, only one person that I know of has ever come back to life, and when a bond defaults it doesn't default 100%, okay. So with those two exceptions and tweaking those two exceptions why a lot of the actuarial science in life settlements and life expectancies is used in the credit derivatives and that is basically how I got involved in life settlements. We were using these products simply as a measure to dampen and risk manage the tranches on collateralized debt obligations, but it became very apparent from working with that product, that that product was in fact in and of itself not a bad investment and we then rolled over into life settlements and their uses which is what the book is pretty much all about. The different uses of life settlements from

an investment as an asset class in and of itself to principle protections and wrapping these products with other capital markets products you can do wonders with them, and that's what the book talks about.

In the book we basically give you background in life insurance and how it evolved from 2000 years ago and before into the mortality and credit structures and valuations and risks, and start into the structured products using life settlements as an asset class in and of itself, buying the pools of life settlements and then managing those pools to term and seeing some very, very nice internal rates of returns or returns. Today given the markets that are out there you can buy what I call a conforming pool of life settlements that has a 10 year term anywhere between 12 and 14% IRR, and that's not a bad investment given the risk wrapped around that structure because that structure basically has very little risk in my humble opinion, number one, it does not have any correlation or very little correlation to any of the other economic indicators out there, markets, stock markets can go up or down, interest rates can go all over the place, it doesn't matter the value of the life policy, just kind of moves forward almost in a linear progression. The credit risk on the life settlement policy is pretty much non-existent given that not only are you buying these things from A-rated companies or better, but in most instances, 46 I think out of 50 states have state guarantees behind them, state insurance pools which will guarantee the pay off on the life insurance policy should the company default. So you've got a conditional probability there which makes them a very secure investment from a credit risk point of view. So what we talk about mainly in the book is really the only risk you have with the product or the main risk you have with the product which is longevity risk and liquidity risk. Liquidity risk is a very real risk in that if you buy, strictly buy a pool of these life settlement products you're going to have a lot of cash outflow initially and nothing coming in, so you're going to have to reserve for that proposition, however, it is almost like an annuity, and that at term you're going to have all of this coming into your structure and the net results should be a very, very fine rate of return or return on investment. The other problem and the big risk is longevity risk in that I am buying this pool with a finite term, a 10 year term to it, which means at the end of 10 years I want my money in the bank if I can wrap the bond structure with this pool of life settlements I have to pay the principle on the bond at the end of 10 years. I am counting on the pool of life settlements to pay off that bond structure and if I have an extension to their longevity risk I'm in trouble. So the main risk to these pools is the fact that the life expectancies are not going to be what the actuaries say they should be and this is where we concentrate most of the chapters in the book on that particular risk. We do define a number of capital market products that you can use, as I said, you can use it as a principle guarantee because I can issue a bond and wrap the bond with a pool of life settlements and have the life settlements there to pay off the principal on the bond. I can use it if I have a financing problem, or I can guarantee the loan repayment with this, with the pool of life settlements. There are almost unlimited permutations and combinations of how you can use this product because of the fact that when you purchase this product you're purchasing it for pennies on the dollar and you're receiving the full dollar pretty much guaranteed at some term, some point and time in the future.

We then have the last two chapters are on products that are not necessarily out there in the market yet. I think they're coming. There's a big convention next week in Las Vegas, Goldman Sachs will be there, they will be presenting their mortality swap product. These are the derivatives and the derivative products like any derivative product is used initially to protect, to hedge against risk. None of these products I have seen as yet are very active in the market, but I think they're coming. There are some problems in how you're going to price them. You can port over a lot of the math from interest rate derivatives to life settlement derivatives but you have to be very, very careful with that, and we talk then finally on hedging. How to use the derivative products to hedge.

