

**FINANCE, INVESTMENT & RISK
MANAGEMENT BOARD**

Networking Evening

Monday 13 February 2006

Speaker: Mr John Hele

The Chairman (Mr Colin Wilson): The President of the Institute was due to welcome you all here but he has been held up coming from another event today. Apologies for that. You are all very welcome, and we extend a particular welcome to our speaker, John Hele, this evening.

I should like to start by explaining briefly why we are here. You may be aware of the recent initiative by the Institute and Faculty to, to some extent, broaden the scope of the profession, and to that extent the Finance & Investment Board has been renamed the Finance,

Investment & Risk Management Board. It is the risk management side which we are looking to expand, which is why we are here this evening.

I want to start by asking Paul Stanworth, who is chairing the risk management task force, to say a few words to introduce that work to you.

Mr Paul Stanworth: The initiative, as Colin has said, to convert the Finance & Investment Board to the Finance, Investment & Risk Management Board was one that we were looking to kick start with some initiatives and to try to set some objectives that we were going to follow. The objectives that were agreed were, firstly, to increase the awareness of actuaries in the role of risk management, both within the profession and to their employers. The second was to provide some sort of guidance to the profession and improve its contribution to risk

management. The third one was to influence education and CPD in risk management as well.

What we have started doing is setting up an information-gathering phase at the moment. We sent out an e-mail just before Christmas, and we hope a number of you saw it, about what you thought risk management was and whether we do it. We had 220 responses to that, which was very good, and we are analysing what people think of themselves and risk management in that respect.

We set up a risk management evening like this with John to try to improve the awareness of risk management and actuaries. Ideally, what we would really like to do is to get some direction from actuaries as to where they want the profession to direct its resources, training, or whatever it might be that we get ideas from so that actuaries make a better contribution within risk management.

Ideally, through all of this information-gathering and discussion we will come out with things that are tangible that we would look to change. If nothing needs to change, then that is great and we will all be great risk managers. If things do need to change, it is a good thing to be able to think what those tangible things are. They may be educational; they may be non-educational. I would encourage you to think about this evening as part of an initial step in trying to guide that process for us all. We will keep you informed as to what we are doing in this initiative as time goes on. Above all, I hope that you enjoy this evening and feel that you can be open during the discussions.

Without any further ado, I will pass over to John to present his piece.

The Chairman: Perhaps I should just introduce John. Most of you will have read from the advertising for this event

that John is the General Manager and Chief Insurance Risk Officer at ING Group in Amsterdam. He is responsible for global insurance risk management, functioning as the Chief Actuary. He is really an entrepreneur and he spent most of his career at Merrill Lynch, both on the retail banking and the investment banking side.

He is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and a Fellow of the Canadian Institute of Actuaries. This year he is also Chairman of the Chief Risk Officer Forum, a group promoting best practices in risk management from leading multi-national European insurers.

Mr John Hele: It is a great pleasure to be here today. I am honoured to speak at this great event in this great hall. It is a very interesting topic, one I have been spending a lot of time on since I joined ING two years ago to head the risk management efforts in insurance.

The key question, in terms of the title, is the one key fact that you want to keep in mind is that this year I was elected the Chairman of the Chief Risk Officer Forum, a group started about a year and a half ago of the 13 largest insurers in Europe. It is interesting that, out of those 13 people (we have a couple of others who are also actuaries by training) I am the only one who functions as the chief risk officer for insurance and the Chief Actuary. In most of the companies that is split apart in different roles and responsibilities. That poses the key question: what do actuaries need to do to become the chief risk officers in these firms, and why are they separated? What caused these firms not to pick the chief actuary to be the head of risk? That is a fascinating question.

If you have looked ahead a little, nothing in my presentation is too insightful, really. Most of it is common sense. What we are dealing with here, and what I have

found -- and this has happened all over the world because in ING we have over 700 actuaries and risk people that functionally report to me, that I am responsible for -- is that the biggest change is cultural. It is in mindset. That is a very easy thing to put on paper but it is probably the hardest thing to do. It is much easier to change processes, formulas, or the way that you do things. The hardest thing is to change your mindset in how you approach an issue. It takes a lot of time and it takes much more effort than anything else that you might do.

So today I am going to go through a brief introduction, and to try to contrast, to make my point tonight, I am going to review some traditional insurance land myths and then contrast that to reality -- what is really going on. It is this mindset of being trained as an actuary -- as I was originally -- in insurance land. It is quite different from how the world works in the marketplace, and how it works in practice. This is not only actuaries. It has happened in

the accounting systems that we have; the statutory valuation systems that we have. It is rife within this entire industry.

Then I will talk lastly about how we are implementing things, both in the industry through the CRO Forum, and things we are doing and as well at ING. Before I go through all this, clearly by coming tonight we have something of a self-selecting group who are highly interested in this topic. Although some of this may not be new for you in terms of your thinking, I would perhaps submit that this might be a way for you to help communicate to the other 1,900 people who may not be here tonight.

It takes a lot of effort and salesmanship to really make the change happen.

Just to explain what is the Chief Insurance Risk Officer at ING and why there is that title, I report to our Vice-Chairman who is CFO and has the title CRO now -- Chief Risk Officer of ING group. We are a bank and an insurance company. We are about equal, 50-50. We have specialised in our various risk types. We have a full credit risk officer who has a staff of about 80 modelling things. I think there is a total staff, worldwide, of about 2,000 people managing credit risk. In insurance we use the same team because they are applying the Basel II technologies to measure credit risk, which are highly advanced statistical methods, done typically by one or two programs. That has become standardised over the last five years. But the amount of work that is going on for Basel II is immense. The numbers quoted by major banks that are implementing Basel II are between €50 million-100 million, so significant risk management investments.

The other group is the market risk in the bank. We have traders and we have risk officers. I do not know whether you know that ING bought Barings. There is a bit of a history there of traders and market risk. One trader brought down the entire firm of Barings. We have become pretty good at managing market risk, we think. We have not had another lapse since we got them.

I handle market risk for insurance. We have about €20 billion of capital; we have about the same in the bank, so they are about equal in size. I use the credit risk people for credit analysis but we amalgamate and do all the capital formulas, create the methods and the measurements and install risk limits. It is interesting that at ING we have more market risk in our insurance company than we have in our bank.

The other big thing which is a very simple word that you can see on the slide is that the risk officers in the

functional organisations that we have are accountable for risk. It is a very simple word. It has huge implications. It is one of the toughest things that we have found in explaining that to people. No longer can that former Chief Actuary, now known as the Chief Insurance Risk Officer in, say, Mexico, say "I do not think he should do that anymore". And they write a nice memo and they explain why. They cannot do that anymore. They have to say "Stop. You cannot do this business. You cannot issue the product and I have the right to veto your trade. I can break the trade." We have immediate resolution rights all the way up the chain; written down and codified. But to get people to do that is a very hard skillset because you cannot just use that trump card whenever you want to. You have to have that power and use that and work with the business of how you communicate that. But it would not be acceptable for us to find in the file, if there is a mistake, a memo from the actuary which says "I told them not to do it". You are not an adviser any more; you

are accountable to manage the risk along with the business line. That is a huge cultural change.

We are actually doing training programmes on this to teach people with case studies in how to deal with this and communicate and work with this.

We also have strengthened the whole functional network.

I have a small team that report to me in Amsterdam, about 25-30 people, but I am functionally accountable for almost 800. We have duties and accountability. I can hire and fire people; I review their objectives. We have a whole system to drive this system throughout. These HR issues are equally as important to driving this change as everything else.

Why the big thing on risk management? Why is risk management so hot now? I started my career just before 1980. I was studying to be in actuary. I was in Canada

but the US market was right there. The equity index was below 100 and interest rates were over 12%. So we design policies, and I learnt how to do all this work. I think I studied a study note that was written in the 1940s about how to value things at 3½-4%, and I was scratching my head because interest rates were 18% or something. But no matter what you would have assumed as an actuary, whether you are doing investment products or mortality products from this day, you had really to try hard to lose money. You really had to be either a crook, or really stupid to lose money in insurance, other than annuities, because of the huge impact in most of the products we sell.