We go into asset swaps which if you have a pool of subprime mortgages, you can swap those pools of subprime mortgages out for a full valued bond or some security and take the subprime mortgages, the underwater asset off your books. We actually did this in London, there was a company that was in default, went into the, in the United States we call a Chapter 11 filing, a major, one of the larger law firms in the country walked it through in a reorganization process and determined that the company could come out in reorganization and be viable. When they came out they decided they were going to merge with another very, very large company in London, but in that process in the evaluation process they determined that one, that their pension funds were way under water and as a result the valuations and the mergers went way down. What the law

firm did was brought some people in and reviewed this and took the pension funds and swapped them off shore for a full value rated instrument and that brought the pension valuation back up to full value and the merger went through and everybody was happy. So again, the permutations and combinations on how you can use this stuff are almost endless. We talk about mortgages and how you can wrap a mortgage with this product, then at the end of 5 years relieve some of the principle, at the end of 10 years relieve some more of the principle and at the end of 15 years literally write off the entire principle on the mortgage be that commercial or residential. Finally, as I said in the last two chapters, they pretty much look at the different derivatives that you can use with this and again that's almost endless. It's the same list that you get with interest rate derivatives, Caps Four, Swap Options, Flexi Caps, Flexions, barrier options, steps up, step down, none of these are in existence today. They are all very, very easily calculable from a mathematical point of view. I am sure as the life settlement market grows these products will grow with it and become more and more popular. That is an overview and background on the book.

Are there any questions now?.

GP Why don't we start with just understanding what your conception of a principle asset class is and where along the path longevity is so we have a framework to then discuss the progress. If you could just give an overview of your experience with other asset classes becoming a principle asset class and then we'll save the questions until the very end. So please everybody write down your questions and we'll then open it up for questions after Jim is done with the next two sections. Go ahead Jim.

JA Well as I said before, I see life settlements following pretty much the same path as the mortgage-back security market. It started out very, very slowly at first, but then grew because it offered advantages that other products couldn't offer. It was a very highly rated product that offered a through the curve return and basically grew in acceptance and became one of the largest asset classes out there. Obviously there were some people ... people got involved and they ended up doing things with the asset class that they shouldn't be doing, but in general the asset class, the mortgage-back securities market when it was traded and structured properly was a very, very fine asset class because it offered advantages to everybody. The lender could pull their mortgages out, get the mortgages off their books, get funds in the door to do more lending, they got rid of the interest risk of the mortgage-back security, or the mortgage security. The asset class to the investor was a very, very secure asset class and as I said through the curve return but obviously we got people started to manipulate the asset class and it got, we got non conforming loans out there to people who shouldn't have had loans and of late this thing has totally and completely blown up. I still contend the conforming mortgages and the mortgage-back securities markets are very fine investments. They're given to people who have put 20% of the value of the home down, they have gone through strict credit ratings and their scores are high and there's probability of them maintaining the payouts are very, very high unlike the subprime loans that seemed to have taken all the headlines of late. I see the life settlement pools following pretty much the same path. When we pool them up and do it correctly it is a very, very secure investment that can offer a very, very high return and as I said, when used in conjunction with other capital markets products can enhance those products. There has been a lot of, what I don't want to call it fraud, but misuse of the product in the past and I think there's been a lot of funny stuff, let me use that term, going on with the people who are basically buying or putting together the pools, the insurance people out there who are collecting the policies. I think what I would like to see in the future and would help this asset class grow immensely is to put together something like they have in the SWAP business, they have ISDA, the International Swap Dealers Association, which is a professional organization that oversees interest rate swaps and when they came into play they gave legitimacy to interest rate swaps. Of late default swaps have basically been rolled up into the ISDA, I mean the default swap market when I first started out everybody laughed at it, it was not going to work. We even had major, major problems with it. In the late '90s Russia defaulted on their debt but it wasn't U.S. dollar denominated debt so U.S. default swaps on Russia did not, they said were not in default, so we didn't have to pay off on the default swap. If a company went into reorganization did it default, there was really not even good definition what a default was in the initial markets in the default swap market, so it was pretty chaotic at first, and that led to a slow growth process, but now that we've migrated up and this default swap business has been rolled into an International Swap Dealer Association type process we have what are called conforming default swap