Mortality improved significantly from 1980 to just recently. There have been significant improvements in certain age groups. Bill Clinton had quadruple bypass surgery just a couple of years ago and spoke to the presidential candidate that afternoon. Open heart surgery

was being done in 1980, but nothing like that. He probably would be dead today if it was 1980. There has been a bull market in mortality, in basic life insurance, and bonds and stocks. Who needed risk? Just sell more! You make more money! The actuary is always conservative.

Those days are gone. We have added some corrections here. Why do we have risk officers now at all the top insurers? This is another high correlation. There are new CEOs at almost every major insurance company in Europe. There is a very high statistical correlation between doing a rights issue and changing the CEO. By the way, a large number of the new CEOs are from the banking world, not actuaries; not from the insurance world. Why is that? What is the market telling us? It is going to be tougher going forward. The bull market is over; we can assume these things are going to happen. Being really smart about risk and measuring and

managing that is going to be the key differentiator of insurance companies going forward.

The other big thing that has happened is that insurers are now more risky than banks and our cost of capital has gone up dramatically. You can see a graph on the screen. It is a bit busy but you can take this home and study it. This is the beta of European insurers versus banks. HSBC, .73. You can see the difference with my firm. This difference, if you look at financial theory, because the beta is multiplied by your equity risk premium, is a multiple impact in the cost of capital. A huge difference to raise capital. Why? Why are banks less risky than insurers?

If you went back before 00, it was the other way round. In the mid-90s banks were more risky than insurers. Our betas used to be .8. This has a massive impact on how you run a business -- probably one of the biggest impacts that the whole industry has. How many actuaries really

understand this is what is driving all the changes in our businesses, why the CEOs are being replaced; why there are risk officers; why this is going on? This is huge. This is the most fundamental shift in the sector in 20 years. It is a very interesting point.

If you want to be a serious risk manager you have to leave the old insurance world behind. I am telling you that it is not working. We got lucky for 25 years. The luck has run out and the market is telling us "You are risky, we do not understand your business and you are going to have to pay a lot more to get our money and our capital than a bank or another financial services company." That is a significant massive disadvantage in running your firm. So you have to get into reality.

When I joined ING a couple of years ago I went to a meeting on embedded value. That was one of the first meetings I went to in the first month that I was there. It

was fascinating. There were all these people in this big meeting. We started talking about market consistent embedded values. I thought it made perfect sense to me. Of course I had just come from 15 years on Wall Street so it was easier for me to understand. Then they started talking about traditional EV and about the real world and that we contrasted the market-consistent world or risk neutral world and then there is this real-world out there. I whispered to the person beside me, "What are they talking about? The real world? The market is the real world. The price you can buy and sell a property, a contract, a security, that is real. You can trade it. On that day I can sell it, I can do it, it validates it. It is real.

The real world in insurancespeak is about assumptions that you think you are going to earn tomorrow. It is as if we give the trader on Wall Street, one million dollars to trade but we are going to count his profit on the day that we give it to him. Goldman Sachs does not do that. We

still give them the one million dollars, but we add it up at the end of the year. We expect them to make the money. That is why they get the money. But we do not count it ahead of time. But somehow this was the real world; the assumed equity risk premium; the fact that you can get credit spreads, that was called the real world. It is not real; it is an assumption. So this wording is very confusing to audiences.

So what are some of these myths? I am going to walk you through some of my favourites. Liability measurement: it depends on the assets backing the liability. A foundation of accounting for insurance. What can you earn on the liability? It is in our training. You probably have had actuarial papers training papers on this. I have some quotes here on the real world.

You need to think about very seriously the International Accounting Standards Board. They have now created the

IFRS, which is one accounting system for everything. They have spent years working on this. It is principle based. The key thing of IFRS is that they will not change a principle. It has to apply everywhere. So all these issues have been thought about and they are actually written up in all their notes. All these issues have become in banking and in all these other sectors that they have already passed and created the rules on. In insurance we got a short by, a few years. But the foundation of everything is in their basis for conclusion. So all these insurance and foundation beliefs have all been talked about already in other financial services businesses.

So they said the cash flows of an asset are irrelevant -- nothing to do with how you measure liability. They said that the way you do a liability is to [inaudible] what the market value is, and this is defined in IFRS 37. It also talked about the discount rate has no additional risk in the cash flow. So you figure out the certainty of the liability

tomorrow by discounting at a risk-free rate today. This is heresy compared to traditional insurance thinking and accounting. But this has been covered because other sectors have been doing this. The board has already said that this is where you are going.

The other big thing that actuaries have been charged with for years is to put margins on liabilities. How much margin do you put on liabilities? Property, Casualty, Life, Investment? You set liabilities with the best estimate. You put prudence on each assumption, so I have been trained, and then you set them, and that is it. But you have to test for loss recognition. Under certainly the US GAAP you only test best estimate with no margin in. So by the time you figure out you have a loss, there is no future profit left in that business. Is this how you want to run your company? By the way, IFRS 4 said that you can keep it going if it is already there, but you cannot add any more. In 37 they said you can take risk and uncertainty

into account but it does not justify creating excessive provisions, or overstatement, and a market price which is the foundation of the accounting system always reflects the margin. You will not trust my best estimate. You always put a margin on it in everything you do. But you should have no more than that is the foundation. The key thing here is that prudence goes into capital not the liabilities in every other financial sector. In banking we have a factor called model error in the capital. It is not in the reserves. The reserves are your best estimate with a market value margin. You can trade it off at priced at market with no additional prudence. All the prudence should be in your capital. This is very hard for non-life actuaries to accept. But a lot of actuarial training has only been around reserves, not around capital.

Why is this is so important to the industry? It is absolutely critical because if insurers end up with a solvency system or an accounting system that puts

prudence in the liabilities, we will be at a huge disadvantage with the financial sectors. There is a much higher cost for locking away prudence for years and years than in having it in your capital structure. This is why in the CRO Forum and the CEA have banded together and we are lobbying and marketing as hard as we possibly can because if Solvency II goes ahead with prudence in the liabilities we will be an absolute competitor disadvantage to the banking sector. The key goal of Solvency II, by the way, is to make the sector more competitive. It is totally against the core principle. But it comes down to a mindset.

There is a view that there is no market for insurance liabilities. I heard that just last week from a non-life leading regulator -- no market for auto insurance -- there is no market value. These companies get bought and sold all the time and they are valued and they are marked to market upon the sale transactions.

Typically, the only people who know this when it happens are the consultants who do the valuation at that moment in time. Why should users of financial statements only know how much a liability is truly worth when it is sold? Why are not those valuations done every quarter so users of financial statements know what those liabilities could be offloaded to a third party at any time?

That is the core essence of it. And there are transactions happening right now. When I joined Merrill Lynch in the early nineties I was the insurance expert and they brought me in and said "Tell us about insurance." I drew the curves and they said "How often do you do this?" "We just did it. It took us two months and we could probably do it annually." Our insurance businesses were about 5% of the balance sheet of Merrill Lynch at the time and they said "You are telling me you can only mark these assets to liabilities to market once a year or once a quarter, if you

are really lucky, and we mark the rest of the balance sheet to market daily?"

I said "But insurance is far more complex." They said: "Have you been down to our derivatives desk? Have you looked at the things that they have on those Sun Microsystems and are valuing those daily? Is it more complex than those?"

A very different approach and attitude in the thinking.

This is my favourite one with the investment management departments that you work with. It is a buy and hold strategy. We figure the assets when we design the policy and we are going to hold those assets with that investment strategy. Yet you go into the investment department and they are being paid on total return and they turnover their portfolio like crazy. They are selling for capital gains. They get more income at the height of

the market. Or when they have a capital loss they look around for a capital gain. This has nothing to do with economics. Not even close to being what you are really trying to drive. There is a huge disalignment in the sector between what the investment people are set up to do and the liability people. Most of this is driven by accounting because accounting sets up the total wrong incentives to manage economically.

Speaking of accounting, the traditional accounting for insurance companies is minimal disclosure. One number. €200 billion of liabilities. Only at the very high level.

Okay, we have CAT risk and insurance and endowment policies and annuities, but it is all one number and the users will be happy with that information, and no risk disclosure, no sensitivity analysis, as to how those liabilities move.

In the United States the actuaries who have done asbestos reserves probably really wish there had been a lot more sensitivity analysis disclosure about how poor those best estimates were. There are a lot of interesting losses going on in this right now. If you read IFRS and the thinking behind seven -- and seven will take your breath the way when you read where we are going to be going with IFRS in terms of disclosure, even IFRS 4 says you have to disclose the assumption of the greatest effect on the assets, and, when practical, quantify disclosure, such as discount rates. How many companies communicate the discount rates in other liabilities in their statements?

Have you ever read a bank and how many pages of risk management disclosure there are? Eight pages with all sorts of quantitative daily VaR tracking? How many insurers even have risk limits? There should be a balance. That is what IFRS says. So this is the key, enabling users

to understand the risk exposures and the potential impact. Totally opposite to traditional insurance thinking. But IFRS 7 does not apply yet to insurance. It is excluded until phase two comes out. But the moment phase two comes out, it is all coming in because they do not accept exceptions like this. So if you want to see where the world is going read IFRS 7.

Reserves capital and disclosure. How about our regulating friends? In the UK you are very familiar with the changes that have gone on, but of course across Europe it is far different. Many regulators are still very much caught in the old world. There is a high correlation when you regulate emergence with the banks. I used to be an M&A banker. During a merger it is called a merger but there is never a merger, because one side clearly wins. What has happened worldwide is when the bank regulators merge with the insurance regulators the bank guys come

out on top and they apply all their thinking generally across the board.

But historically regulators have been quite confidential, based on factors, almost no additional risk disclosure.

"What is the minimum that I can tell the regulator?"

If you think about what is about happening in Basel II -- and we are a bank and insurer so we get both -- actually Pillar I is the minimal stock. That is the easy part. It is Pillar II where the regulator comes in, which you find in the UK. I want to see sensitivities. How does this happen? What is going on? It is not the numbers, it is understanding what is going to happen to risk. It is not running a bunch of numbers; it is how does it move; what is driving it? That is what Pillar II does.

By the way, Pillar III is to make all of this public -- going back to my earlier point. We are only partway through

Basel II. It comes out next year and the year after. The numbers and the amounts of money banks are spending on this is breathtaking.

So we are endorsing a whole market consistent approach on an economic balance sheet with the CEA. This is very hard for some actuaries to accept. Our biggest problem today in pushing this agenda forward for Solvency II is coming from some regulators but also from some actuaries who just cannot handle market consistency or they cannot handle not putting additional prudence into reserves.

How about investors? The common view is that insurance is different. We have made it different. We made it hard to understand. That is why our beta is so high. But the head of the largest fund companies have somebody called their allocator, and they think sectors, so much to banking; so much to insurance. If they do not like a

sector, they move out. So you can be affected in your valuations by just a whole movement away by these people who allocate. They do not care whether you are a bank or an insurance company.

What is the difference today? I can sell endowment policies that are investment returns. I can sell funds from a bank. They just want to know economically how can I compare them? What is the value added between these two? It is why the key analysts are calling for market consistency in all the valuations because they want to be compared to a bank.

Banks, as I said earlier read a bank disclosure. They publish. You can see the biggest risk types; what is driving them; their sensitivities. You can see the biggest concentrations. How many insurers disclose their largest concentrations in what they do? Investors decide every day. This disclosure thing is hard for a lot of accountants

and people to really get used to. But I would encourage you to look at banking. Read the reports. Understand Basel II, because the same thing will happen to insurance.

Analysts are people I spend a lot of time with because as Group Actuary I also publish embedded values, so I am very popular, starting on Thursday, with the analysts.

When I started, you did not disclose much. The analysts ask me "Why do you not want me to be able to model your company? Why is that so confidential? If I cannot model your company, I put a big factor in a discount on the numbers I get from you. So the best companies do extensive disclosure. I mean extensive. They give enough information to the core drivers of the business, not the results, the core drivers, to then drive the results so all the analysts can build their own model. When they get results, what they want to do is to validate the information they have against their model.

You start trades on the future value. The information you publish every quarter only validates the models for the growth going forward. It is basic portfolio stock theory. So the more you give, the better off you are. There is also a huge paper called the asymmetry of information. They do a study and the companies that publish more and more information, do better and better. Why? If I am buying something from you, and I know that you know more about it than I do, and if I do not trust you I will naturally give you a discount to that. I will always be more conservative in my pricing because you know much more about it than I do. There is great case study on this.

If you look at some leading P & C insurers in the States and other places they publish triangles by all sorts of business. They have huge, thick statistical supplements. The big US insurers publish a massive US statistical supplement with all the drivers, all the results, by line of business. Banks published huge informational packages.

It is coming. The purpose is to help the analyst community understand and model your business.

Prices -- I talked about this earlier. We have been trained, I remember my actuarial training papers, to calculate it and price the product at issue. Of course, it is designed to be guaranteed at issue. That is how they are done. For, like, 50, 60 or 70 years. Then it is great because we publish the value of new business. Oh! How much money we have made! And guarantees have not been [inaudible] priced. So if you wanted to get rid of that guarantee in the capital markets you could not because you price it consistent with the capital markets.

But in reality the embedded values that came out after the fact -- and, by the way, you start trades on embedded value not on your VNB -- the true value and the growth you are creating, you are not even close. But I ask you to take any product, those priced one year ago, two years

ago, five years ago, 10 years ago or 20 years ago, look at the value creation that was in the first pricing and offer for memorandum and what has come out, it is not close. You cannot really price at issue. You are thinking you are, but you are not. The reality is that the profits are coming out and the standard deviation around the mean is a mess.

If you are a risk manager is this any way to run a business? How much time do you spend managing the in-force risk versus the new products? Where is all the risk? Where is all the capital? Do you hedge? Do you limit risk? Do you tranche risk? How are you really spending time on the risks?

Assumptions. The actuary looks in a crystal ball and decides on an equity risk premium, decides on future interest rates, decides on mortality trends, decides on everything, and that is it. It is basically on the mean, the traditional actuarial training. You think of the mean. You

do not worry about the tails; you do not worry about the distributions. You forget about that good statistical training that you took. You do not think about what distribution, do I put on it. Credit risk has a very different distribution from the normal distribution. Mortality is much more normalised historically. We will see if bird flu changes that. It is just not good, mathematical theory, I am sorry. I put up the Morris Review, which I am sure most of you have read. But this is sad. I am embarrassed to be an actuary that we have let the profession come this far, and I am a US and Canadian actuary. But it is the same issue. You get ingrained in what you are doing and how you have done it. You have missed this boat.

I remember in the early nineties we had a great group created at Merrill Lynch that were going to help revolutionise the insurance business. The insurance strategies group were going to do hedging and have these

derivatives to help these companies manage their portfolios. They sold it to us in our insurance company. We hedged and we got rid of the risk. We ran it in 1992 on a market value basis, marked to the market every month. That is as far as I got.

But they could not sell it to anybody else. Do you know what those guys did? They disbanded the group because Wall Street takes only about six months if you are not making revenue. You either lose your job or you morph. That did they do? They went to mortgage backed securities. The big insurers wanted yield. So they gained yield, lots of yield, highly convex yield, because they learnt no one was measuring convexity in insurance companies. They were matching duration. So they tranced mortgage backed securities to get perfect duration, and the test that the actuaries were doing in those days were plus or minus 100 basis points. There was an actuary there, I will never forget him, he almost

lost his job, went into this, made millions and he designed these things that when it got 150 basis points out all hell broke loose. And what happened? In 2002 and 2003 all hell broke loose.

But they were designed that way. A great yield!

Everyone was happy: the accountants, the investment guys.

The good news is that we are here. Everyone globally is working on this. Mono financial theory is coming. I am sure that everyone in this room is really up on these things. But it is going to take some time. There is a very ingrained way of thinking.