programs and it is more professionally run and next year I guess the number I heard was the credit derivatives market was something like \$40 trillion in trade. So I see, I would like to see the life settlement profession put together something along the same lines that the International Swap Dealers Association to oversee life settlement pools and life settlement trades, ... and I think that will happen. Where it comes from, I don't know. There is the LISA Organization out there, whether LISA should be the driving force behind it or the investment banks, because the investment banks are big in this product, don't kid yourself. They are buying this stuff in huge quantities. Whether it's the investment banks or an organization like LISA, I don't know, but I think it, I would like to see some sort of an oversight. As far as electronic trading is concerned, Cantor I know has a web platform where you can buy and sell life policies and pools, I think there's a, I heard that AEGON was starting one, whether or not that's up and running yet I don't know, but I can see electronic trading platforms starting up. They're going to be a little more difficult because the product itself is not that structured. Every pool has a different cohort population, it has different parameters so there's not kind of a vanilla product we can look at. Finally, as I said, the derivatives will follow on as the product grows and the need for risk management becomes more and more apparent because that is in fact what the derivative products are going to do, they're going to hedge against longevity risk, which is the primary risk in the product. That's pretty much what my experience is, as I said, I came through the credit derivative fiasco, I came through the mortgage-back security fiasco. Every one of these asset classes have had problems in the past, they are now even the default swaps are now pretty much considered vanilla products out there, and certainly the interest rate risk swap is the main method that people use to hedge interest rate risk.

GP Jim,

JA Yeah,

GP This is George, we've got a number of panelists, so before we open it up for questions and answers to the attendees, could you just talk about what the media, some of the articles we've been discussing... we're trying to understand how the media can influence this and, you know, how to decipher what's real from not real, what they're saying. Could you give an example of the recent *New York Times* article, they covered a lot of different issues there and most of the people that I've spoken to say that that has a negative slant. Do you have anything that you want to say about the articles that you've seen, please go ahead?

JA Well the only thing I can say about the *New York Times* article is it's written by the *New York Times*. Basically the gist of the articles I have seen is here we go again more structured products that are going to get us into trouble, and if done incorrectly will probably, that probably can happen. If we've learned our lesson from the past and we have more of a review and a more transparent product then I don't think you will have a problem with it. It will cause problems to the insurance industry, the insurance writer of the policy because most of these products, life insurance products, have been priced with a certain amount of lapsing included. In other words if I issues ten policies, life insurance policies, I am going to assume from past history that five of them will lapse, which means people will fail to pay the premium on the policy and I no longer have any kind of a liability going forward and therefore I've made the premiums and the sales commissions and whatever else I got up front, and I don't have a liability in the future so I can reduce the price of my life insurance policy. As people become more and more aware of a third alternative to their life insurance policy, i.e., they've usually either had to carry a life insurance policy they didn't want because initially these things were what we're talking about mainly in the book are called senior life settlement policies, they're policies that are held by people who are in their 50s, 60s, and 70s, they purchased the policy when they were in their 30s, 40s, and 50s to protect their families against any kind of a sudden death on their part. They are now in their 50s, 60s and 70s, the house is paid for or they have sold the house and downsized, the kids are all out of the house, the pensions have kicked in and they have a life insurance policy they don't need any longer. So they had two options prior to this, they could either lapse the policy, take the cash surrender value out of the policy which was not much money at all, or they can continue to pay into the life insurance policy which they really didn't need. Now they have a third option, they can sell that policy onto a trust or a hedge fund or some investment vehicle and basically the money they receive for that policy is substantially higher than anything they would get under a cash surrender value. That being the case there's not a lot of need to let a policy lapse anymore, so all the pricing that has

gone into the price of a life insurance policy is now going to have to be rewritten because of the fact that we're now going to carry that liability through to term and not get to write it off after two, three, or four years. Having said that for the first time since we have been keeping records the life expectancy of people in the United States has turned down, so we just had a rewrite of all the life expectancy tables in the last year or two, we may end up seeing another rewrite of life expectancy tables in favor of the life expectancy tables in favor of the life insurance companies in the next few years. I don't know, that's a speculation on my part. But the articles basically said that, one, here's another structured product that's going to get us into trouble, nobody knows how it works, nobody is watching it, and two, we're going to force the life insurance companies to up the price of the life insurance policies and it was pretty much all negative.

MO Jim, this is Mike O'Conner, President of the Independent Life Settlement Advisory Group. I have a number of questions starting with the current life expectancy estimation protocols in the market. You'd just mention, the life expectancy estimate is pretty much central to any wager of success with this asset. Can you comment on those protocols?

JA Say that again Mike, I'm having a little bit of trouble hearing you.

MO The protocol for life expectancy estimation in the market right now, please comment on what's being done out there and why we should have any level of confidence or what level of confidence we ought to have or in which protocols for estimating life expectancy.

JA Okay, you're talking about the 2008 tables versus the 2002 tables. One of the problems we have is that if you're asking me how many people will die in the city of New York in 2009. Using those tables I can get very, very close. It's amazing how accurate you can be with those tables. The problem with the life settlement pool is, I'm not interested in how many, I'm interested in who. So when I put these pools together I'm taking a very, very small sample size of a massive, of a universal set and as a result the question then becomes, are these life expectancies at all accurate given the small size of my sample set, and that is a very, very big problem in and of itself within the sample set and your question goes a little further in that okay, how accurate is the universal set and I can only say that it does, they do come out every, what is it four years Michael, and re-evaluate these things. They haven't moved that much ...

MO From the 2001 tables there was I think a fairly significant move to the ...

JA To the 2008

MO The relative risk tables are weak as are the short duration on general tables so that went to the question, how much confidence can we have in the base tables and then you know each one of these life expectancy estimators has kind of their own a black box or a secret sauce if you will, and when we first published actual to expected, the actual number of cases that they have are so small that its hard to generate confidence and I guess I asked the question because if we were going to take this asset class out of kind of behind closed doors of private equity and into investment realm we need rating and we look at markets and without confidence in those life expectancy estimates then I don't know if we can get there.

GP Jim, this is George, can I just interject quickly, thank you Michael for your questions. One of the areas that your book touches on briefly is the importance or the major role that factor analysis can play in skewing the distribution and I sent you an e-mail asking how much of a science is that and how much of the skewing can perhaps offset life expectancy actuarial estimates that are done, can that weigh in?

JA Well yes, I mean Michael has a real good point because for example we have an actuarial model, a life expectancy pricing model that we use for individual policies and portfolios in general, it came out of the CDO market where we optimize around the liability side rather than just try to price the asset side. We use a mean to calculate life expectancy because the mean is what they use in capital markets. The other products that are out there use a median and some of them use a 50% median and some of them use a 85% median. The point I think Michael is trying to make is these

numbers are all over the board and how much confidence can we have in them, and the idea being you're going to have to use something as a starting point and then kind of hedge around that starting point. They're not going to be extremely off. The other point being, the skewing we talked about, when I put together a life expectancy or a life settlement pool I get to pick and choose who I want in that pool, and generally speaking the choices I make if the gentleman gets up every morning at 6:00, he's 65 or 70 years old, he gets up every morning and runs a marathon, eats twigs and sticks and leaves all day long, has no stress and leads a very, very quiet, quality life, that policy I don't want in my pool. The guy I want is the guy who's 5'2", weighs 400 pounds and thinks exercise is moving from the couch to refrigerator to get beer and chips. So I can skew to some extent my life expectancy by choice in the pool I take, but Michael is right in that we are going through a transition here and again we don't even know, we're not even sure what measure we want to calculate the life expectancy. I just gave you three different measures we're using, so you're going to have to use some sort of a collar or a wrap around your expectations and try and hedge that term expectation if we're going to bring it into a, if you want to use it as an investment grade product.

MO May I ask one other question?

JA Sure.

GP Go ahead.

MO The other thing that you had mentioned earlier Jim had to do with kind of IRR expectations from a pool.

JA Yeah.

MO Have you got any, you or your clients, do you have any sort of reasonable history in this respect that you can talk about?

JA No, That's a simple answer, the reason being that these people have been buying these things quite a bit. I mean the big investment banks Deutsche and Credit Swiss, they're into this stuff massively, but they're buying terms of 10 years, and we haven't gotten there yet. This product is not 10 years old so to speak. I'm sure there are products out there that are 10 years, but it's not massive. I would be such a small sample set as to not be really useful in any kind of an analysis in my humble opinion, there may be somebody, there may be a study out there. There's a great web page out of London that is a pension fund web page and they may have some papers in there I haven't looked to see if there are studies on this topic.

MO No, that's been my experience too there isn't enough data or enough experience in the market to really validate these IRR expectations, although most of the models conform to the numbers that you just quoted.