Calculations and analysis on economic capital once in a while. It is a model; it is a study; it is new and it is an additional measure. You do not think about running your business in economic capital. I will tell you. Economic

capital, because it is a tail measure that the regulating agencies care about, is the measurement of risk. It is the foundation of losing your rating. In the financial institution your rating is generally [inaudible] It is the core element of being in business. It keeps the doors open. If you have no rating, you will not be an insurance company, generally speaking.

So you need to do economic capital on a regular basis. By the way, economic capital is based on the market value of your liabilities and the market value of the assets, so you need to calculate these on a regular basis. They need to be Soxed and audited and the infrastructure done. Very difficult to do. Also the poor accountants have never really worked on future value accounting before. It is a different audit system to audit a model from did the calculations exactly meet what is in the computer system? This is a huge amount work. This is where banks are spending fortunes, by the way. I can keep

going, by the way, for quite long time on these things, but I will not bore you with all of them.

But this is one of my favourite ones. This is the liquidity factor. I was at a meeting the other day and they said they were trying to figure out what interest rate to pick to value liabilities. I said the risk free rate because you do not put risk into how you think about your future cash flows. "But what about the liquidity factor?" they said. They said they had a paper from actuaries in the UK on this, that there is a liquidity factor. I came back here in the audience so that I could be among you because I wanted to look at it like people look at it. They say that you discount your liabilities as certain, so they are annuities. Payments. No right to surrender. Then you can use a higher discount rate for that because they are illiquid.

The rate you use is equal to like a AA bond or something higher because there is illiquidity in that. There is credit risk and illiquidity risk. I do not know about you, but any AA bond you can probably sell very quickly. There is not much liquidity risk. Even poor old GM. You can sell GM bonds, and that is not even close to being AA. So I do not quite buy the theory under liquidity, but even if you did, why would you pick any other rate as opposed to the risk free rate? You project your certain liabilities -- well, best estimate -- but they are annuity payments; they contractually are going to pay the person as long as they are alive, and people do not die that often. So in ten years I know exactly the zero-coupon curve on that date, so I can tell you with certainty what that payment is worth today. That is all I know. I project my best estimate cash flows. I discount them back at the yield curve to the zero-coupon curve. I use the zero swap rate. This is a swap rate because that is what all bank transactions are. It is

pretty close to risk free. It is much more liquid. So where is the discount?

Actually, it is the other way round. If you had the right to surrender you have written a put option. You have offered the client a put option so that makes your liability go up. You deconstruct your liabilities. But if you think about it has an average, I am using one rate and I have got to get this average rate and I have got to take all these things into account and you come at it from the traditional actuarial thinking way. That is not how you do it. You deconstruct your liabilities. You look for certain cash flows, use a zero coupon rate to bring them back and you look for the puts and the calls, and you value the puts and calls consistent with capital markets.

But I still hear this. I heard this last week again. The poor users, the poor regulators and the poor people who hear all this are going ? There is a huge push for this

because people want cheaper liabilities particularly among some accountants. They are really pushing to use the earning rates and assets to justify what their liabilities are. But there is no difference because a liability is a liability. It is independent of the assets unless you have a link structure like an endowment contract that is actually linked to a portfolio of assets. But a general liability has nothing to do with the assets. You have written a put option if you have liquidity.

I said that I would keep going for a long time on this but we will keep it short and kind of close off.

Everybody is moving this way. Insurance land is over. We are in reality, but it takes a little while to get there. All major competitors, all my peers, the 13 largest companies in Europe, we have all done economic capitals. We are calculating them. Most have been in public. We are driving the business throughout, and transaction prices

today, my consulting actuarial friends tell me, are the key thing asked "How do you mark everything to market to do the transaction? I do not think you would sell a major block of insurance today without fully marking both sides of the balance sheets to market and valuing all the options and calls consistent with capital markets. I could be wrong, but you would find somebody really out to lunch.

External stakeholders. Analysts are crying for MCEV and EC disclosures, by the way, now, Standard and Poor s, Moody s [inaudible] ERM, EC. In just two years. That is a very new thing that is going on but they are coming at it full bore. Bert Stern[?] says that it is happening, it is going to become the norm. Many regulators, the UK regulator, the Danish regulator, our regulator in Holland, are driving forward in a market consistent world.

There are others who take longer to get there for all the various reasons. But the IASB wants it clearly to go that

way. The International Association of Insurance Supervisors, fully endorse this framework, an economic framework. So it is an inevitable trend that you are going to move towards running your company on EC.

We have now left insurance land and we are now in reality. What does it mean to be a serious financial services manager? How are you going to run your business differently? First of all, capital management, which is the essence of an insurance company. An insurance company uses capital. That is why it is so easy to make money. I always have capital, generally. I was never out of capital. I make money on the capital. You have got to really work hard to lose it all because you have all this capital there. So how you manage it, is it. That is the business of running an insurance company.

You run it on economic capital to protect and market value liabilities, on a total balance sheet approach. You

calculate market value liabilities by deconstructing the liabilities into the components. This is absolutely how it is done on Wall Street. It is how it is done in the IASB for everybody but insurance. If you take IFRS 37 it tells you to deconstruct the liability. If you create a liability in a bank, under 37, you have to deconstruct it into puts, calls, options and value those derivatives separately. It is it, it is printed, it is done, that is how you do it. You have active quantification and management of diversification. You do not group everything together, you decompose and deconstruct and you think how these risks interact. You model that. It is one of the biggest things that you do, putting together your portfolio of risk.

It is what we have done always historically in mortality, in thinking about diversification of people, and this and that, and their lives, for 150 years in this Institute -- maybe longer. But now you think about it for all risks. How will

they all react? Always, always risk neutral. Modern portfolio theory.

In risk management you create a risk appetite. By the way, in Basel II banks and boards have to create a risk appetite. We will take this much risk, and it is quantified and that has to be then codified and sent down. We are already working on that with credit risk dashboard[?] in preparation for Basel II next year. We will have a risk appetite quantified on how much risk and it will be handed out in the planning process. And risk limits. How many people have limits on risk in insurance companies?

All you do in a bank when you have a new product line is create proposals to ask for more risk limit. You create fat proposals, give them to the committees and you cry for more risk limit. You get your limit and you can run your business. By the way if you knowingly violate a limit in a bank, you are fired. That is the culture.

Proactive management of risk limits. You go in, as I said, and you are working on this. You have proactive hedging because you have got to live within your limit. You have the ability to break a trade. You disclose everything, and not only in EC and MVL but all the other sensitivities that go round it.

Performance measurement. The primary measure is not the offer P&L we have today under IFRS, it is growth in value, return on capital measured market consistent. You can call it fair value accounting; you can call it market consistent embedded value. It is essentially the same thing. And much less focus on just VNB because it is how you run your whole book that drives it much more. The value of new business under MCEV is less because you do not get to capitalise. The trader does not get to count his profit at the beginning of the year; he counts it at the end of the year. So you focus on more embedded value profit

or in the total increase in your embedded value. Product management, management on MCEV principles, market consistent pricing.

It really is different thinking. We are driving this out worldwide. It is a real training programme. "You mean I cannot make up the assumption on the market curves?" We broadcast and publish daily the volatility services and the interest rates that people have to use globally for ING. The actuaries phone me up: "I cannot assume rates are going higher next year?" "No, you use the market curve and you do a sensitivity and, by the way, all new products will have a duration and a convexity and will have replicating portfolios."

That is how you manage as a risk manager. Accounting: everything is at market value. Proactive management and commission volatility.

I will tell you why I am absolutely certain of this. The current system we have today of assets at market liability to book never going to last. It is terrible. Everyone agrees it is terrible. There are those who hope the IASB will go back on the asset side and create an amortised cost. No way. We have been there in banking. The bank's fought the IASB tooth and nail. They lost. We had to do an EU carve out and finally just had to give in to make it practical.

The IASB will not go back on it because they would have to go back for banking and every other financial institution. They cannot go back on 32, 39, 37. That is there. So the liabilities will come.

The only question is would it be a good market value system or a bad market value system? Not everyone agrees with me on this point, but you have to look at what has happened in banking. We at ING, because we have

had the bank experience, know this view because of our past experiences.

So the actuary should be thinking about: How do I create the best fair value market value system I possibly can for liabilities instead of saying that it cannot be done or it is not going to happen. Because we have won the risk, the staff will go ahead and create it anyway. I think that it is trying to do that as we speak.

So this is the key point here. As I talk to people worldwide and we are working on all this change I use this slide because what you have to do to become a risk manager is you look at the same data, and the traditional view is your metrics, you worry about the value of new business. Your pricing is based on local reserves with regulatory capital or rating agency, and you make all the assumptions. What you are trying to do is get an

acceptable return on all the assets that are tied up in total.

Picking the discount rate is the key actuarial function. That sets everything. When you become a risk manager you leave the left side of the room and you physically have to walk over to the right side of the room, look at the same data, the same business, from a different view. The view is return on embedded value from a market consistent embedded value. It is market value of assets and liabilities. It is how those move. It is the capital that you need around it, which is a reflection of how they move; the market assumptions. If you can get a market assumption, you get a market price. If you cannot, you model a market price. You are always trying to figure out the market. Your skills model the market.

You want to get a proper return on each risk and you get different costs of capital depending upon those types of

risks that you take. There is not one average discount rate. It depends upon the risk you take. You decompose everything.

This is the hardest thing for people to do. The questions I get often from our own internal experience have come from people who are still on the left side of the room and they are looking at it thinking from that way. You have to get over here and look at it this way. I know it sounds simple but this is really the biggest thing to do.

To execute this plan there are three basic things that you have to do. Invest in people. You will need new people. You need more market people that can do these pricing things, who know all this stuff; who can do derivatives, price them; understand them. You need to train people, invest in people, hire people, but also train your existing people. You have to speak another language. You wrote a put. What! I wrote a put. That is what a guarantee

is. It is saying it that way, pricing it that way; and it will change your business links because the cost of a very long-term guarantee is very high. You have to rethink how you are doing things.

I say these things. The top line is true, it is immense. We have covered insurance land reality. Now, how do you get there? Just a few more slides. I will talk briefly on Solvency II and what is happening at industry level, and things that we have done at ING.

The thing that we have decided to focus on in the CRO Forum is to get the liabilities right. As opposed to capital, we actually realised that if we get the liabilities wrong there is too much prudence in liabilities and all the capital measures we do are not going to be correct so we have said very clearly that it should be on a total balance sheet market consistent value approach. We use the words market value.

I had one actuary ask me: John, I agree with all of this, but do you have to use the words 'market value'?" I do not know, but there was some problem with "market value".

So these are the points that we have said. By the way, so far we have had a pretty good impact. We have been told that. It is interesting when you talk about skills of risk managers, why did we have such a good impact? We made a very clear, concise statement that we got everyone to sign up to. But because we made it clear and concise, with examples, so there are the technical details there, we were able to communicate in such a way that we spent hours and hours and months getting this wording right. We found as we said things people understood different things from it. "What do you mean by market value? What do you mean by this? What do you mean by that? What do you mean by technical

provision . We put dictionaries at the back and we still are tripping over this often.

I spoke earlier and said the value of hedgeable risk should be determined by mark to market approaches. If I have a market I must take the market price. If I do not, I try to mark to model, I try to model the market. Very core elements. It is not one number. You are not doing the whole thing. You are not doing distributions on the whole thing; you are deconstructing across the board. And, as I said, prudence is in the capital. We say this every time, three times a week. In every forum we use the same slide. We say it to all the CEOs and the CEAs. We say it to all the regulators. We say to the EU, we say it to the EC. We say this over and over again.

What do we do at ING? A little microcosm. We finalised the economic capital methodology at ING. We had been studying this for five years when I joined. The first

economic capital project was in 1999. So, fine, I think that we can stop studying it now; we can decide on it and move on.

But it really changed the business mix for a lot of our players so there was huge resistance to finalising the methodology. As long as I am arguing about the methodology, I cannot change. But in the end you say it is good enough. Is it perfect? No, but it is a heck of a lot better than what I had before, which was basically nothing.

We use it as our key capital measure now. Business units have to project economic capital and model it out to understand the risk. Someone said to me that it is too much work. I said how can modelling your risks be too much work when you are in the risk business? What else are you doing? We have limits on market. As I said, market risk is our biggest risk in ING insurance. So we

put limits, buy units every year, on how much risk a firm can take in market risk. They said "What if we violate it?" I said the "Hedge it". "Oh, but that costs money!" "Exactly!" We only have so much capital. We have rolled out market consistent pricing globally and definitions for EV and we are training and communicating.

I have hired a full-time change manager who spends his whole day thinking about how to change actuaries to be risk managers. He is here tonight. He is not an actuary; he is not a risk manager; he is a business consultant type who thinks about cultural change programs.

In 06 we are going to do a report internally; we are going to continue with the pricing; we are going to move to a production auditable environment for economic accountable reporting and market value liabilities, and ultimately we will disclose them, but only after I get my clean audit opinions.

The cultural change is equally as important as all those points that I had up on the slide. Here is one way we depict it. You notice they are chained together because this is not easy. We have redefined all the roles and responsibilities of our insurance risk network globally. What is my job, what do I do, how is it different? What is expected of me?

We have instituted a 360 degree review. We piloted that this year. We will be rolling that out. Now we are going to do a GAAP analysis, skills set, training and communication and defining what we mean by high performing culture. That is linked to the business leaders. We communicate the value added that we do in risk management, how we can help the business analyse risk better to add more value and help them save money. As opposed to cost, we are driving the value based system. The actuaries are your engineers to drive your business.

I have visited every business unit in ING, except for two or three. That is 41 in two years. I go, I make a presentation. I meet all the CEOs. I communicate with them quarterly. I send them a survey to ask them for their input on my objectives for the year. I spend a lot of time marketing here. We are embedding risk management in everything we do. We have re-done our strategy; we have done our business planning. We have changed our definitions. We have changed our product development. We have changed the performance measurement. We have changed all the compensation of every CEO worldwide and we are just halfway there.

In closing, I have tried to preview to you what I think reality is. I think actuaries are extremely well qualified to be the people to lead the insurance industry to reality, to help them understand it, manage it, quantify it and get insight into it, the best qualified people.

But you are not alone in doing it. There are others who are helping out and I think that it is up to the profession really to work on this. I think that we are very, very qualified to do it. I am doing it. I think once we accept that is where reality is we are going to start to take action and change what we are doing in order to get...

[TAPE CHANGED AT THIS POINT]

[The Chairman]:

with insurance land, as you call it today. Obviously, I should like to throw the meeting open for comments and questions.

I should just mention the usual caveats. This is being recorded but simply so that we can capture the points that are being made. There may be a report in *The Actuary* but no comments will be attributed to individuals.

That said, you have painted a clear picture of where we need to get to. The question is how we might get there. You have made it clear that it is quite difficult.

Do we have some comments from the floor?

Mr Gary Finkelstein: That was a really fascinating talk. It is music to my ears but it is music to the ears of most people in the room. You are preaching to the converted, I suspect, in this room. We all look at the world on a market consistent approach.

I have some questions for you. On slide 15, when you talked about the value of new business, clearly I think what you were thinking of there was the traditional value added to embedded value on the traditional embedded value model.

I am curious to know what your view is on the value of future profits in new business on a market consistent basis. If you have sold a product with guarantees and you have worked out the cost of hedging is 25 basis points and you are charging 50, is it legitimate on day one of selling the product to put a present value of those future profits?

My second question is around your comment on historic cost accounting versus forward looking accounting. I have always had the view that that was something that was to the credit of the insurance industry that, unlike many other industries, they have embraced value based accounting from quite a way back. Many insurance companies have traditionally run their business on embedded value accounting, which is value based accounting rather than historic cost accounting.

I know that we need to move forward from the first step of embedded value accounting to market consistent

embedded value accounting. I would appreciate knowing whether you agree with that view of the insurance industry, at least.

My third question relates to international accounting standards and the DESOP[?]. When the first DESOP came out (I think it was Principle 5.6) there was a principle in there which said that the value of the liabilities should be quantified, taking into account what it would cost you to trade with a third party counterparty in the market.

When I look at the way that international accounting standards drafts have been progressing since then, every time I look it is more and more diluted.