JA Right. Now the only thing I will say on that is, you know, making the leap of faith that the market will grow and become liquid at term if I have 100 policies in a 10 year term and only 50% of those policies have matured, I have 50 policies that will now be available for sale that will have a zero life expectancy. Now obviously you're going to take those policies and re-evaluate them and have an adjusted life, but the value of those policies are going to be very, very high compared to what I paid for them, so while they haven't run off and given me the face value of the policy, I can certainly turn around and sell them in the market assuming there's a liquid market for them at a very, very nice profit. So that is one of the hedges you can look at or even take those and set up a new pool and roll it over into a new pool and a new investment which has got now 50 policies which are very, very valuable. So if we assume that the market will grow and become liquid in 10 years, you have options, you're not stuck sitting there paying premiums on a policy that may go 15 more years on, because I have heard people tell me that look I can actually lose money on this investment, and my answer to them is theoretically yes, you can invest in a policy that's supposed to mature in 10 years and you're paying premiums on it 15 years out, that theoretically you could lose money, but if the markets grow and become liquid then theoretically I don't see how you can

do that. I'd just sell it.

MO The last question really goes back to this idea of longevity as a principal asset class. What can we say to today's pension fund manager or sponsor to convince them that this asset class is worth their investment today? I mean so that they don't sit on their thumbs for 10 years to wait for data.

JA To wait for the data to get there. One of the things that has been proposed, there have been two bonds that have been issued, both of them were miserable failures. One was by Swissery and one was by, boy I forget, they are longevity bonds where you actually invest in the bond and the value of the bond you can either have the principle at risk or a coupon at risk and the value of the bond is dependent on the mortality curve. You set up a mortality curve initially when you buy the product and if the actual ... that is your realized mortality curve, your index mortality curve, if the expectation of the mortality curve is above or beyond, below that, why then the payoff goes up or down and while the two products that were issued didn't do very well that product I think could sell if put together correctly. The problem with the two products were they weren't designed for the market they were just an experiment on how to do this. The one bond was a 3 year bond, the other bond was a 25 year bond, the market needs a 10 year bond or something in that nature and that's why it didn't do very well. But that type of a product, because what it does then its an investment that gives you a return that can offset any kind of a mortality risk that you have or a longevity risk that you have. Swap markets for example can offset, that Goldman Sachs can offset those risks so ... and these bonds by the way were rated so there are products out there that pension funds can get involved in to offset their longevity risk and then again depending on what the exposure the pension fund has they can actually get involved in the product themselves.

MO I don't have any further questions.

GP I have another question for you Jim. So this asset class, longevity, is inherently no more prone for abuse than any of the other asset classes that you've worked with. So what abuse is done with life settlements will be by "Wall Street"?

JA Yes, but again I say if we can get a more of a transparent market, the abuses can go away. I mean when you start building these structures don't make them so convoluted that nobody understands them and nobody understands the risks that are inherent in them. The risks that are inherent in a strict life settlement pool are very, very apparent and should be easily understood, okay. Once I start putting these things together in structures and I'm not saying don't structure them because as I said if I put these together with bonds or loans or any other kind asset class I can enhance the value of the asset class and reduce the risk but make them as transparent as possible so everybody understands what's going on out there.

GP Are you looking to write another book?

JA Well I'm writing, I'm in the middle of a second book but its going to be a little more technical, its life settlement derivatives. I worked again in the interest rate derivative markets when I first came into the business world and we were hedging what then was called the junk bond pool. They've toned it down a little more and called it high yield bond markets now, but we were hedging junk bonds using derivatives the first and second derivative of the price yield curve which is commonly called durations and convexities. The problem with that was that they didn't understand the theory behind the derivative, it was (48:52 inaudible) derivative and it required the function to be smooth and no way disjointed, continuous and not disjointed anywhere. Well if you look at the price yield curve on the high yield bonds, junk bonds, you can get jumped, so our hedges were being destroyed and we didn't know why until we went back and looked at the theory. So the idea that you know it works in practice now, will it work in theory, the old joke. I think you still have to look at the theory and the book, I say that only because you can take all the interest rate derivatives and the math behind all the interest rate, derivatives and port them over to get swaps and swaps in caps and floors which is all very useful in hedging longevity because that's what they do. Deutsche Bank had a put option on a life settlement pool that you could purchase from them, i.e, I would buy the put and in 10 years if I wanted to exercise the put I would put the longevity pool, the life settlement pool to Deutsche and Deutsche would give me face value for that pool. So there is a hedge on the longevity risk right there. There are insurance companies out there that will write

residual value insurance on these products, in other words, I can go to the insurance company and say look, there's a \$100M face value at 10 years on this pool, I want insurance that \$100M is there in ten and the insurance company will write that insurance policy for you such that if at the end of 10 years the \$100M hasn't run off they will make up the difference. They were going to take the pool from you and pay you the difference. So there are products out there that you can buy that can absolutely guarantee that you will get face value at the end of term. My problem being, a lot of, again I don't want to get into the mass speak, but a lot of it requires going into the Ito calculus. Ito calculus requires things to be normal distributions normally distributed and if you're looking at some of the new pricing methodologies for life expectancies or a place on jump the fusion process, you're going to end up making some errors here and that's what the new book is all about, but it's a little more technical I think. We tried to keep this book as simple as we could.

JP Michael were you trying to say something?

MO One follow up questions because I'm intrigued by who might write this residual value insurance. Do you know of anyone out there who's writing that kind of insurance and at what cost?

JP Well there in lies the key. There are banks, I know of one bank and two insurance companies that will write residual value insurance. As I said Deutsche was writing the put option, they have since seized and desisted. I was working with Merrill Lynch on this stuff but the problem with all of these derivatives, one, is there any need or requirement for them until the market grows, you know, the demand for the product is probably not there so why go into it. Secondly, at this point in time most of the investment banks that were looking into this the people in the areas I was talking to are hiding under their desks hoping they don't get fired and they're not moving into any new areas. The point being these products were available can be available in the future and they are very profitable, that's the problem. I mean, I would never recommend anybody buy insurance, residual value insurance on these pools simply because you're paying up front for something you're going to give away in the future, but most of the time if you're talking to a lender who's going to lend you money on these products, their attitude is look, I'm not in the life expectancy business, I'm not in the life settlement business, I don't have trading desks I don't have the expertise, I don't want you to turn over a pool of life settlements to me in 10 years because it didn't all mature, I want it fully hitched. So if you're going to go out into the markets and try and borrow to set up these products you're probably going to see a demand for these residual value insurance products because the lenders are just not going to accept the fact that yeah, we'll just give you the pool at the end of 10 years.

MO Right. Good point.

GP Jim, what, besides the next book that you're now working on, are you working on, what is the next step, is it the rating that needs to be done. The NY Times article that you mentioned talks about DMBR, the Canadian Rating Company that claims to be at the brink of the rating one of these instruments. What do you think is the next step?

JA Let me real quickly, we did not talk about rating the pools. Both Moody's and Fitch, and A.M. Best will rate the pools for you, and if you then wrap a bond with a pool of these products the bond will have a shadow rating, so the life settlement pool gets an A rating from Moody's the bond will have a shadow A rating. Again, I think I would like to see some sort of a move towards the ISDA set up which is the International Swap Dealers Association where we come together and we say look, these are the parameters we like to see on what I would call a conforming pool and these conforming pools by the way are going to be the mandates on the performing pools would be probably the same parameters that the rating agencies would like to see to rate the pools. So I see that as being a starting point, and then, you know, just general practices. We did not talk about Stoley's, we did not talk about other practices in this area that are not all that professional, non-conforming type things that again could always get everybody in trouble once they get out of control.