I believe that the world should go IFRS -- was it seven or 17? -- but I am not sure it necessarily is going to go that way in the insurance industry. I would welcome your input.

Mr John Hele: The first question was regarding the VNB. I guess the question is how do I look at the value of new business under a market consistent world that maybe has very little profit or even a loss on a market consistent basis? You are assuming that you are going to make equity spreads or credit spreads in the future to make up for the cost that you may have at issue.

I do not know of any other business that demands to make a profit at issue. When you open a new store, when you bring in a customer, it is usually a cost. The only question is whether you amortise it or it hits your P&L immediately. But there is always a cost. But you run the company on a portfolio. When Wal-Mart opens a new store in China they do not capitalise the future expected profits from all the Chinese coming to Wal-Mart. Actually it would be very busy calculating that out! It is a loss but it is an investment. They only do so much at once. They

measure it, they communicate it to the analysts. Analysts build their models. It is all on the same thought. You just do not get to count it until it is done. There is nothing wrong.

You may have a loss in it. If you need to make money from the credit markets to get the spread to pay for these things, then of course there would be an initial loss. It is the question in your whole portfolio, how you manage it in a year. Do not forget you are going to have higher returns from your in force portfolio because you have not reflected it all at issue. It is how you balance it.

We have looked at various blocks of business like this, and it is almost the same. Unless you are rapidly growing, which is rare in insurance, you have to go to the market to explain to people. But it makes it transparent. If you capitalise all these future assumptions, you do not know where the money is coming from. Is it real money or

assumed money? Every year Wall Street and Fleet Street trade, and they put all this capital at risk. They do it but they invest money in it and they lose money on some trades to build the business. It is again thinking of running the whole portfolio versus just VNB.

The second question concerns historic cost accounting. If you think this is a good result and the fact that every major CEO has lost his job in insurance companies in the past five years, that is a terrible result. The cost of capital has gone. We used to be like banks. We are now like this. There is a huge turnover. This is nothing to be proud of. We should be ashamed of this as an industry. We have raised the cost for our customers by a multiple. If your cost of equity is 5% or 4% over the risk-free rate, and you go from 0.7 to 1.4, that is a lot.

Regarding your third question, I am giving you my personal views on these things. I think that there is much

talk going on today in the industry on the new accounting for the market value liabilities. Much of it I find is mixed models, people are trying to put elements of entry value in with exit values. To the extent you are in the middle of the room, or you are on one side and somebody else is on the other, if you cannot agree on it you end up with a mishmash. Where I think personally IFRS has gone off track is you have not come up clearly enough from one side of the room and you get this mishmash of different things.

It happened in banking. The problem is that the staff at the IASB[?] go ahead and do something. If they cannot get agreement, they will just put something through.

My personal recommendation is that we should work with the accountants to develop the best system possible, but the principle is market value and how do I get the best market value? If I am trying to do mishmash and

amortised cost, and things like that, it is very hard to be in between. You have to come from one place. Where I have seen things come off track, certainly in the banking side, was banks did not really accept that early enough and the staff went ahead and wrote some things that did not really make perfect sense and eventually had to be changed in the latest release in 37.

Mr David [?]: As a presentation, if I had written it, I would have been told off for being too aggressive. It was very, very good. You presented a slide which said that we should go market consistent everything, and that is the basis of the world, slide No 22 or 26. Have you presented it to the CFO[?] Forum? What was their response, and do you think that they are going to sign up to something similar?

Mr John Hele: Slide 26 has been presented to the CFO Forum; to the IASB. You name it, they have got it.

Mr David [?]: My real question is: what is the CFO Forum's response to this? The stuff that they have put out is not nearly as articulate as this is.

Mr John Hele: The CFO Forum, on which I sit but not officially because I am not a member of CFO, are developing their full response to this and are still working on their overall principles. These could fit in in one form of thinking; but they are looking for some more things to that. What we have agreed with the CRO Forum is that we will de-link to the accounting from the Solvency II debate.

We are saying from a solvency balance sheet point of view, this is how you should run your company. I have my personal view which I have shared with you today.

The official CRO Forum view is that this is the way to do solvency accounting; it is for the accountants to sort out how they want to run their accounting.

Mr Martin White: I think that I am one of the few general insurance people here tonight. What do you say to the Americans who do not want to discount? How would you go about estimating a market value, a price which you would be prepared to sell long tail insurance liability?

Mr John Hele: I have talked to the Americans on it. It is a very heated debate, obviously. They want the prudence in the reserves, and we say you should make your prudence explicit. You have it there because you do loss recognition testing, so you have to discount when you do that. Australia works on it already with an interest rate already on their non-life. The prudence should be explicit and if you are not certain about your best estimate you should be putting huge amounts of capital against that. It

should not be in reserves but it should be communicated together. You need the price at which someone will take a long tail liability.

The question for you is why are you issuing long tail liabilities that no one will take off you? That is one question. There are some that we have as an industry, as a sector. Asbestos is one. That is very problematic. Asbestos needs a huge amount of capital against it because the best estimate will vary absolutely dramatically around the mean[?], if there is a mean.

But the fact that we have done these things in the past should not be the reason why we want not to have the right accounting convention going forward. Why would an investor give you money if you cannot tell me what is the reasonable mean? Okay, in hurricanes maybe the model was a bit off, but they re-priced. They got the new models. They got tonnes more capital in. So there are

sectors that are able to communicate it well enough and to talk about diversification. When you see the Bermuda guys they speak about diversification, they speak about the tracking. It is quite public. Where is that in the rest of our industry? But they are the ones to got all the capital, by the way.

Mr Martin White: The conclusion I get from that is that they are some lines of business, frankly, that we should not be writing at all.

Mr John Hele: My philosophy is that if I cannot price it, with some deviation, understand the tail on the mean, why would somebody give me money to put at risk if I cannot quantify it that way?

Mr Martin White: And the last point on the margins in the capital versus the reserves, does that not have the impact of [inaudible] tax?

Mr John Hele: In certain regimes it does hurt your tax. Then we should lobby to fix the tax systems. If you have one set of reserves you call capital, you run it through your tax system, they are called reserves, but it is labelled and treated by the rating agencies and the regulator as capital. But in the end I think that your beta will go down if you can communicate your risk beta and have the capital free. I think that the taxes are probably cheaper. I have not done that proof yet, but that is what needs to be done. We should not just keep doing it. We should communicate, at least in the market, that this is capital and measure it that way. Okay, we have to hold it this way because it is the local way that we do it. But while do we not communicate with the capitalists? It might lower my beta.

Mr Campbell: You have described essentially a fundamental change in terms of how to run the business,

switching to this market system. That entails process change. It entails infrastructure change. My question is for a large insurance company these days how big is the infrastructure investment, and how long do you think that it is going to take them to put a system like this in place?

Mr John Hele: It is a multi-year project, obviously, to be done. Australia has done it over x number of years. But they switched earlier. The Swiss are doing it. The UK people are doing it to the best possible way that they can. You have to do other work, but you do not get full credit for it yet, which is a real shame.

The infrastructure is major. Basel II: there is 1500 million -- maybe more. It creates an economy of scale. The small insurers have trouble. But what happens is in Basel II there are services which come up. You can buy a model and that does your credit risk. It is for sale for everybody. The services do come up for the small players. You can

get standardised models. Many consultants are happy to coming in and help.

But you have to decide do you really want to have in business companies that cannot measure the risk? Is that good for the industry? Is it good for the sector? Is it good for the consumer to have a player out there that really does not understand the risk you are taking? Is it acceptable from a social point view? I would say that it is not. I think fundamental risk management is the foundation of insurance and has to be up-to-date at all times.

A Speaker: May I seek to be clear so that I understand? Although we have been talking in the last few questions about market consistent valuation and similar type items, I do not think that is exactly what you are talking about here.

Just going back to the title of the talk, in what ways do actuaries need to change to be good risk managers or contribute to good risk management?

To my mind -- please comment if you agree or not -- what you are looking at here is this. Are we making a profit? Whether or not we are, do we understand how that number will change as things change around us -- mainly of course market prices?