- GP Thank you Jim.
- JA But again I don't know where we go to talk about setting up some sort of an overview panel.
- GP Well Michael, do you have any input on that, does anybody, do we know of anybody, I mean there's LISA and there's ILMA the other two trade associations, does anybody know of any efforts that have been made to put something like this in place.
- MO You mean an overview with respect to what constitutes conforming or what the rating protocols are. I'm not sure I understand what the question is regarding those things.
- JA Well basically all of the above and more. The International Swap Dealers Association basically has a book out on what credit default swap is and how it's rated and a number of different parameters on what constitutes a good default swap and what you should stay away from type thing.
- MO Yeah, I'm kind of with you folks and that I'm kind of at a loss just where we might go within our industry to get that kind of panel that would have you know
- JA It's a best practices panel, I mean a lot of abuses have taken place even down at the lower levels where insurance agents will go out and try and buy life policies from elderly people offering 5¢ on the dollar and then turning around and selling them to a provider at 25¢ on the dollars such that the idea being look we want transparency in the industry if you're selling it to a provider the provider has to record what they paid for it and they have to record what the initial person was paid all the way up so there aren't abuses in that area. I mean there's a whole list of things you can look at in that area.
- MO Yeah Jim I would say that that part of the business while it has, as you suggested, been fraught with a lot of poor practice in the past, that seems to be getting better and better thanks to no I guess in no small part to a lot of legislation, but the thing that I think is just confounding us the worst is the fact that at the heart of all this, I don't want to beat a dead horse, but it's the life expectancy estimate and our confidence in that and how accurate that can be and we can't get these five sisters who drop their combined 95% of the life expectancy estimations and we can't get them to agree on status, and you know, they promised the last year I believe in September at the Las Vegas conference that they would have, that they would get together this spring and they would put together standards and they would agree to them, and I still haven't seen those.
- JA Nope, they're not there yet.
- MO So I think until we can get some sort of consistency with respect to how life expectancy is, the life expectancy calculus and the reporting, the actual experience and you know some way that we have a standard of tracking as well as calculation we're going to kind of have the cart before the horse trying to get the rating, you know, and then pension sponsors behind our asset class.
- JA Well again, as I said, you can get ratings on pools from all the rating firms but only one that will not talk to you about it I think the guys name is Chan over at S&P, but Moody's and Fitch and A.M. Best all have booklets out, anybody that wants it can e-mail me or e-mail this web page on what the parameters are for ratings. So you can get the pools rated by the rating agencies, and their ratings are all going to be dependent on either the 2001 and 2008 tables, but they're going to use those tables, yes.
- GP So what I'm hearing is that life expectancy in the industry has its little quirks with the five sister companies not wanting to step up and become transparent and systematize, however, the rating agencies have taken that into consideration, they probably know that, and are still willing to rate. Michael did you know that the rating agencies have those booklets and ...
- MO I'm looking at A.M. Best right now, I've got it right in front of me and I haven't been through it in a while, but as I recall there were some pretty good restrictions with respect to what they did and I

just can't quote them to you because I haven't been through it for probably a year.

JA The A.M. Best and Moody's and Fitch are almost all identical.

MO Are they, okay. Did they quote and not doing some Canadian rating agency that was ...

JA I don't have that in front of me but ...

GP We're a couple minutes over time. I'd like to thank Michael and Jim for participating, it doesn't look like there are any questions from any of the participants. Andreas is going to close the webinar. Jim, do you have any closing statements.

JA Not really, just let me reiterate, as I've said I've been through this with the mortgage-back security market, I've been through this with the credit derivative market and I do see this, I mean this product has huge advantages over other asset classes. It will in time that advantages will go away, markets are poor arbitrage as they say, but for now I see it growing very rapidly if we can overcome a few of the little quirks that you will see out there. As I said, I'm not as concerned about longevity risk as Michael is simply because there's a number of ways to get around it, you know, over-collateralizing the pool or and think trouncing the pools up and things like that, but I agree with him that, you know, even the method of measuring life expectancy is in discussion, there is no one set way. So the life expectancy tables are very suspect.

GP Good. I will put the NY Time article on the Forum and we can start a discussion on that and feel free to go on the Forum and make suggestions what the next webinar should be. Andreas could you do the closing statements and we'll wrap it up.

AH Okay, so thank you all very much for participating in this very interesting discussion, especially I would like to thank Jim for his interesting presentation and for his identification as well as key admission. I think your presentation has the image of the life settlement industry and contributes to accelerating the acceptance of the asset class. Let me also thank John Wiley & Sons Publisher for supporting this initiative and cooperating with ISLSP. Looking forward to welcome you at our next conference in October. I'm Andreas Hauss, the guy with the European accent and founder of the ISLSP speaking from our offices in Italy.

JA Thank you.

MO Thank you.