Market consistent valuation is simply a tool, and at the end of the day there will be some sort of fudge as there always is from the accounting profession, not meaning to be rude particularly, in which things will be counted.

But the thing that will always have to be focused on is what is the economic reality? At the end of the day that is what counts.

Mr John Hele: This presentation that I have been doing has evolved over the past two years. I would have had much less on this market view and more on the process and communication and the skillsets that you need to be risk managers.

What I have to found, though, as I have worked internally in our company and externally around the industry, is this view, our history, the training we have all had, accounting, and everything, is changing our vision. It is a bit of a fog.

I will be crystal clear that it is this mindset change. Once you have this mindset change then all becomes much clearer. You have to accept that I cannot run an insurance company without understanding how my balance sheet moves every quarter, what drives it and the risk it entails, how the product drives it and what goes on every quarter consistently, or faster. Once you make that

shift and you are on that side of the room, all the skills and training, and everything else, come along.

That is the key shift. That is what we are having many debates on because it is very different from how most insurance management has been trained, how we have all grown up, how the accounting system works and the regulatory system works. It is quite different.

A Speaker: And what you have described is the way that banks do it every day of the week.

Mr John Hele: Yes, all financial-services except insurance. Hedge funds, investment banks, commercial banks, retail banks. They were not that way before. In the Eighties they were a lot of book value guys. But they had huge crises in the banking system in the early Nineties. That is when they all hired their risk officers, by the way. After 94 everybody had a risk officer in the bank. So you look at

what has happened. We had our big moment in 2002. All of a sudden there is a chief risk officer in most insurers, and those who do not have them are wondering should they have them. The consultants are selling year end.

A Speaker: Do you think that it [inaudible] change the mindset of [inaudible], should the nature of the exams increase, the number of exams, leave it more to companies to train people on the job? Should it organise itself nationally or internationally?

Mr John Hele: I think the actuarial profession needs to think through the skills that it needs to add on to, while retaining the core competence of the quantitative skillsets, which are excellent. But we have not done enough on modern portfolio theory and integrating traditional actuarial training to be totally consistent with it.

We also can learn from communication and all that work that is currently done in universities and places all over the place. We do not have to reinvent the wheel in many of these things. We should think through how to use all of that and how we are going to attract great people into the actuarial system. We have to get consistent with modern financial theory in everything that we do. We also need to work hard on communication.

Mr Simon Harris: First, that was a great presentation. It was very interesting. Thank you for that. A question in terms of your capacity as chairman of the CRO Forum, and thinking about Solvency II discussions, I have been able to attend a few of the SEOPs [?] Hearings, Wave 2 and Wave 3.

I would be interested to hear your views as to the influence that you and other parties have been able to have on what I see as quite a diverse set of regulators

with varying sets of levels of understanding and willingness to move in the direction that you are talking about. Without naming any names, could you talk about your view as to how you see the project developing from here, and whether things will develop as you have basically been outlining here -- the total balance sheet approach?

Mr John Hele: Solvency II is a very complex system, given the EU regulatory process, with 26 countries, and some additional observers. You go to these working group meetings, and the room is almost as big as this hall, and you are trying to work on highly technical issues at times.

But I am very impressed by the process, not being a European, in terms of how it is working. It is very open. They really are looking for input. They listen to the input and it is all recorded so I am extremely impressed by the openness of it.

Regarding the CRO Forum, we have been told that we have had a good impact in certain areas. Our diversification was not really on the broad agenda of most of the regulators in standard models. In internal models we produced a paper on it last year on diversification that they said encouraged their thinking. They are willing now to discuss it. It is a core element. We are going to have many good discussions on how much you get. But we are having the right discussions now, the discussion on what is correlation of risk between these things as opposed to there is no diversification impact at all, which is a very great step to happen.

It is generally accepted now that there will be internal models. It was not generally accepted. There was a big question on that before last year. The comment on the slide I showed you, we have been told has had a major impact. There is still a wide divergence of view on these

concepts within SEOPS as within the broad industry. But at least we came forward and we made a very clear position. You can understand it. You may disagree with us but we can have a good debate on where we disagree. That is something we are really trying to have, to get some facts down, and we can understand what the implications are of these things.

Solvency II, as you have found in the UK, what seems like little things, little definitions, can be extremely far reaching in implications. So we were very happy with the discussions. I attended a session last week and we are still having good discussions on it.

In the end, it is a political process. So where it ends up may not be where we would like it to be as the CRO Forum, but I am hoping that we get closer to an economic standpoint, because we firmly believe that the industry will be far better served, it will be run on economics, it will

be more competitive and provide better products for consumers by being run that way.

A Speaker: John, you mentioned the importance of changing the mindset of actuaries, and you talked about the education process as being one of the things that would help that. I wonder if, to some extent, there is also a question about whether or not we have the right sort of people within the profession.

Within this room I think that many people would buy into what you have said; but in the wider profession I wonder how many actuaries actually want to be accountable for the risks as opposed to just advising on the risks.

Mr John Hele: Let us remember that we view, at least at ING, that being an actuary is super training to becoming a risk manager, but it is not the only training for a risk manager. The risk manager is a set of these functions,

accountability, proactiveness. In reality you may not be that comfortable being an adviser or one of the key technicians. On Wall Street we call them the quants . It is not a mega connotation because actually the "quants" and the derivatives desk make more than the manager -- by a multiple sometimes. My bank guys are trying to recruit more "quants" globally.

You may end up in your career to be a quantified actuary and doing more the calculations, being a very highly specialised person in the measurements of those types of risk, or you may be a more broad general risk manager, being accountable in managing the broad spectrum of risk. They are both great and you must have both. They are core elements of having a risk management system.

Mr David [?]: I totally agree with all your comments about MCEV. I take them on board. What I should like to ask you about the risk manager is how you actually go about

bringing in your Pillar II work, particularly operational risk, and how actuaries can interlink with other colleagues in that area.

Mr John Hele: We are lucky at ING because we have a whole team from the bank that is doing operational risk. So we are applying all that technology to our insurance side. We have a whole system in place with a database. We have applied that and adapted it. We have scorecards. It is the same as applying the Basel II technologies on operational risk.

Most insurers have not begun this process. They need to start. If you look at your losses, which we track, if you look at the losses due to operational risk in any major financial institution, it is a big number every year and it has happened in a lot of insurance. Just ask the big US insurers that had something called vanishing premium, UK insurers had their things, it goes on and on.

It is a big risk area but actuaries have not been involved in it. They should be involved in it. They should be actively promoting and working on it. It is more a matter of priority, but I think that is an area. I really encourage you to take what is in banking, apply it, work on it and improve it and apply it to insurance. But do not be too inconsistent with it because in the end your regulator is going to say "Why is operational risk different in processing something in a bank versus an insurance company? They are the same thing." So you want the same framework and same measurement and communication system.

A Speaker: Presumably, the same comment applies to credit risk. I have always puzzled why banks, whose business is lending, obviously see and take credit very seriously, but insurance companies, which invest hundreds of millions into credit risky defaultable bonds, where

effectively there is no difference between lending money and investing in a defaultable bond, and effectively land up with the same exposure just do not take credit seriously.

Mr John Hele: Well, you had better hope that we are doing the same in the bank and the insurance company. A GM bond is a GM bond, whether we hold it in something called insurance capital or bank capital. We have the same system across both. We use the same technologies. We have a Chinese wall so that one side does not see the other but they have to use the same methodologies, the same credit rating on names, a consistent process across the world. We can analyse our exposures by sector.

Two companies produce most of the major models that everyone is using. It is easy, just buy them all and implement them. Do not reinvent the wheel. Spend your time thinking how credit risk interfaces with insurance risk

and market risk. What is that the diversification and how do these interact? That is where you should be spending your time.

A Speaker: I think for most insurance companies the key risk is market risk. Although I agree in the fullness of time these other risks do need to be looked at and considered, and so forth, and good firms are doing it today without doubt, the important thing for a risk manager is to focus on the important things and that has to be market risk.

Mr John Hele: That is why we have limits on market risk today, and I spend the majority of my time on that.

A Speaker: John, thank you very much for a very informative talk. Just one thing that you started off with, comparing the betas between banks and insurance companies. I am wondering whether you have a view as

to that change in the betas, how much of that is driven by actual risk. I think that one of your comments was that this showed that the insurers were more risky than the banks. How much of that is actual risk and how much of it is the perception from the analysts because they do not have the information that they feel that they need and therefore are applying a higher discount?

Mr John Hele: We have spent a great deal of time studying this. I think that we have had all the banks come and give us their views. It is both, and it is very hard to separate it. The view in the mid-90s was that insurers were not that risky, in general, and banks in the mid-90s -- remember the Asian crisis, and everything else -- were viewed as more risky.

Now it has switched around. There is no one factor. It is a multitude of factors. It is better risk management in banking, better communication, the Basel II framework

coming in. There is a huge change that has been happening in banking, and insurers have had trouble, particularly the 02 time. "We did not think those equities were going to go away!" And there have been failures in the UK. Very big things which have not happened in 40 years or longer in the sector.

Perception is reality. This is the price. To get capital you have to go and pay. How we fix it is through better risk management in total, the total framework, I believe, and that is why we are spending our time doing it. It is a combination. I do not have the exact answer

A Speaker: But are you saying, John, that the risks have actually increased by that much for insurance companies or simply that people now understand they were always risky?

Mr John Hele: I cannot tell you. It is impossible to differentiate between the two. Clearly, if interest rates had come down, because of guarantees insurers are far more risky. The market price of our options we have given the policyholders are far more expensive and far more volatile than if you weigh out the money. If you weigh out the money the price of that option does not move much. When you are close to the money or in the money it is a very volatile cost. They know that now. But no one has quantified it for them very well, really.

Analysis coming out of embedded values, the financial options and guarantees, the FOG -- that is a perfect name for it! -- has only been published this year or in the last year among the EV principles. So we will have to see what happens.

A Speaker: What do you tell your shareholders you are hoping to achieve for them over the next decade or so?

Mr John Hele: We do not give forward-looking statements. I should probably have that on the front of this presentation. We tell them that we are going to focus on value, value defined as the return on risk capital, and we are going to be very good capital managers, and also find growth. We view measuring and managing risk as a differential advantage that can give better products to consumers and allow us to get superior returns for our shareholders.

A Speaker: I will just comment on the betas. Measurable context is in the historic period, due to the fall in the equity market and the excess equities carried, then in effect insurance companies simply found that they just lost profits and capital, and they focused analysts' minds on the fact that if you look at most insurance companies as at today, they are actually geared players on equities one way and the other. After all, most insurance companies still take management charges as very

important components of profit, and of course that will go up if equities go up and vice-versa.

So by focusing the analysts on that most insurance companies have actually proved to the analysts that there is a geared play going.

So you have two things happening: first of all, if you look historically a beta is just an historical measure. It is just telling you what happened over the past three years, in effect. Secondly, it has focused the analysts on the fact that insurance companies are geared equity players.

Insurance companies can come out of that because they can hedge it -- perfectly easy -- but most of them just have not chosen to do so.

Mr John Hele: It is one thing to lose a lot of money if you over-capitalise; to lose enough money to do a rights issue,

why would you possibly run a company this way when you could have got a hedge?

A Speaker: One further question, if I may, on the issue of how far the analysts have really come in buying this story themselves. You mentioned that in the US there is this huge pack of supplementary information which they now use. I wonder if they have come quite that far as maybe over here, and with the mergers and acquisitions that you talk about, whether the pricing is really taking place on the sort of market consistent values which you are describing and which I think we all buy into as to where we are going to end up.

As an example, the bulk purchase annuity deals.

Apparently many people are looking to come into this market now, and perhaps pension funds are expecting to be able to offload their liabilities. That is something which existing players might think is not the market consistent

price. Conversely, insurance companies have been able to reinsure large blocks of annuities again at a price which maybe would not be market consistent.

Mr John Hele: You will have to show me the ones that are not close to what the market is. Most transactions I have seen are at a fraction of the reported embedded value or some percentage of the embedded value, typically not at a premium. You have had the new firms start up that have been buying blocks of business. They are at a discount to the old, published traditional embedded values.

I have just looked at it briefly, I have not studied closely, but that seems closer to the market than anything else. I have not seen things being transacted at what the embedded values have historically been showing. With regard to annuity blocks, I have not heard of any going for great premiums. Pension funds are a great case. To take

and price these very long-term liabilities is very costly.

There is huge uncertainty in that measurement. Okay, we have them. We made these guarantees and we have them. They are costly.

The world has a lot of capital looking to be put to work and people willing to take some pretty big bets. If you cannot offload those liabilities and that market, then obviously you have not found the market price yet.

A Speaker: I guess that we will have a very good test, then, because the financial press here are certainly saying that there are people out there raising capital with the objective of taking on these.

Mr John Hele: I know there is capital. I know that there is capital being raised for all sorts of purposes. We will see what price they are transacted at. That is not raising capital, that is when you do the deal. I think that any

investor today will demand consistency with these more modern financial theories.

A Speaker: If we want consistency with financial economics, why do we not just measure this by looking at the movement in the share price?

Mr John Hele: Your movement in the share price is the market but you have to find the drivers of it. What we are doing in insurance is assuming risk and putting capital at risk. So we need to find a way to measure the risk in that capital. That is the foundation of what our insurance business is. You need capital to run an insurance business; you cannot do without it; and you put it at risk.

So this is the measurement techniques that are more dynamic than a total process that is all book value, and some day when in the company is sold or the policyholder dies you figure out whether you are right or not.

A Speaker: A quick question. I am curious to know what your view is on the future of European or enhanced embedded values if they are not market consistent.

Mr John Hele: We think market consistent embedded values comply with the European embedded value principles. We believe more people will start publishing under that framework. Axa has already published an MCEV in December. I believe they used statutory accounting reserves as the basis, not market value liabilities; but that is a huge step in right direction because they priced all the options consistent with capital markets. A few others I know are plying the public under that framework. We will eventually. I am comfortable with it.

A Speaker: John, I was fascinated by your description of the culture change which you are aiming to achieve. I am sure that we can talk about that all night. I wonder if you

could say a little more about whether some actuaries, or actuaries in some countries, are more or less accepting of change, and also whether or how the actuarial profession could be an ally to you in achieving the kinds of change that you want to see.

Mr John Hele: That is a tough question because we are generalising. We find the people that adapted quickest were some of the younger people, particularly if they have taken economics as the core basis of it, or if they are more a pure mathematician. They intuitively accept it.

We have another group who have been trained a certain way. They are very open to these and they have started to think about it and read about it. They really just need to learn about it to really get there and once they have finished their learning they are there. That is across the board.

Many European actuaries learn more at school, at university. Much of the education is from the school and so the schools are teaching them all the modern portfolio theories as well as a course. They seem to be more adaptable to it.

The US actuaries have had quite a structured exam system, historically. A lot of the work has been historically around optimising statutory accounting, which is very factor based. The reserves are set for you by law and you are trying to optimise around that. So these concepts are quite a shift for them. It is just in terms of thinking market liabilities; and also managing the rating agency requirements has been a key driver; how they price and run their businesses.

Some of the people who resisted the most, and who had great debates on this, when they finally came over to the right-hand side of the room, then they are the strongest.

They have converted. They have found the new way to believe, and they believe and tell everybody. That is really what happens. It is a change of culture, of thought, of approach. When you are over, then you are fine. If you are not over -- and there are some who really do not believe in this -- some are very strong in this. Sometimes those people are very hard to convince. We may never convince some. But you only have to convince enough. We call this our four year programme, at least in our firm.

The Chairman: That may be a very good to point to stop, John, because we have run out of time. I should like to thank you very much for the clear exposition of what you have given. Maybe we can all use that internally to help our communications within the profession. There is still a lot of convincing to be done.

It may be that we will have the opportunity to do that again in a couple of months time. We are looking to

organise a sessional meeting on the whole risk management initiative, and we are hoping to open that up to some of the actuaries -- dare I say it -- in the more traditional areas within the profession. It is hoped that this will be good ammunition for that.

I hope you will join me in thanking John for what has been a fascinating and thought-provoking session. [Applause]